

# POWER SUPPLIES

LED DRIVER POWER SUPPLY  
SWITCHING POWER SUPPLY



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moving in better ways

# POWER SUPPLIES

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# Numbering System of Power Supplies

**M F 320 A 24 A G 0 - V/RC**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

**P U 040 A 070 A Q 1 - L**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

① case option	M	metal case
	P	plastic case
	O	open frame
	B	brick (module)
	U	"U" case
② input voltage range	L	"L" case
	A	85~127 VAC
	E	175~264 VAC
	F	85~264 VAC
	S	115VAC / 230VAC switch selectable
③ rated output power* <sup>1</sup>	U	90~305 VAC
	-	rated output power in integer value
④ PFC function	A	active PFC
	P	passive PFC
	N	PFC not available
⑤ rated output voltage/current of main circuit* <sup>2</sup>	-	rated output voltage/current of main circuit in integer value
	A	1 output
⑥ number of output channels	B	2 output
	C	3 output
	D	4 output
	E ~	E~ by analogy
	G	general series
⑦ type of power supply	P	LED driver series – constant voltage
	Q	LED driver series – constant current
	S	ODM (original design manufacturer) series
	D	DIN rail series
	T	telecommunication series
⑧ mode of output channels combination* <sup>3</sup>	-	mode of output channels combination
⑨ options (suffix)* <sup>4</sup>	-	specific function or special tagging

## Note:

\* 1 Series model output power value or powergrade; the LED driver series 3-digit mark.

\* 2 In the LED driver series, the 3 digit "XXX" are used to represent the output voltage(V) or output current(mA).  
eg: The output voltage of 48V is labeled as "048", and the output current of 350mA is labeled as "350".

\* 3 Output combined mode

3.1 Single Output: default value of "0" and can be omitted. "0-9, J-Z" represents a different output specifications.  
eg: "PU040A070AQ-L" is the LED drivers, PU040A Series, output 38W/700 mA/27-54VDC

"PU040A070AQ1-L" is the LED drivers, PU040A Series, output 30W/700 mA/18-36VDC

3.2 Multiple Output: "0" for same output voltage and current (and can be omitted).

"0-9, J-Z" for different output specifications.

- \* 4 Power supplies that have the same output power, voltage, current, but have different optional features are designated with different suffixes to distinguish the specific S.P.S. models. There may be several suffixes separated by "/", in sequence.
- 4.1 The first group is fixed to the definition of terminal types.
- 4.2 Typical options:
  - V - vertical terminal block
  - H - horizontal terminal block
  - C - connector
  - L - wiring type
  - RC - remote (ON/OFF) control
  - RS - remote sensing
  - M - motor (application)
  - F - fan (cooling)
  - LT - long life
  - AT - over temperature protection (OTP); automatic recovery
  - HC - OCP type: hiccup mode, automatic recovery
  - PF - power failure signal output function
  - PC - parallel connection
  - PV - programable voltage

Numbering  
System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General  
Power Supplies  
- MF Series

# PU012 Series - Constant Current / Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 85% typical
- Active PFC: 0.97 typical
- IP66 compliant
- Protections: OVP, OCP, SCP
- Comply with UL8750, UL1310, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



85 × 36 × 23mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.97 at 110VAC; 0.94 at 220VAC (typical)
Inrush current	15A MAX (25°C at 220VAC, cold start)
Input current	0.18A MAX at 110VAC; 0.1A MAX at 220VAC
Efficiency	85% (typical) at 220VAC maximum load
Maximum power	12W
Line regulation	± 3%
Load regulation	± 3%
Leakage current	0.3mA MAX
Hold-up time	Half cycle
Protections	Over voltage, over current, short circuit

## Environmental Specifications

Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3750VAC
Vibration	5-55Hz/2g, 30minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L × W × H)	85 × 36 × 23 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

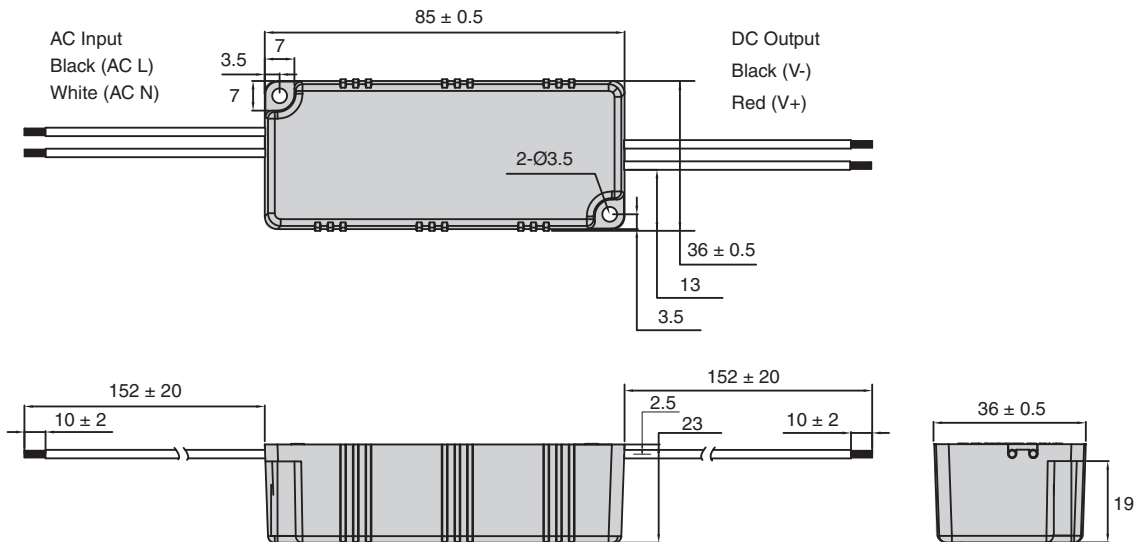
### Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU012A025AQ	250mA	24-48VDC	± 3%	85%	85%
PU012A030AQ	300mA	18-36VDC	± 3%	83%	83%
PU012A035AQ	350mA	18-36VDC	± 3%	84%	84%
PU012A050AQ	500mA	12-24VDC	± 3%	83%	83%
PU012A070AQ	700mA	8-16VDC	± 3%	81%	81%
PU012A080AQ	800mA	8-16VDC	± 3%	82%	82%
PU012A100AQ	1000mA	6-12VDC	± 3%	80%	80%

### Model Specifications - constant voltage

Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU012A048AP	48VDC	250mA	± 5%	85%	85%
PU012A036AP	36VDC	350mA	± 5%	84%	84%
PU012A024AP	24VDC	500mA	± 5%	83%	83%
PU012A016AP	16VDC	800mA	± 5%	82%	82%
PU012A012AP	12VDC	1000mA	± 5%	80%	80%

### Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

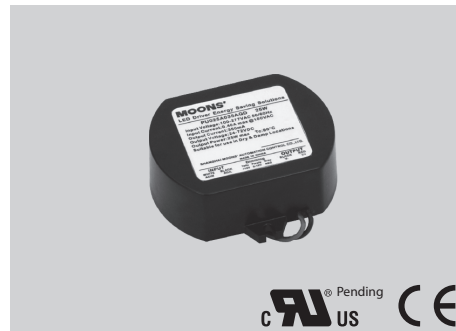
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# PU025 Series - Constant Current

## Features

- Input voltage range: 90-305VAC
- High efficiency: 87% typical
- Active PFC: 0.97 typical
- IP66 compliant
- Protections: OVP, OLP, SCP
- Comply with UL8750, UL1310, UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.97 at 220VAC (typical)
Inrush current	15A MAX (25°C at 230VAC, cold start)
Input current	0.4A MAX at 110VAC; 0.2A MAX at 220VAC
Efficiency	88% (typical) at 220VAC maximum load
Maximum power	25W
Line regulation	± 3%
Load regulation	± 3%
Leakage current	0.5mA MAX (at 277VAC 50Hz input)
Hold-up time	Half cycle
Protections	Over voltage, over Load, short circuit

## Environmental Specifications

Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3750VAC
Vibration	5-55Hz/2g, 30minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 40°C ambient

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547



### Model Specifications - constant current

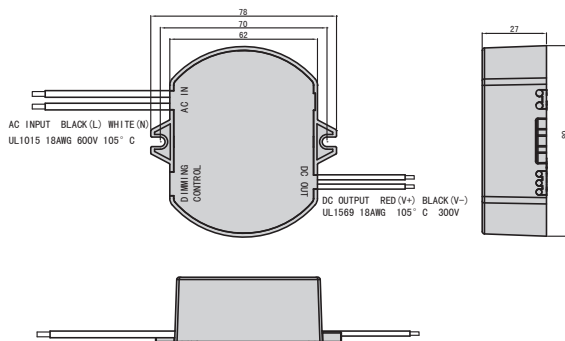
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU025A035AQ	350mA	24-72VDC	± 5%	87.0%	88.0%
PU025A045AQ	450mA	19-56VDC	± 5%	87.0%	88.0%
PU025A062AQ	620mA	13-41VDC	± 5%	86.0%	87.0%
PU025A070AQ	700mA	12-36VDC	± 5%	85.0%	86.0%
PU025A085AQ	850mA	10-30VDC	± 5%	85.0%	86.0%
PU025A105AQ	1050mA	8-24VDC	± 5%	84.0%	85.0%
PU025A125AQ	1250mA	7-20VDC	± 5%	84.0%	85.0%
PU025A140AQ	1400mA	6-18VDC	± 5%	83.0%	84.0%
PU025A156AQ	1560mA	6-16VDC	± 5%	82.0%	83.0%
PU025A175AQ	1750mA	5-15VDC	± 5%	81.0%	82.0%
PU025A208AQ	2080mA	4-12VDC	± 5%	81.0%	82.0%

### Model Specifications - dimming control

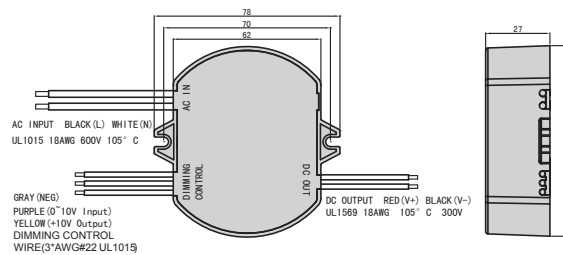
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU025A035AQD	350mA	24-72VDC	± 5%	85.0%	86.0%
PU025A045AQD	450mA	19-56VDC	± 5%	85.0%	86.0%
PU025A062AQD	620mA	13-41VDC	± 5%	84.0%	85.0%
PU025A070AQD	700mA	12-36VDC	± 5%	83.0%	84.0%
PU025A085AQD	850mA	10-30VDC	± 5%	83.0%	84.0%
PU025A105AQD	1050mA	8-24VDC	± 5%	82.0%	83.0%
PU025A125AQD	1250mA	7-20VDC	± 5%	82.0%	83.0%
PU025A140AQD	1400mA	6-18VDC	± 5%	81.0%	82.0%
PU025A156AQD	1560mA	6-16VDC	± 5%	80.0%	81.0%
PU025A175AQD	1750mA	5-15VDC	± 5%	79.0%	80.0%
PU025A208AQD	2080mA	4-12VDC	± 5%	79.0%	80.0%

### Mechanical Outline (unit: mm)

#### Constant Current



#### Constant Current with Dimming Control



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# PU040 Series - Constant Current / Voltage Output & Dimming Control

## Features

- Input voltage range: 90-305VAC
- High efficiency: 88% typical
- Active PFC: 0.97 typical
- IP66 compliant
- Protections: OVP, OCP, SCP
- Comply with UL8750, UL1310, IEC61347-1, IEC61347-2-13
- UL / CE
- Dimming control: 0 ~ 10VDC
- 5-year warranty



95 × 70 × 32mm

## Electrical Specifications

Input voltage range	90-305 VAC
Frequency	47-63Hz
Power factor	0.97 at 110VAC; 0.92 at 220VAC (typical)
Inrush current	15A MAX (25°C at 220VAC, cold start)
Input current	0.5A MAX at 110VAC; 0.25A MAX at 220VAC
Efficiency	88% (typical) at 220VAC maximum load
Maximum power	40W
Line regulation	± 3%
Load regulation	± 3%
Leakage current	0.3mA MAX
Hold-up time	Half cycle
Protections	Over voltage, over current, short circuit

## Environmental Specifications

Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3750VAC
Vibration	5-55Hz/2g, 30minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L × W × H)	95 × 70 × 32 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU040A035AQ	350mA	38-114VDC	± 5%	87%	88%
PU040A045AQ	450mA	30-89VDC	± 5%	87%	88%
PU040A070AQ	700mA	18-54VDC	± 5%	86%	87%
PU040A090AQ	900mA	18-45VDC	± 5%	86%	87%
PU040A105AQ	1050mA	12-36VDC	± 5%	86%	87%
PU040A120AQ	1200mA	11-33VDC	± 5%	86%	87%
PU040A140AQ	1400mA	10-29VDC	± 5%	86%	87%
PU040A166AQ	1660mA	8-24VDC	± 5%	85%	86%
PU040A182AQ	1820mA	12-22VDC	± 5%	85%	86%
PU040A200AQ	2000mA	10-20VDC	± 5%	84%	85%
PU040A222AQ	2220mA	6-18VDC	± 5%	84%	85%
PU040A333AQ	3330mA	4-12VDC	± 5%	83%	84%

Model Specifications - constant voltage

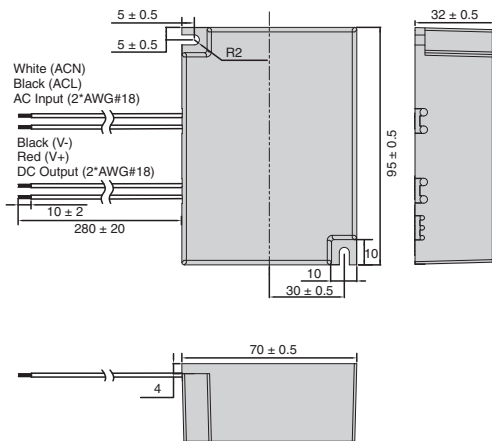
Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU040A048AP	48VDC	830mA	± 5%	86%	87%
PU040A036AP	36VDC	1100mA	± 5%	86%	87%
PU040A024AP	24VDC	1670mA	± 5%	85%	86%
PU040A018AP	18VDC	2220mA	± 5%	84%	85%
PU040A012AP	12VDC	3330mA	± 5%	83%	84%
PU040A009AP	9VDC	4450mA	± 5%	82%	83%

Model Specifications - dimming control (0~10V)

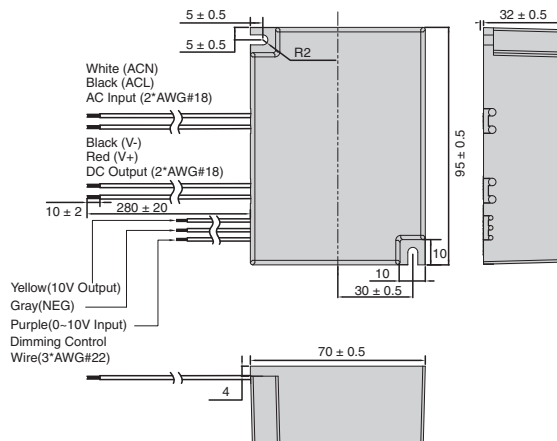
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PU040A035AQD	350mA	38-114VDC	± 5%	87%	88%
PU040A045AQD	450mA	30-89VDC	± 5%	87%	88%
PU040A070AQD	700mA	18-54VDC	± 5%	86%	87%
PU040A090AQD	900mA	18-45VDC	± 5%	86%	87%
PU040A105AQD	1050mA	12-36VDC	± 5%	86%	87%
PU040A120AQD	1200mA	11-33VDC	± 5%	86%	87%
PU040A140AQD	1400mA	10-29VDC	± 5%	86%	87%
PU040A166AQD	1660mA	8-24VDC	± 5%	85%	86%
PU040A182AQD	1820mA	12-22VDC	± 5%	85%	86%
PU040A200AQD	2000mA	10-20VDC	± 5%	84%	85%
PU040A222AQD	2220mA	6-18VDC	± 5%	84%	85%
PU040A333AQD	3330mA	4-12VDC	± 5%	83%	84%

Mechanical Outline (unit: mm)

Constant Current/Voltage Output



Constant Current with Dimming Control



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

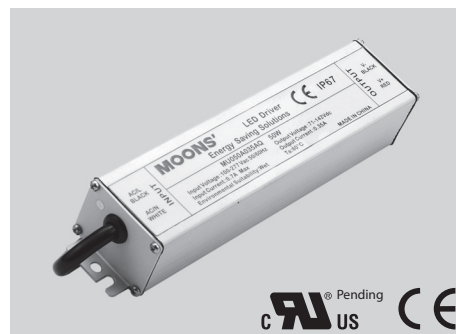
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU050A Series - Constant Current Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 92% typical
- Active PFC: 0.98 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP, OLP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



193 × 42.5 × 34.5mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Inrush current	15A MAX (25°C, at 220 VAC, cold start)
Input current	0.7A MAX at 110VAC; 0.35A MAX at 220VAC
Efficiency	92% (typical) at 220 VAC maximum load
Maximum power	50W
Line regulation	± 3%
Load regulation	± 3%
Leakage current	0.5mA MAX
Protections	Over voltage, short circuit, over temperature, over load

## Environmental Specifications

Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3750VAC
MTBF	300,000 hours at full load and 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension(L × W × H)	193 × 42.5 × 34.5 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

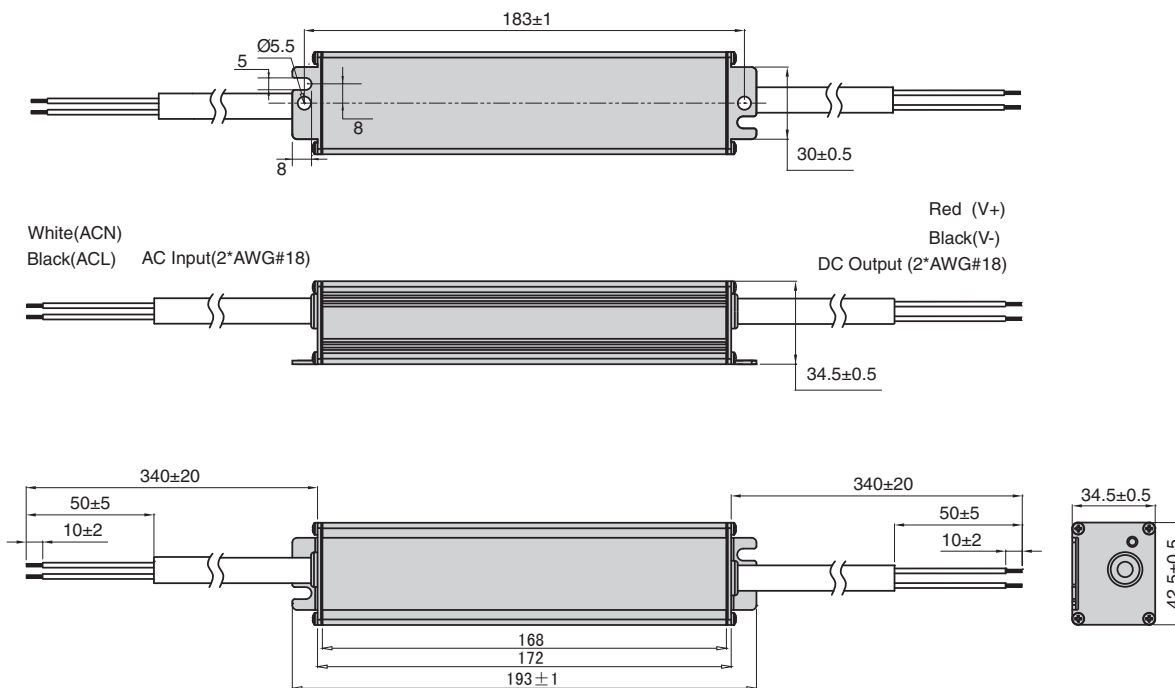
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU050A035AQ	350mA	71-142VDC	± 5%	91%	92%
MU050A045AQ	450mA	55-111VDC	± 5%	91%	92%
MU050A070AQ	700mA	36-72VDC	± 5%	90%	91%
MU050A105AQ	1050mA	24-48VDC	± 5%	90%	91%
MU050A119AQ	1190mA	21-42VDC	± 5%	89%	90%
MU050A140AQ	1400mA	18-36VDC	± 5%	89%	90%
MU050A210AQ	2100mA	12-24VDC	± 5%	87.5%	88.5%
MU050A277AQ	2770mA	9-18VDC	± 5%	86.5%	87.5%
MU050A300AQ	3000mA	6-12VDC	± 5%	83.5%	84.5%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

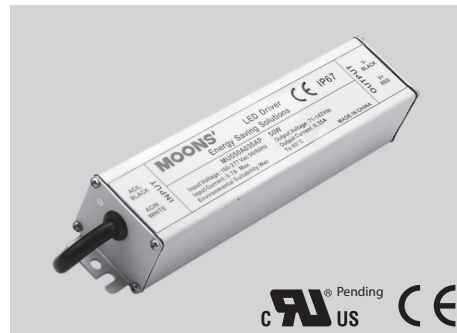
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU050A Series - Constant Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 91% typical
- Active PFC: 0.98 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP, OLP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



193 × 42.5 × 34.5mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Inrush current	15A MAX (25°C at 220VAC, cold start)
Input current	0.7A MAX at 110VAC; 0.35A MAX at 220VAC
Efficiency	91% (typical) at 220VAC maximum Load
Maximum power	50W
Line regulation	± 3%
Load regulation	± 3%
Leakage current	0.5mA MAX
Protections	Over Voltage, Short Circuit, Over Temperature, Over Load

## Environmental Specifications

Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3750VAC
MTBF	300,000 hours at full load and 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	193 × 42.5 × 34.5 (mm)

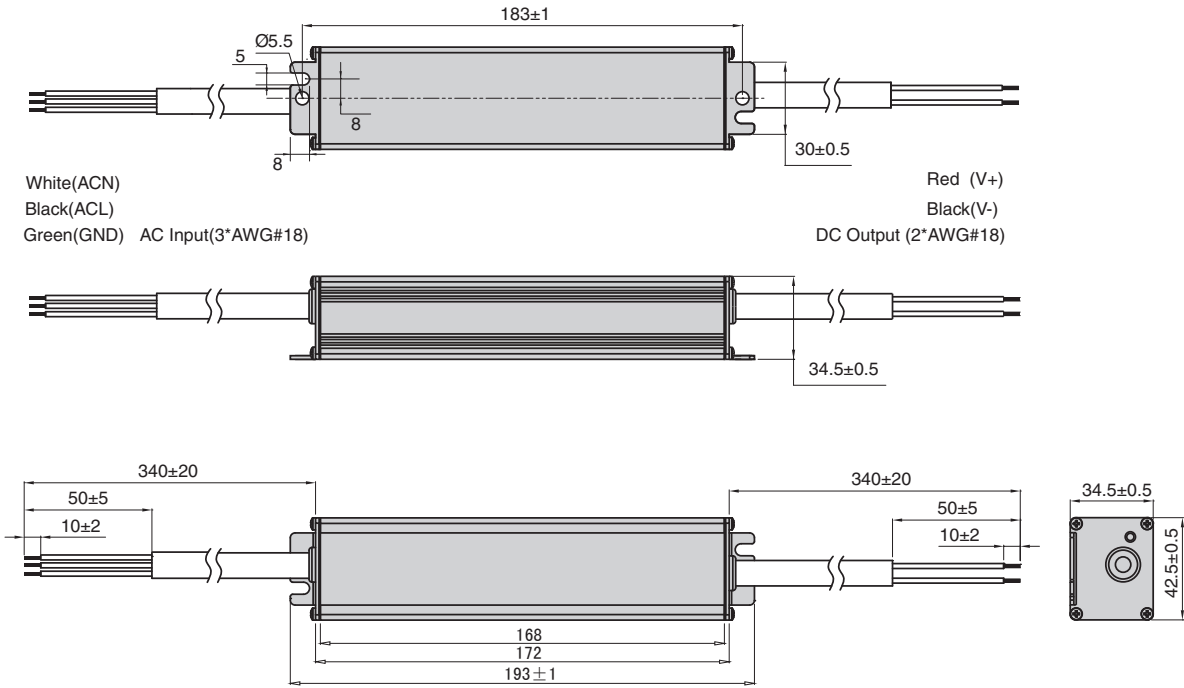
## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Model Specifications - Constant Voltage

Part Number	Output Voltage	Max Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU050A012AP	12VDC	4200mA	± 5%	84%	85%
MU050A018AP	18VDC	2780mA	± 5%	86.5%	87.5%
MU050A024AP	24VDC	2100mA	± 5%	87.5%	88.5%
MU050A036AP	36VDC	1400mA	± 5%	89%	90%
MU050A048AP	48VDC	1050mA	± 5%	90%	91%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Uses  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

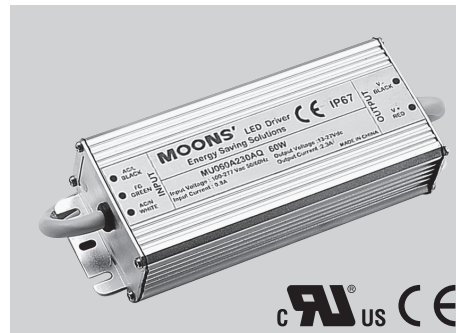
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU060A Series - Constant Current Output & Dimming Control

## Features

- Input voltage range: 90-305VAC
- High efficiency: 91% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- Dimming control: 0 ~ 10 VDC
- 5-year warranty



177 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.95 at 220VAC (typical)
Inrush current	50A MAX (25°C at 220VAC, cold start)
Input current	0.8A MAX at 110VAC; 0.36A MAX at 220VAC
Efficiency	91% (typical) at 220VAC maximum load
Maximum power	60W
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protections	Over voltage, short circuit, over temperature

## Environmental Specifications

Operating temperature	-30°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input/output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W xH)	177 × 67.5 × 37 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



Model Specifications - constant current

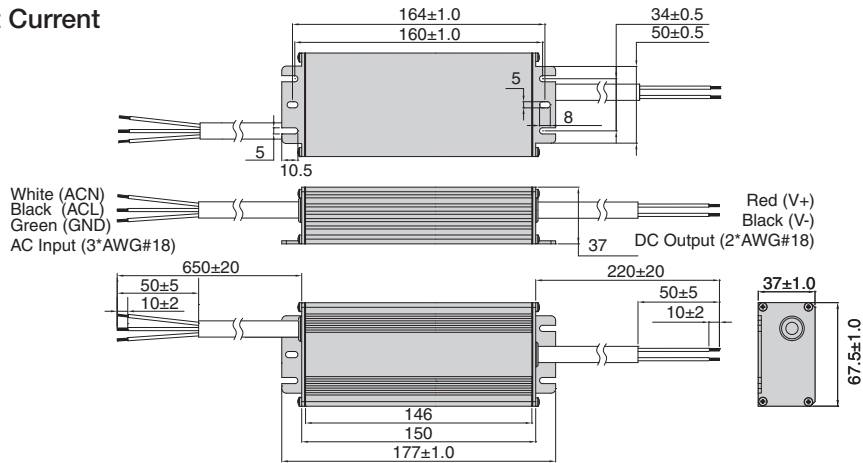
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU060A035AQ	350mA	86-170VDC	± 5%	89%	91%
MU060A045AQ	450mA	67-134VDC	± 5%	89%	91%
MU060A070AQ	700mA	43-86VDC	± 5%	88%	90%
MU060A105AQ	1050mA	29-58VDC	± 5%	88%	90%
MU060A140AQ	1400mA	21-43VDC	± 5%	88%	90%
MU060A170AQ	1700mA	18-36VDC	± 5%	88%	90%
MU060A230AQ	2300mA	13-27VDC	± 5%	87%	89%
MU060A330AQ	3300mA	9-18VDC	± 5%	86%	88%
MU060A500AQ	5000mA	6-12VDC	± 5%	85%	87%

Model Specifications - dimming control (0~10V)

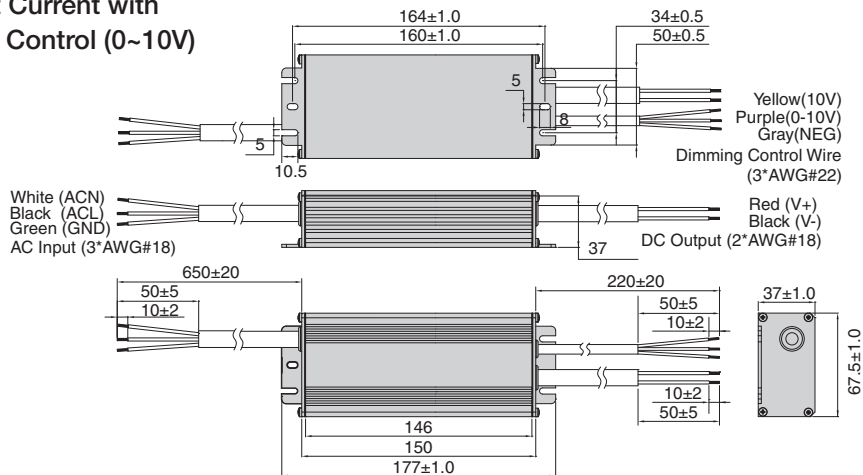
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU060A035AQD	350mA	86-170VDC	± 5%	89%	91%
MU060A045AQD	450mA	67-134VDC	± 5%	89%	91%
MU060A070AQD	700mA	43-86VDC	± 5%	88%	90%
MU060A105AQD	1050mA	29-58VDC	± 5%	88%	90%
MU060A140AQD	1400mA	21-43VDC	± 5%	88%	90%
MU060A170AQD	1700mA	18-36VDC	± 5%	88%	90%
MU060A230AQD	2300mA	13-27VDC	± 5%	87%	89%
MU060A330AQD	3300mA	9-18VDC	± 5%	86%	88%
MU060A500AQD	5000mA	6-12VDC	± 5%	85%	87%

Mechanical Outline (unit: mm)

Constant Current



Constant Current with Dimming Control (0~10V)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

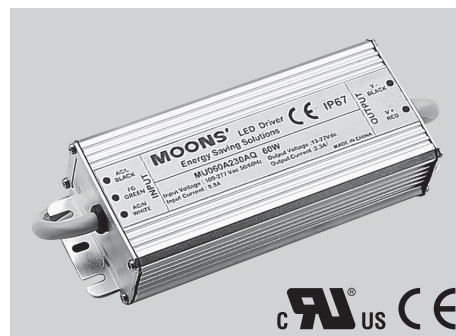
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU060A Series - Constant Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 91.5% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



190 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.95 at 220VAC (typical)
Inrush current	50A MAX (25°C at 220VAC, cold start)
Input current	0.8A MAX at 110VAC; 0.38A MAX at 220VAC
Efficiency	91.5% (typical) at 220VAC maximum load
Maximum power	60W
Line regulation	± 1%
Load regulation	± 2%
Leakage current	1mA MAX
Protections	Over voltage, over current, short circuit, over temperature

## Environmental Specifications

Operating temperature	-30°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input/output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference Dimension (L x W x H)	190 × 67.5 × 37 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

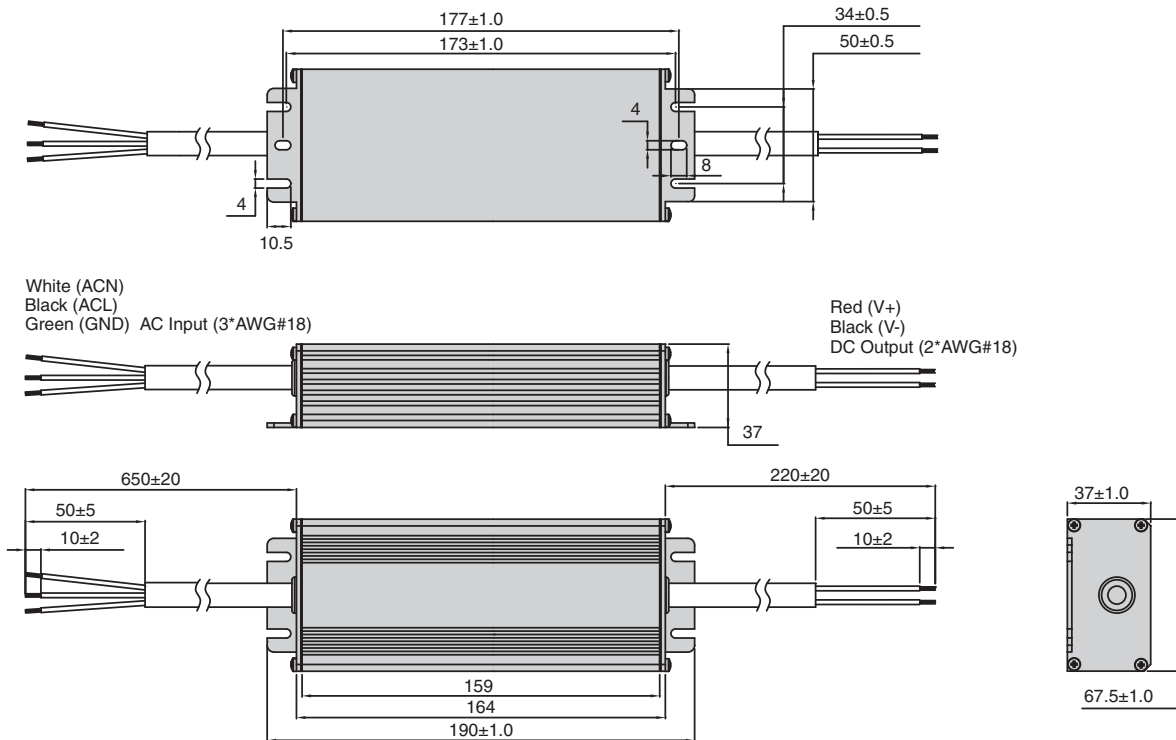
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

## Model Specifications - Constant Voltage

Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU060A012AP	12VDC	5000mA	± 5%	87.5%	89.5%
MU060A024AP	24VDC	2500mA	± 5%	89.5%	91.5%
MU060A036AP	36VDC	1670mA	± 5%	89.5%	91.5%
MU060A042AP	42VDC	1430mA	± 5%	89.5%	91.5%
MU060A048AP	48VDC	1250mA	± 5%	89.5%	91.5%
MU060A054AP	54VDC	1110mA	± 5%	89.5%	91.5%
MU060A081AP	81VDC	740mA	± 5%	89.5%	91.5%
MU060A105AP	105VDC	570mA	± 5%	89.5%	91.5%

## Mechanical Outline (unit: mm)



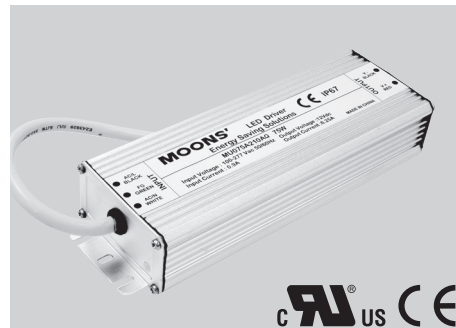
Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU SeriesLED Driver  
- General Series  
- Outdoor Use  
- MU SeriesLED Driver  
- General Series  
- Outdoor Use  
- Other TypesLED Driver  
- General Series  
- Indoor UseLED Driver  
- Intelligent Series  
- 50W Intelligent SeriesLED Driver  
- Intelligent Series  
- 30W Intelligent SeriesLED Driver  
- Programmable Series  
- Clock Control SeriesGeneral Power Supplies  
- MF Series

# MU075A Series - Constant Current Output & Dimming Control

## Features

- Input voltage range: 90-305VAC
- High efficiency: 92% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- Dimming control: 0 ~ 10VDC
- 5-year warranty



177 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.96 at 220VAC (typical)
Inrush current	50A MAX (25°C at 220VAC, cold start)
Input current	0.9A MAX at 110VAC; 0.42A MAX at 220VAC
Efficiency	92% (typical) at 220VAC maximum load
Maximum power	75W
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protections	Over voltage, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	177 × 67.5 × 37 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

### Model Specifications - Constant Current

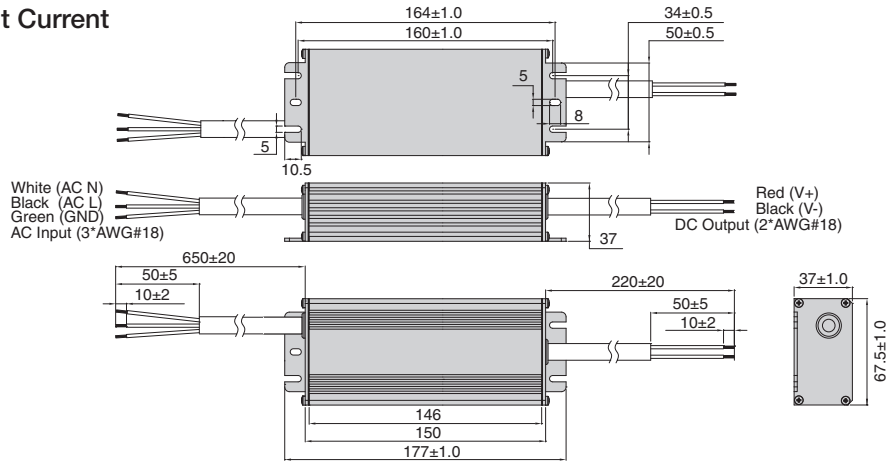
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU075A035AQ	350mA	107-214VDC	± 5%	90%	92%
MU075A045AQ	450mA	83-166VDC	± 5%	90%	92%
MU075A070AQ	700mA	54-108VDC	± 5%	89%	91%
MU075A105AQ	1050mA	36-72VDC	± 5%	88%	90%
MU075A140AQ	1400mA	27-54VDC	± 5%	88%	90%
MU075A210AQ	2100mA	18-36VDC	± 5%	87%	89%
MU075A280AQ	2800mA	13-27VDC	± 5%	87%	89%
MU075A375AQ	3750mA	10-20VDC	± 5%	86%	88%
MU075A500AQ	5000mA	7-15VDC	± 5%	86%	88%

### Model Specifications - Dimming Control (0~10V)

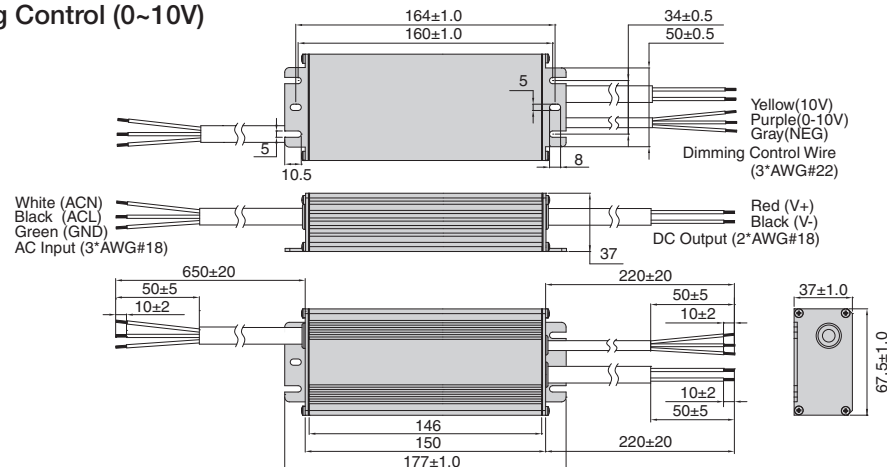
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU075A035AQD	350mA	107-214VDC	± 5%	90%	92%
MU075A045AQD	450mA	83-166VDC	± 5%	90%	92%
MU075A070AQD	700mA	54-108VDC	± 5%	89%	91%
MU075A105AQD	1050mA	36-72VDC	± 5%	88%	90%
MU075A140AQD	1400mA	27-54VDC	± 5%	88%	90%
MU075A210AQD	2100mA	18-36VDC	± 5%	87%	89%
MU075A280AQD	2800mA	13-27VDC	± 5%	87%	89%
MU075A375AQD	3750mA	10-20VDC	± 5%	86%	88%
MU075A500AQD	5000mA	7-15VDC	± 5%	84%	86%

### Mechanical Outline (unit: mm)

#### Constant Current



#### Constant Current with Dimming Control (0~10V)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

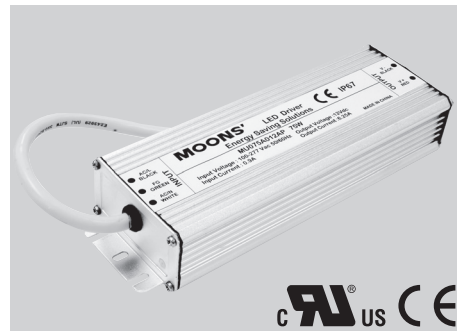
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU075A Series - Constant Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 92% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



190 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.95 at 220VAC (typical)
Inrush current	50A MAX (25°C at 220VAC, cold start)
Input current	0.9A MAX at 110VAC; 0.45A MAX at 220VAC
Efficiency	92% (typical) at 220VAC maximum load
Maximum power	75W
Line regulation	± 1%
Load regulation	± 2%
Leakage current	1mA MAX
Protections	Over voltage, over current, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference Dimension (L x W x H)	190 × 67.5 × 37 (mm)

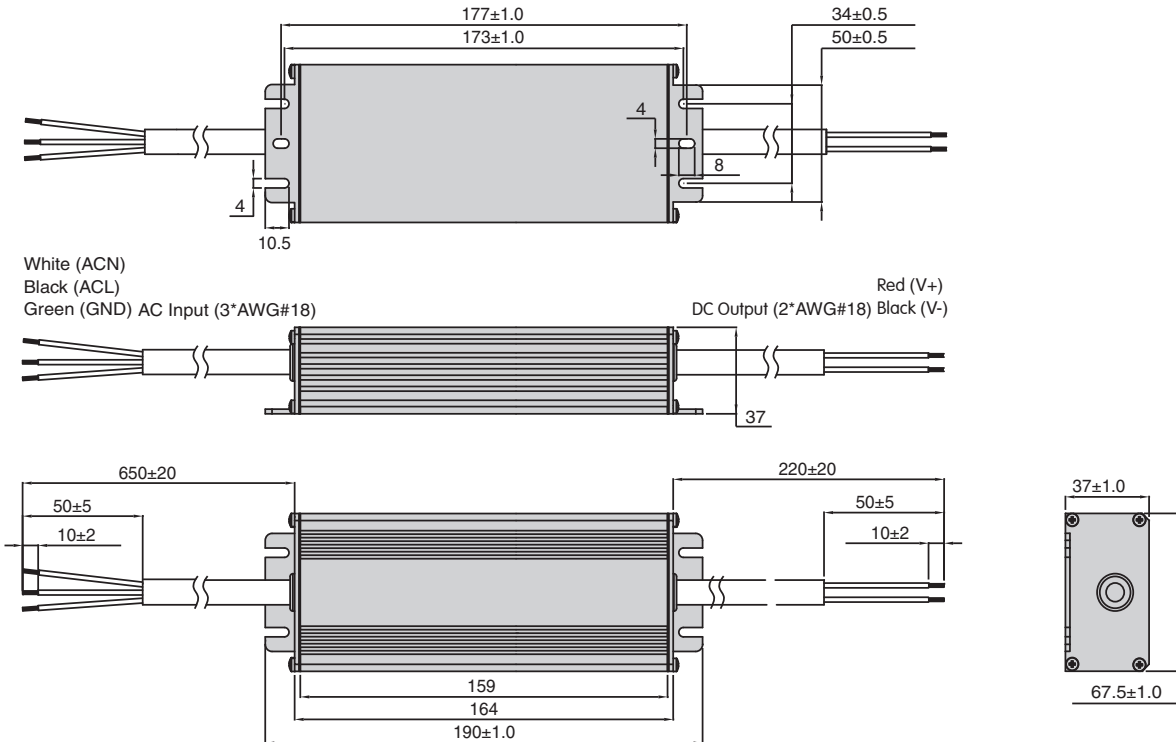
## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

## Model Specifications - Constant Voltage

Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU075A012AP	12VDC	6.25A	± 5%	88%	90%
MU075A024AP	24VDC	3.13A	± 5%	90%	92%
MU075A036AP	36VDC	2.08A	± 5%	90%	92%
MU075A042AP	42VDC	1.79A	± 5%	90%	92%
MU075A048AP	48VDC	1.56A	± 5%	90%	92%
MU075A054AP	54VDC	1.39A	± 5%	90%	92%
MU075A081AP	81VDC	0.93A	± 5%	90%	92%
MU075A105AP	105VDC	0.71A	± 5%	90%	92%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

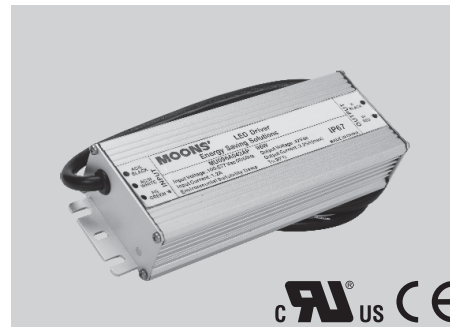
General Power Supplies  
- MF Series



# MU096A Series - Constant Current Output & Dimming Control

## Features

- Input voltage range: 90-305VAC
- High efficiency: 90% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- Dimming control: 0 ~ 10VDC
- 5-year warranty



201 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.96 at 220VAC
Inrush current	50A MAX (25°C at 220VAC, cold start)
Input current	1.2A MAX at 110VAC; 0.6A MAX at 220VAC
Efficiency	up to 90%
Maximum power	96W
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protections	Over voltage, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	201 × 67.5 × 37 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No.107.1 CSA-C22.2 No.223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

### Model Specifications - Constant Current

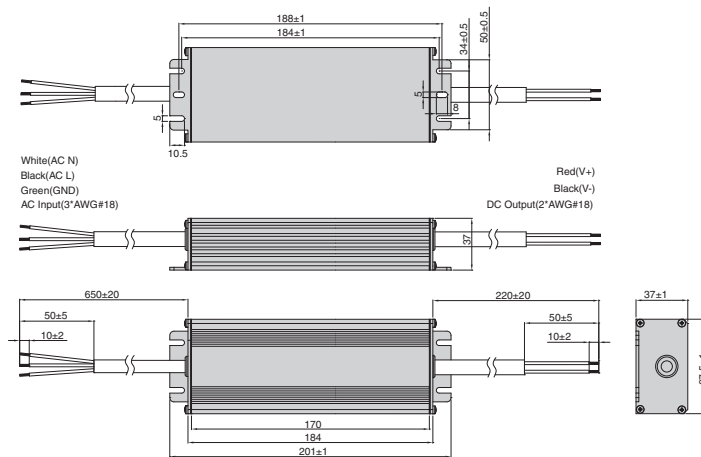
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU096A175AQ	1750mA	55V	± 5%	88%	90%
MU096A210AQ	2100mA	46V	± 5%	87%	89%
MU096A245AQ	2450mA	39V	± 5%	87%	89%
MU096A280AQ	2800mA	34V	± 5%	87%	89%
MU096A315AQ	3150mA	30.5V	± 5%	86%	88%
MU096A357AQ	3570mA	27V	± 5%	86%	88%
MU096A420AQ	4200mA	23V	± 5%	86%	88%

### Model Specifications - Dimming Control (0~10V)

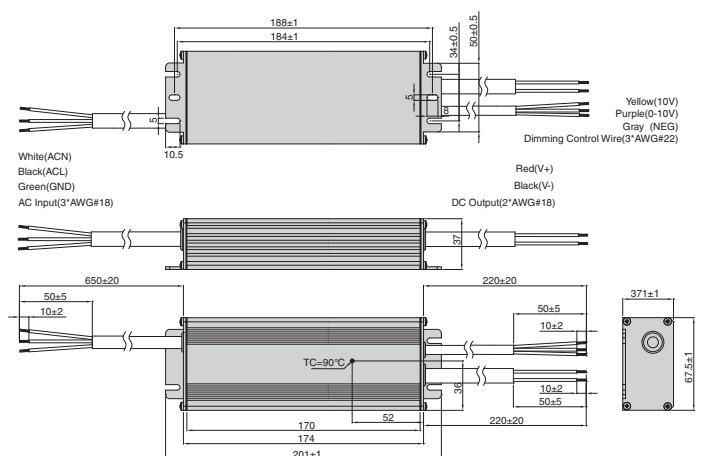
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU096A175AQD	1750mA	55V	± 5%	88%	90%
MU096A210AQD	2100mA	46V	± 5%	87%	89%
MU096A245AQD	2450mA	39V	± 5%	87%	89%
MU096A280AQD	2800mA	34V	± 5%	87%	89%
MU096A315AQD	3150mA	30.5V	± 5%	86%	88%
MU096A357AQD	3570mA	27V	± 5%	86%	88%
MU096A420AQD	4200mA	23V	± 5%	86%	88%

### Mechanical Outline (unit: mm)

#### Constant Current



#### Constant Current with Dimming Control (0~10V)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

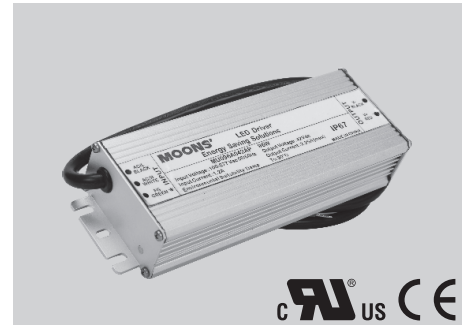
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU096A Series - Constant Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: up to 90%
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



201 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.96 at 220VAC
Inrush current	50A MAX (25°C at 220VAC, cold start)
Input current	1.2A MAX at 110VAC; 0.6A MAX at 220VAC
Efficiency	up to 90%
Maximum power	96W
Line regulation	± 1%
Load regulation	± 2%
Leakage current	1mA MAX
Protections	Over voltage, over current, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference Dimension (L x W x H)	201 × 67.5 × 37 (mm)

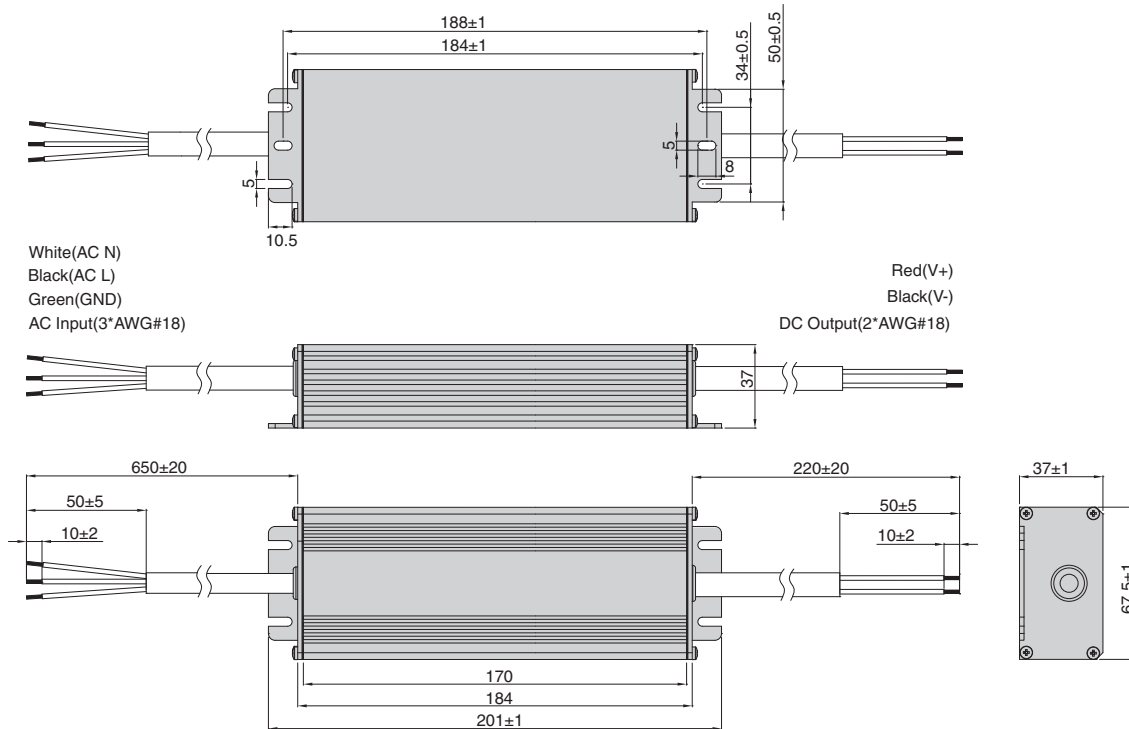
## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No.107.1 CSA-C22.2 No.223-M91 Class 2
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

## Model Specifications - Constant Voltage

Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU096A024AP	24 VDC	4.0A	± 5%	86%	88%
MU096A028AP	28VDC	3.4A	± 5%	86%	88%
MU096A036AP	36 VDC	2.66A	± 5%	87%	89%
MU096A042AP	42 VDC	2.25A	± 5%	87%	89%
MU096A048AP	48 VDC	2.0A	± 5%	87%	89%
MU096A054AP	54 VDC	1.77A	± 5%	88%	90%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU100A Series - Constant Current Output & Dimming Control

## Features

- Input voltage range: 90-305VAC
- High efficiency: 92% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP
- Comply with UL8750, UL1012, CSA-C22.2 No. 107.1, IEC61347-1, IEC61347-2-13
- UL / CE
- Dimming Control: 0 ~ 10VDC
- 5-year warranty



221 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.96 at 220VAC (typical)
Inrush current	65 A MAX (25°C, at 220VAC, cold start)
Input current	1.3A MAX at 110VAC; 0.6A MAX at 220VAC
Efficiency	92% (typical) at 220VAC maximum load
Maximum power	100W
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protections	Over voltage, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference Dimension (L x W x H)	221 × 67.5 × 37(mm)

## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

## Model Specifications - Constant Current

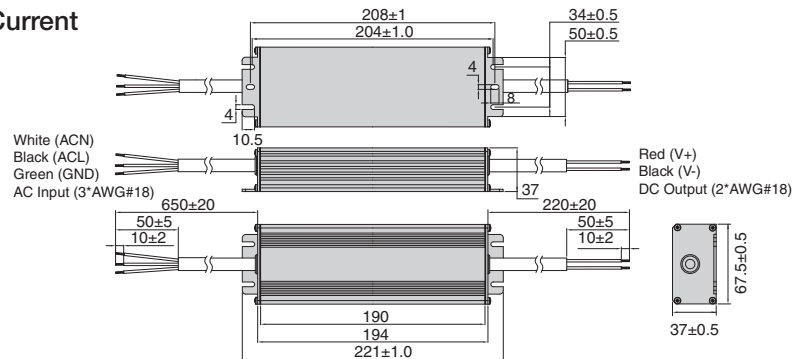
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU100A035AQ	350mA	172-286VDC	± 5%	90%	92%
MU100A045AQ	450mA	132-222VDC	± 5%	90%	92%
MU100A070AQ	700mA	86-143VDC	± 5%	89%	91%
MU100A105AQ	1050mA	57-95VDC	± 5%	89%	91%
MU100A140AQ	1400mA	43-71VDC	± 5%	89%	91%
MU100A175AQ	1750mA	34-57VDC	± 5%	89%	91%
MU100A210AQ	2100mA	29-48VDC	± 5%	89%	91%
MU100A245AQ	2450mA	25-41VDC	± 5%	89%	91%
MU100A280AQ	2800mA	22-36VDC	± 5%	88%	90%
MU100A315AQ	3150mA	19-32VDC	± 5%	88%	90%
MU100A357AQ	3570mA	17-28VDC	± 5%	88%	90%
MU100A420AQ	4200mA	14-24VDC	± 5%	88%	90%

## Model Specifications - Dimming Control (0~10V)

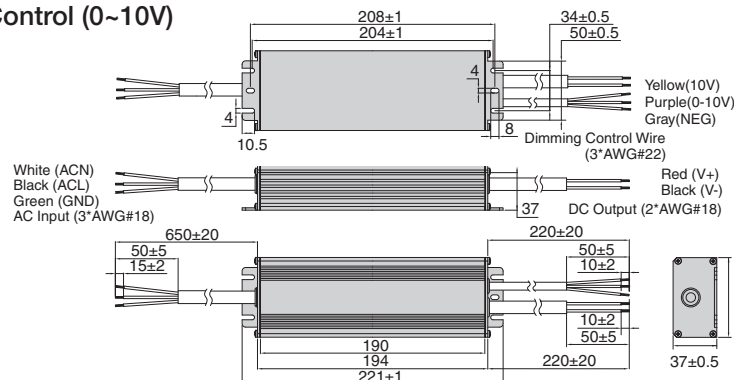
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU100A035AQD	350mA	172-286VDC	± 5%	90%	92%
MU100A045AQD	450mA	132-222VDC	± 5%	90%	92%
MU100A070AQD	700mA	86-143VDC	± 5%	89%	91%
MU100A105AQD	1050mA	57-95VDC	± 5%	89%	91%
MU100A140AQD	1400mA	43-71VDC	± 5%	89%	91%
MU100A175AQD	1750mA	34-57VDC	± 5%	89%	91%
MU100A210AQD	2100mA	29-48VDC	± 5%	89%	91%
MU100A245AQD	2450mA	25-41VDC	± 5%	89%	91%
MU100A280AQD	2800mA	22-36VDC	± 5%	88%	90%
MU100A315AQD	3150mA	19-32VDC	± 5%	88%	90%
MU100A357AQD	3570mA	17-28VDC	± 5%	88%	90%
MU100A420AQD	4200mA	14-24VDC	± 5%	88%	90%

## Mechanical Outline (unit: mm)

### Constant Current



### Constant Current with Dimming Control (0~10V)



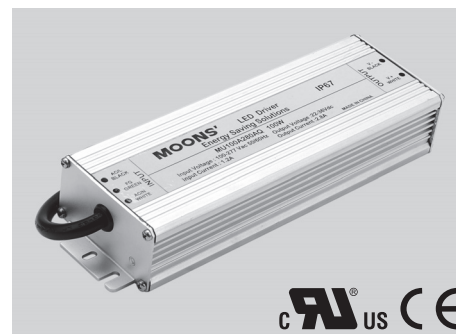
Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU SeriesLED Driver  
- General Series  
- Outdoor Use  
- MU SeriesLED Driver  
- General Series  
- Outdoor Use  
- Other TypesLED Driver  
- General Series  
- Indoor UseLED Driver  
- Intelligent Series  
- 50W Intelligent SeriesLED Driver  
- 30W Intelligent SeriesLED Driver  
- Programmable Series  
- Clock Control SeriesGeneral Power Supplies  
- MF Series

# MU100A Series - Constant Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 93% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1012, CSA-C22.2 No. 107.1, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



221 × 67.5 × 37mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.95 at 220VAC (typical)
Inrush current	65A MAX (25°C, at 220VAC, cold start)
Input current	1.2A MAX at 110 VAC; 0.6A MAX at 220VAC
Efficiency	93% (typical) at 220VAC maximum load
Maximum power	100W
Line regulation	± 1%
Load regulation	± 2%
Leakage current	1mA MAX
Protections	Over voltage, over current, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	211 × 67.5 × 37 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

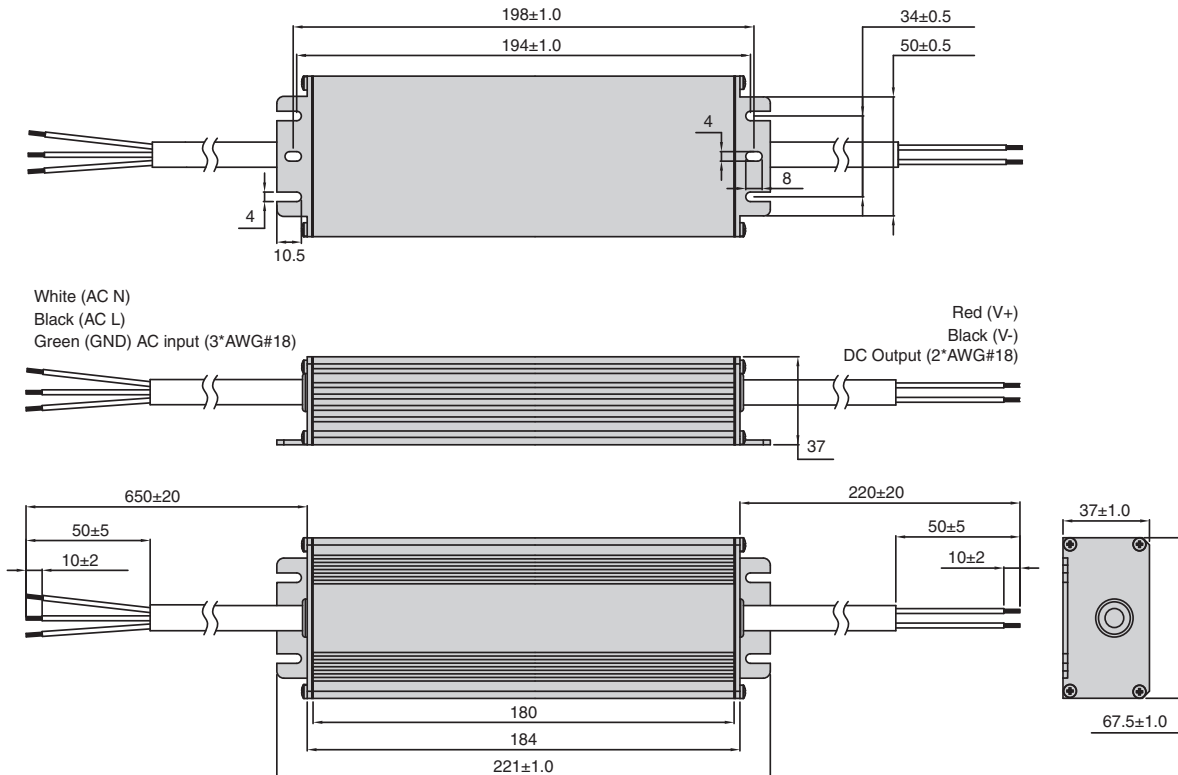
General Power Supplies  
- MF Series



Model Specifications - constant voltage

Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU100A012AP	12VDC	8.33A	± 5%	89%	91%
MU100A024AP	24VDC	4.17A	± 5%	90%	92%
MU100A036AP	36VDC	2.77A	± 5%	90%	92%
MU100A042AP	42VDC	2.38A	± 5%	90%	92%
MU100A048AP	48VDC	2.08A	± 5%	90%	92%
MU100A054AP	54VDC	1.85A	± 5%	90%	92%
MU100A081AP	81VDC	1.23A	± 5%	91%	93%
MU100A105AP	105VDC	0.95A	± 5%	91%	93%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU150A Series - Constant Current Output & Dimming Control

## Features

- Input voltage range: 90-305VAC
- High efficiency: 92% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, SCP, OTP
- Comply with UL8750, UL1012, CSA-C22.2 No. 107.1, IEC61347-1, IEC61347-2-13
- UL / CE
- Dimming control: 0 ~ 10VDC
- 5-year warranty



205 × 86 × 43mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.96 at 220VAC (typical)
Inrush current	65A MAX (25°C at 220VAC, cold start)
Input current	1.8A MAX at 110VAC; 0.9A MAX at 220VAC
Efficiency	92% (typical) at 220VAC maximum load
Maximum power	150 W
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protections	Over voltage, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	205 × 86 × 43 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

### Model Specifications - Constant Current

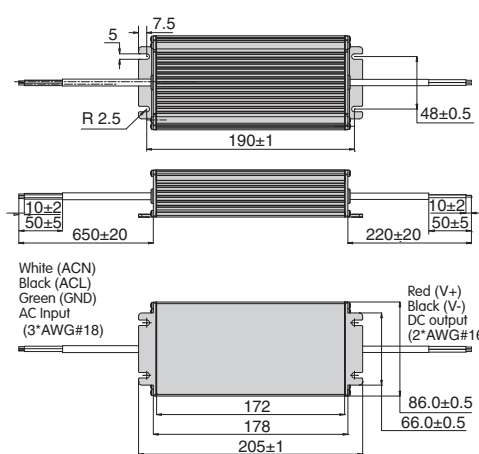
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU150A035AQ	350mA	256-428VDC	± 5%	90%	92%
MU150A045AQ	450mA	200-333VDC	± 5%	90%	92%
MU150A070AQ	700mA	128-214VDC	± 5%	90%	92%
MU150A105AQ	1050mA	85-142VDC	± 5%	90%	92%
MU150A140AQ	1400mA	64-107VDC	± 5%	89%	91%
MU150A175AQ	1750mA	51-85VDC	± 5%	89%	91%
MU150A210AQ	2100mA	42-71VDC	± 5%	89%	91%
MU150A245AQ	2450mA	36-61VDC	± 5%	89%	91%
MU150A280AQ	2800mA	31-53VDC	± 5%	89%	91%
MU150A315AQ	3150mA	28-47VDC	± 5%	89%	91%
MU150A350AQ	3500mA	25-42VDC	± 5%	88%	90%
MU150A420AQ	4200mA	21-35VDC	± 5%	88%	90%
MU150A490AQ	4900mA	18-30VDC	± 5%	88%	90%
MU150A595AQ	5950mA	15-25VDC	± 5%	88%	90%

### Model Specifications - Dimming Control (0~10V)

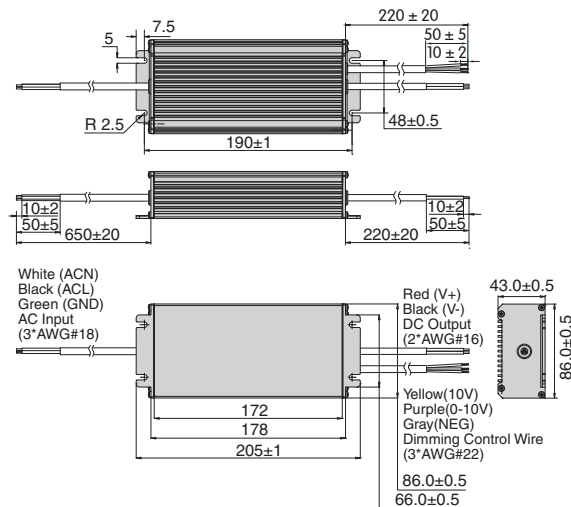
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU150A035AQD	350mA	256-428VDC	± 5%	90%	92%
MU150A045AQD	450mA	200-333VDC	± 5%	90%	92%
MU150A070AQD	700mA	128-214VDC	± 5%	90%	92%
MU150A105AQD	1050mA	85-142VDC	± 5%	90%	92%
MU150A140AQD	1400mA	64-107VDC	± 5%	89%	91%
MU150A175AQD	1750mA	51-85VDC	± 5%	89%	91%
MU150A210AQD	2100mA	42-71VDC	± 5%	89%	91%
MU150A245AQD	2450mA	36-61VDC	± 5%	89%	91%
MU150A280AQD	2800mA	31-53VDC	± 5%	89%	91%
MU150A315AQD	3150mA	28-47VDC	± 5%	89%	91%
MU150A350AQD	3500mA	25-42VDC	± 5%	88%	90%
MU150A420AQD	4200mA	21-35VDC	± 5%	88%	90%
MU150A490AQD	4900mA	18-30VDC	± 5%	88%	90%
MU150A595AQD	5950mA	15-25VDC	± 5%	88%	90%

### Mechanical Outline (unit: mm)

#### Constant Current



#### Constant Current with Dimming Control (0~10V)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU150A Series - Constant Voltage Output

## Features

- Input voltage range: 90-305VAC
- High efficiency: 93% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 compliant
- Protections: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1012, CSA-C22.2 No. 107.1, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



205 × 86 × 43mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.96 at 220VAC (typical)
Inrush current	65A MAX (25°C at 220VAC, cold start)
Input current	1.8A MAX at 110VAC; 0.9A MAX at 220VAC
Efficiency	93% (typical) at 220VAC maximum load
Maximum power	150W
Line regulation	± 1%
Load regulation	± 2%
Leakage current	1mA MAX
Protections	Over voltage, over current, short circuit, over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	205 × 86 × 43 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Part15 / EN55015 Class B
Radiated emissions	FCC Part15 / EN55015 Class B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

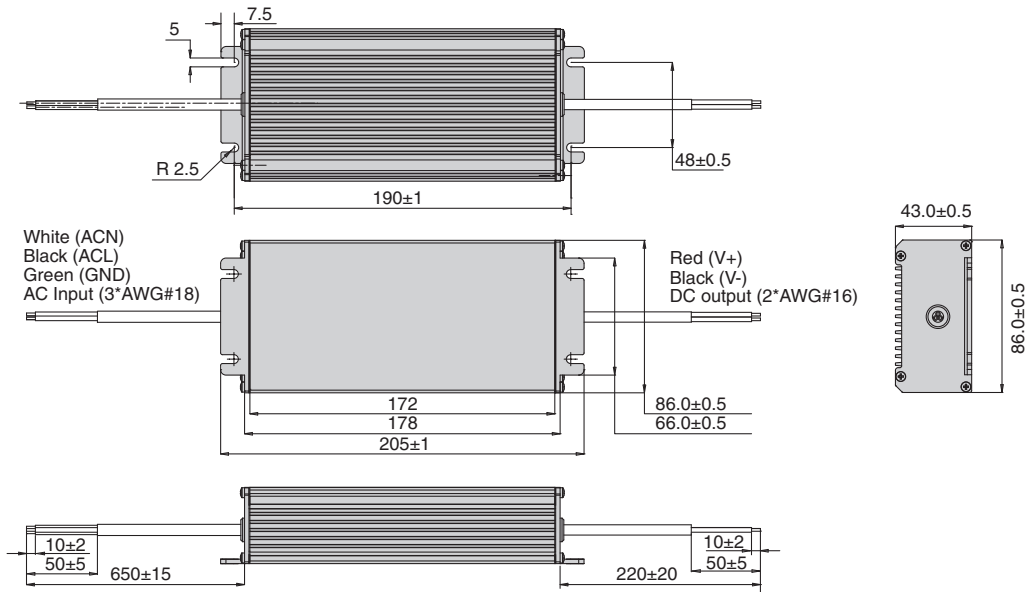
General Power Supplies  
- MF Series

## Model Specifications - Constant Voltage

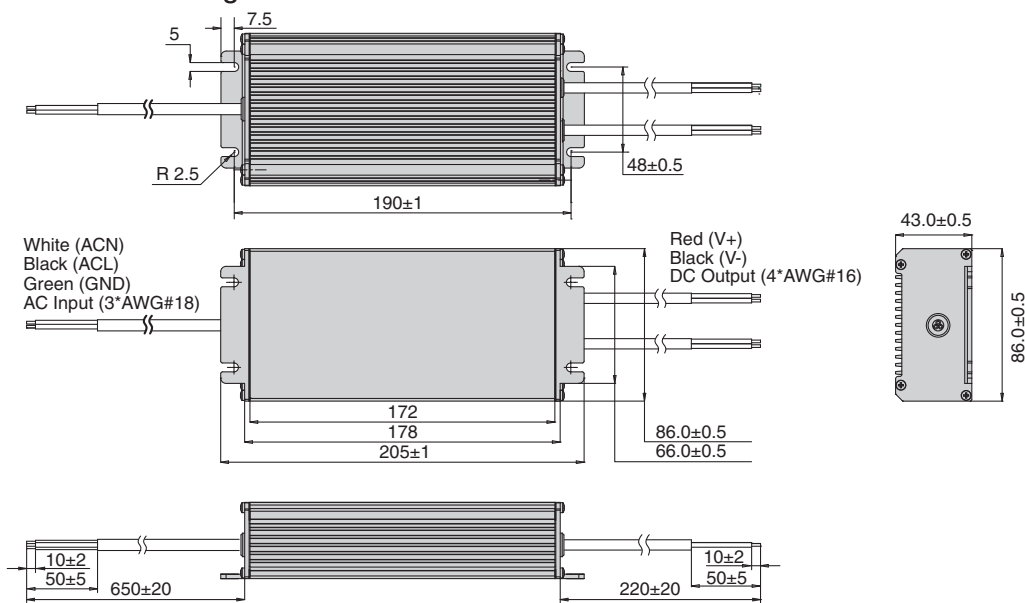
Part Number	Output Voltage	MAX Output Current	Voltage Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU150A012AP	12VDC	12.50A	± 5%	90%	92%
MU150A024AP	24VDC	6.25A	± 5%	91%	93%
MU150A036AP	36VDC	4.17A	± 5%	91%	93%
MU150A042AP	42VDC	3.57A	± 5%	91%	93%
MU150A048AP	48VDC	3.13A	± 5%	91%	93%
MU150A054AP	54VDC	2.78A	± 5%	91%	93%
MU150A081AP	81VDC	1.85A	± 5%	91%	93%
MU150A105AP	105VDC	1.42A	± 5%	91%	93%

## Mechanical Outline (unit: mm)

### Constant Voltage



### constant voltage with 12V



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU200A Series - constant current output & dimming control

## Features

- input voltage range: 90-305 VAC
- high efficiency: 92% typical
- active PFC: 0.99 typical
- lightning protection (EN61000-4-5 Level IV)
- IP67 compliant
- protection: OVP, SCP, OTP
- Comply with UL8750, UL1012, CSA-C22.2 No. 107.1, IEC61347-1, IEC61347-2-13
- UL / CE
- dimming control: 0 ~ 10 VDC
- 5-year warranty



223 × 95 × 46mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power factor	0.99 at 110VAC 0.95 at 220VAC (typical)
Inrush current	65A MAX (25°C, at 220VAC, cold start)
Input current	2.4A MAX at 110VAC 1.2A MAX at 220VAC
Efficiency	92% (typical) at 220VAC maximum load
Maximum power	200W
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protection	over voltage, short circuit: auto recovery; over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	convection
Isolation voltage	input / output 3000VAC
MTBF	350,000 hours full load at 25°C ambient
Life time	100,000 hours at 25°C ambient
Dimension (L x W x H)	223 × 95 × 46 (mm)

## Safety & EMC Compliance

CUL	UL 8750, UL1012
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

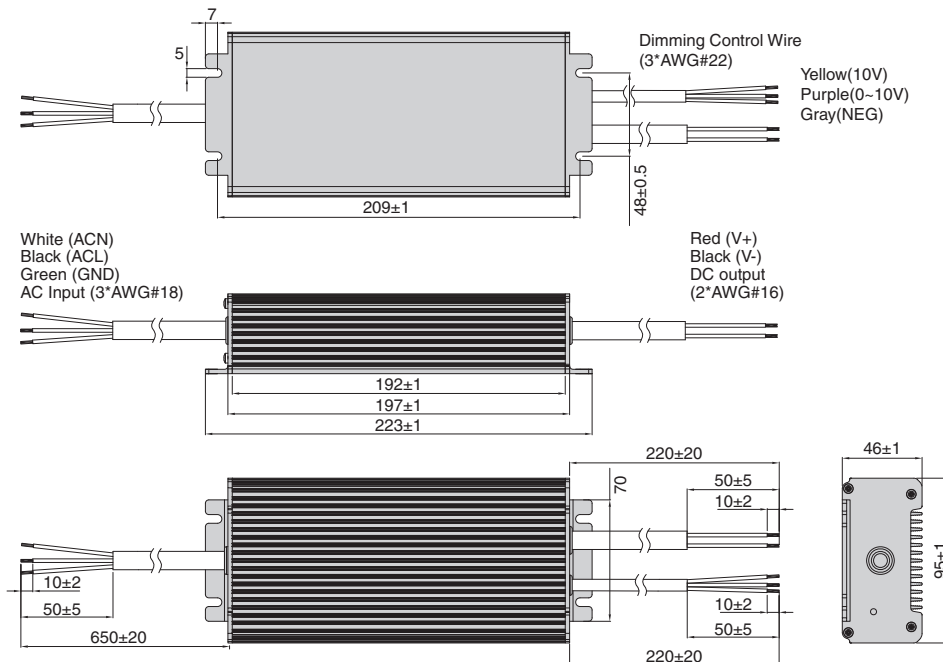
Model Specifications - constant current

part number	output current	output voltage	current accuracy	efficiency (typical)	
				110VAC	220VAC
MU200A045AQ	450 mA	266-444VDC	± 3%	90%	92%
MU200A070AQ	700 mA	171-285VDC	± 3%	90%	92%
MU200A105AQ	1050 mA	114-190VDC	± 3%	90%	92%
MU200A140AQ	1400 mA	85-142VDC	± 3%	90%	92%
MU200A175AQ	1750 mA	68-114VDC	± 3%	89%	91%
MU200A210AQ	2100 mA	57-95VDC	± 3%	89%	91%
MU200A245AQ	2450 mA	48-81VDC	± 3%	89%	91%
MU200A280AQ	2800 mA	42-71VDC	± 3%	89%	91%
MU200A315AQ	3150 mA	38-63VDC	± 3%	89%	91%
MU200A350AQ	3500 mA	34-57VDC	± 3%	89%	91%
MU200A420AQ	4200 mA	28-47VDC	± 3%	88%	90%
MU200A490AQ	4900 mA	24-40VDC	± 3%	88%	90%
MU200A560AQ	5600 mA	21-35VDC	± 3%	88%	90%
MU200A630AQ	6300 mA	15-25VDC	± 3%	88%	90%

Model Specifications - dimming control (0~10V)

part number	output current	output voltage	current accuracy	efficiency (typical)	
				110VAC	220VAC
MU200A045AQD	450 mA	266-444VDC	± 3%	90%	92%
MU200A070AQD	700 mA	171-285VDC	± 3%	90%	92%
MU200A105AQD	1050 mA	114-190VDC	± 3%	90%	92%
MU200A140AQD	1400 mA	85-142VDC	± 3%	90%	92%
MU200A175AQD	1750 mA	68-114VDC	± 3%	89%	91%
MU200A210AQD	2100 mA	57-95VDC	± 3%	89%	91%
MU200A245AQD	2450 mA	48-81VDC	± 3%	89%	91%
MU200A280AQD	2800 mA	42-71VDC	± 3%	89%	91%
MU200A315AQD	3150 mA	38-63VDC	± 3%	89%	91%
MU200A350AQD	3500 mA	34-57VDC	± 3%	89%	91%
MU200A420AQD	4200 mA	28-47VDC	± 3%	88%	90%
MU200A490AQD	4900 mA	24-40VDC	± 3%	88%	90%
MU200A560AQD	5600 mA	21-35VDC	± 3%	88%	90%
MU200A630AQD	6300 mA	15-25VDC	± 3%	88%	90%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# MU200A Series - constant voltage output

## Features

- input voltage range: 90-305 VAC
- high efficiency: 93% typical
- active PFC: 0.99 typical
- lightning protection (EN61000-4-5 Level IV)
- IP67 compliant
- protection: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1012, CSA-C22.2 No. 107.1, IEC61347-1, IEC61347-2-13
- UL / CE
- 5-year warranty



223 × 95 × 46mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power factor	0.99 at 110 VAC 0.95 at 220 VAC (typical)
Inrush current	65A MAX (25°C, at 220VAC, cold start)
Input current	2.3A MAX at 110 VAC 1.1A MAX at 220 VAC
Efficiency	93% (typical) at 220 VAC maximum load
Maximum power	200W
Line regulation	± 1%
Load regulation	± 2%
Leakage current	1mA MAX
Protection	over voltage, over current, short circuit: auto recovery; over temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	convection
Isolation voltage	input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	100,000 hours at 25°C ambient
Dimension (L x W x H)	223 × 95 × 46 (mm)

## Safety & EMC Compliance

CUL	UL 8750, UL1012
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

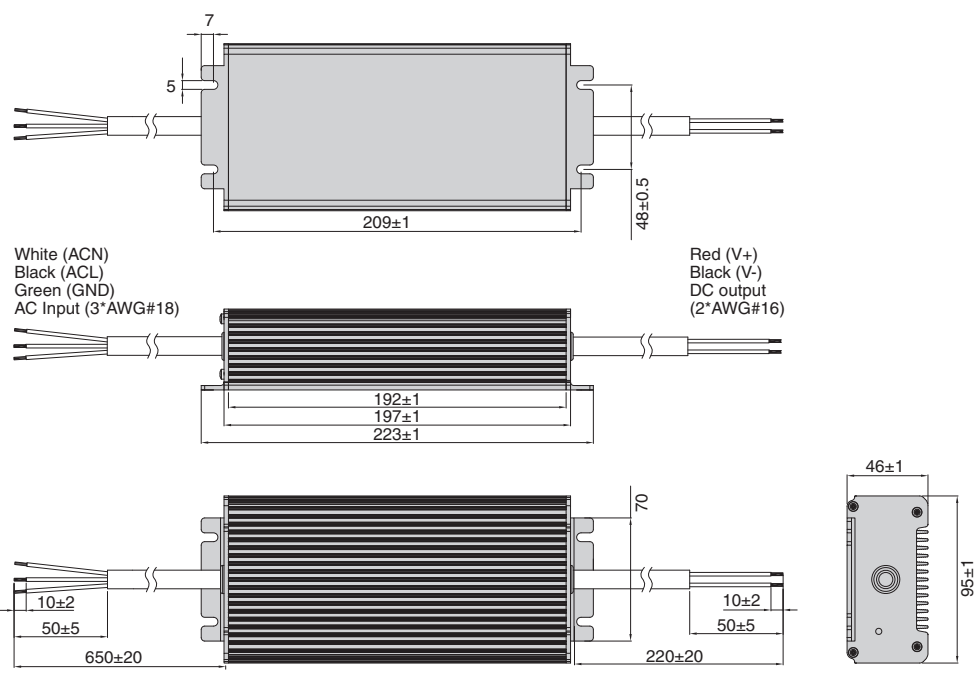
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

Model Specifications - constant voltage

part number	output voltage	MAX output current	voltage accuracy	efficiency (typical)	
				110VAC	220VAC
MU200A012AP	12 VDC	16.67A	± 5%	90.0%	92.0%
MU200A024AP	24 VDC	8.33 A	± 5%	90.0%	92.0%
MU200A036AP	36 VDC	5.56 A	± 5%	90.5%	92.5%
MU200A042AP	42 VDC	4.76 A	± 5%	90.5%	92.5%
MU200A048AP	48 VDC	4.17 A	± 5%	90.5%	92.5%
MU200A050AP	50 VDC	4.00 A	± 5%	90.5%	92.5%
MU200A052AP	52 VDC	3.84 A	± 5%	91.0%	93.0%
MU200A054AP	54 VDC	3.70 A	± 5%	91.0%	93.0%
MU200A081AP	81 VDC	2.47 A	± 5%	91.0%	93.0%
MU200A100AP	105VDC	1.9 A	± 5%	91.0%	93.0%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

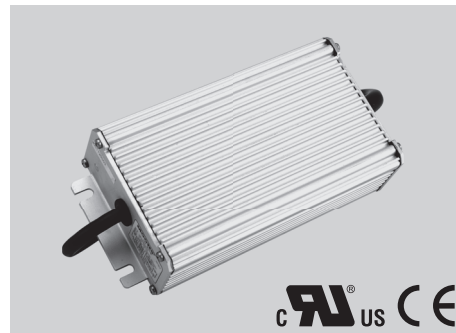
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU081A085CQ - Constant Current Output

## Features

- Input voltage range 90-305VAC
- Outputs: Constant current 850mA, 3chs
- High efficiency: 88% typical (at 220VAC), 86% typical (at 100VAC)
- Active PFC: 99% typical
- IP67 Compliant
- Protection: OVP, OCP, SCP, OTP
- Comply with UL8750, UL1310/UL1012, IEC61347.1, IEC61347-2-13
- UL / CE
- 5-year warranty



150 × 86 × 43mm

## Electrical Specifications

Input voltage range	90~305VAC
Frequency	47~63Hz
Power factor	0.99 at 100VAC (typical), 0.95 at 220VAC (typical)
Inrush current	50A MAX (25°C, at 220VAC, Cold Start)
Input current	0.96A MAX at 100VAC
Efficiency	88% typical at Maximum Load
Maximum power	81.6W
Output voltage range	22~32VDC
Output current	0.850A * 3 Channles
Line regulation	± 1%
Load regulation	± 3%
Leakage current	1mA MAX
Protection	Over voltage, over current, short circuit; auto recovery Over temperature protection

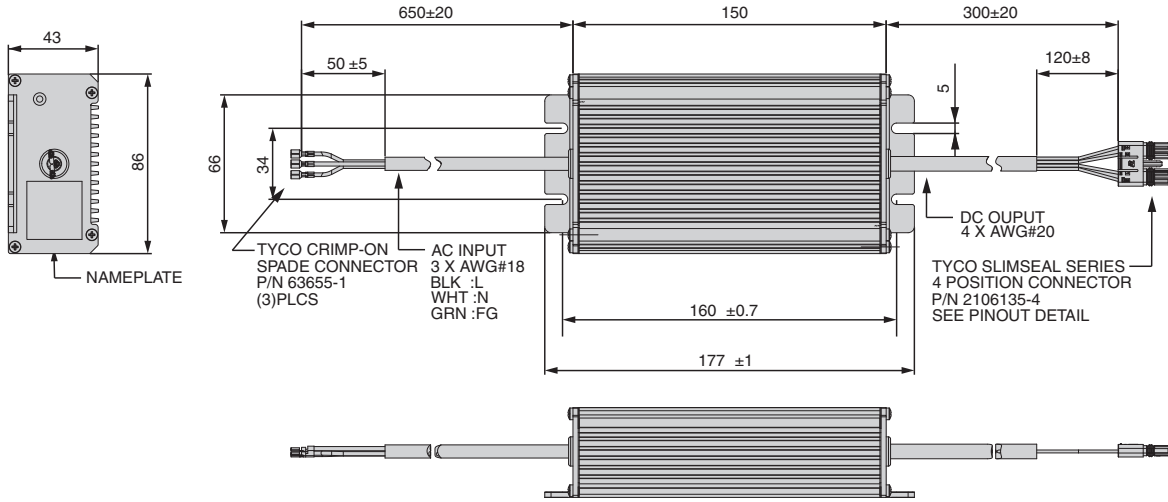
## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case temperature	90°C
Humidity	5% ~ 100%RH
Cooling method	Convection
Isolation voltage	Input / output 3000VAC
MTBF	300,000 hours full load at 25°C ambient
Life time	100,000 hours at 25°C ambient, 5,000 hours at 70°C ambient
Reference dimension (L x W x H)	150 × 86 × 43 (mm)

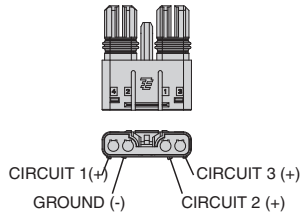
## Safety & EMC Compliance

CUL	UL 8750, UL1310 / UL1012
CE	EN 61347-1, EN61347-2-13
Conducted emissions	FCC Level B
Radiated emissions	FCC Level B
Harmonic current emissions	EN61000-3-2
Voltage fluctuations and flicker	EN61000-3-3
Electrostatic discharge	EN61000-4-2
RFE field susceptibility	EN61000-4-3
Electrical fast transient	EN61000-4-4
Surge immunity test	EN61000-4-5
Conducted radio frequency	EN61000-4-6
Power frequency magnetic field test	EN61000-4-8zz
Voltage dips	EN61000-4-11
Electromagnetic immunity	EN61547

■ Mechanical Outline (unit: mm)



CONNECTOR PINOUT



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MR16 Triac Dimming Spotlight LED Driver (Installed)

## Features

- Input Voltage Range: 90-120VAC
- High Efficiency: 70~72% typical
- Triac dimming
- Protections: OCP, SCP
- Non isolated
- 2-year warranty



31 × 28 × 26.5mm

## Electrical Specifications

Input voltage range	90~120VAC
Frequency	47~63Hz
Dimming	Triac dimming
Inrush current	15 A Max (25°C, at 110 VAC, Cold Start)
Input current	0.15A Max at 100VAC
Efficiency	70~72% (typical) at 110 VAC maximum load
Maximum power	7.0W
Line Regulation	± 5%
Load Regulation	± 5%
Turn on delay	<3S at 100VAC maximum load
Protections	Over Current, Short Circuit

## Environmental Specifications

Operating temperature	-10°C ~ +50°C
Storage temperature	-30°C ~ +70°C
Humidity	10% ~ 90%RH
Cooling method	Convection
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	31 × 28 × 26.5(mm)

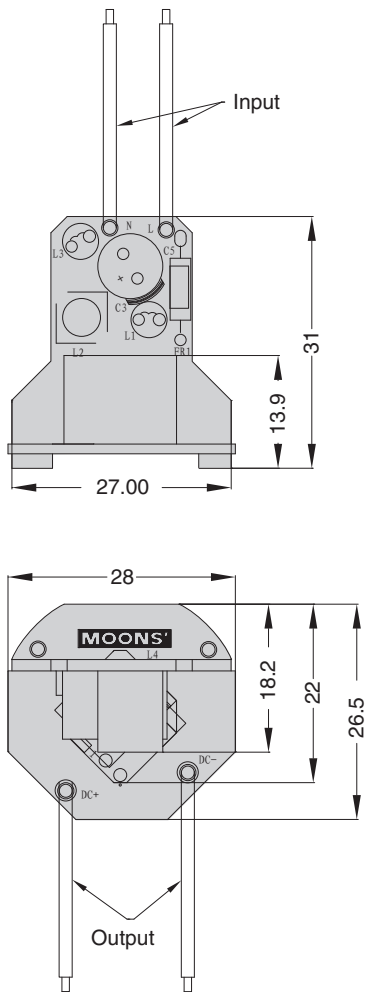
## Safety & EMC Compliance

Safety	J61347-1, J61347-2-13
Conducted Emissions	FCC Part15 / J55015

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				90VAC	110VAC
OA004N030AQ-L	300mA	12-14VDC	± 10%	72%	72%
OA007N040AQ-L	400mA	12-14VDC	± 10%	70%	72%

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# OA006N030AQ-L - Triac Dimming Bulbslight LED Driver

## Features

- Input Voltage Range: 90-120VAC
- High Efficiency: 70~75% typical
- Triac dimming
- Protections: OCP, SCP
- Non isolated
- 2-year warranty



37.5 × 28 × 12mm

## Electrical Specifications

Input voltage range	90~120VAC
Frequency	47~63Hz
Dimming	Triac dimming
Inrush current	15 A Max (25°C, at 110 VAC, Cold Start)
Input current	0.15A Max at 100VAC
Efficiency	70~75% (typical) at 110 VAC maximum load
Maximum power	6.0W
Line Regulation	± 5%
Load Regulation	± 5%
Turn on delay	<3S at 100VAC maximum load
Protections	Over Current, Short Circuit

## Environmental Specifications

Operating temperature	-10°C ~ +50°C
Storage temperature	-30°C ~ +70°C
Humidity	10% ~ 90%RH
Cooling method	Convection
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	37.5 × 28 × 12 (mm)

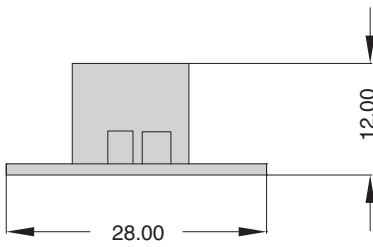
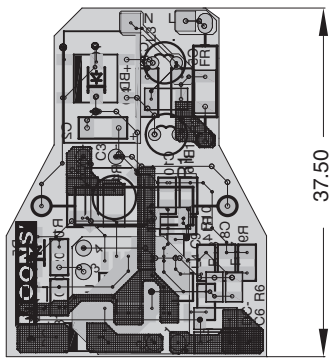
## Safety & EMC Compliance

Safety	J61347-1, J61347-2-13
Conducted Emissions	FCC Part15 / J55015

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
OA006N030AQ-L	300mA	14-16VDC	± 10%	70%	75%

■ Mechanical Outline (unit: mm)





# OA010A043AQD - Triac Dimming Bulbslight LED Driver

## Features

- Input Voltage Range: 108-132 VAC
- High Efficiency: 80% typical
- Triac dimming
- Protections: SCP
- 2-year warranty



140 × 23 × 18mm

## Electrical Specifications

Input voltage range	108~132VAC
Frequency	60Hz
Dimming	Triac dimming
Inrush current	15 A Max (25°C, at 120 VAC, Cold Start)
Input current	0.22A Max at 108VAC
Efficiency	80% (typical) at 120 VAC maximum load
Maximum power	11W
Line Regulation	± 5%
Load Regulation	± 10%
Turn on delay	<3S at 132VAC maximum load
Protections	Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +50°C
Storage temperature	-40°C ~ +85°C
Humidity	10% ~ 90%RH
Cooling method	Convection
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	100,000 hours at 25°C ambient
Reference dimension (L x W x H)	140 × 23 × 18 (mm)

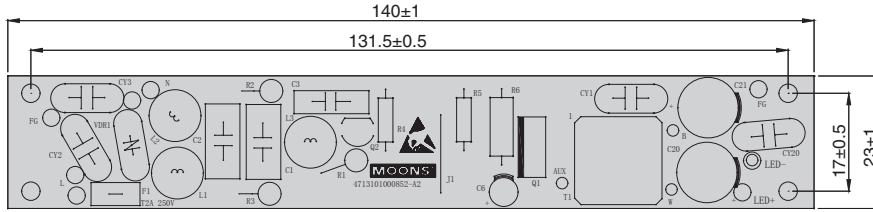
## Safety & EMC Compliance

Safety	J61347-1, J61347-2-13
Conducted Emissions	FCC Part15 / J55015

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)
				120VAC
OA010A043AQD	430mA	19-24VDC	± 5%	80%

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

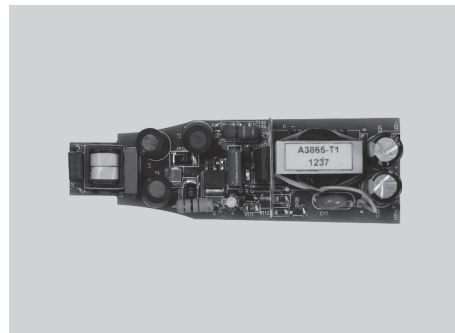
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# OA019A070AQD - Triac Dimming LED Driver

## Features

- Input Voltage Range: 100-127 VAC
- High Efficiency: 82% typical
- Triac dimming
- Protections: SCP
- 2-year warranty



100 × 32 × 18mm

## Electrical Specifications

Input voltage range	100~127VAC
Frequency	60Hz
Dimming	Triac dimming
Inrush current	15 A Max (25°C, at 120 VAC, Cold Start)
Input current	0.25A Max at 100VAC
Efficiency	82% (typical) at 120 VAC maximum load
Maximum power	19.11W
Line Regulation	± 5%
Load Regulation	± 5%
Turn on delay	<2S at 127VAC maximum load
Protections	Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +50°C
Storage temperature	-40°C ~ +85°C
Humidity	10% ~ 90%RH
Cooling method	Convection
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	100,000 hours at 25°C ambient
Reference dimension (L x W x H)	100 × 32 × 18 (mm)

## Safety & EMC Compliance

Safety	J61347-1, J61347-2-13
Conducted Emissions	FCC Part15 / J55015

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

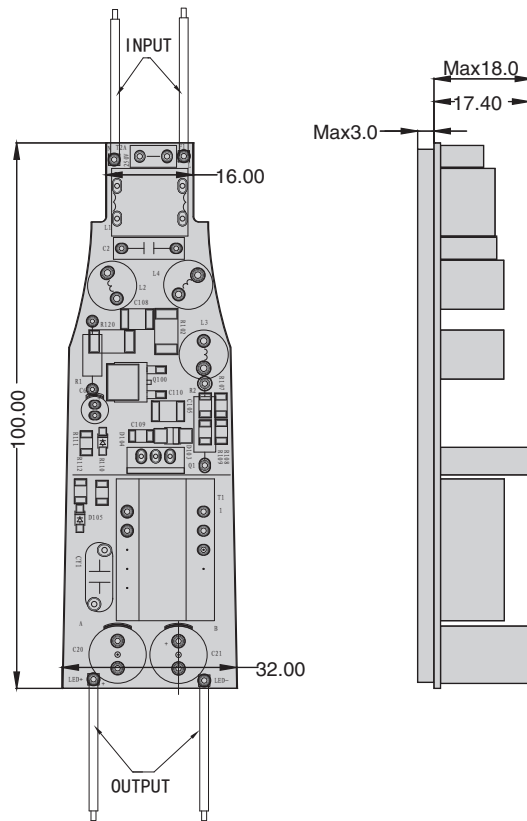
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)
				120VAC
OA019A070AQD	700mA	23-26VDC	± 10%	82%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

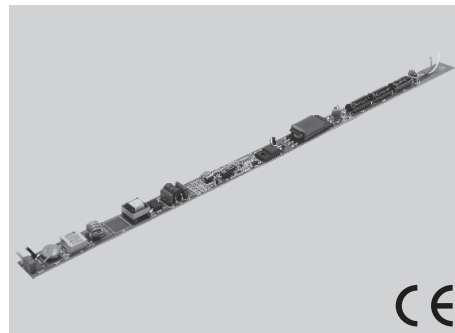
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# OF007/014/018 Series - Lighting Tube Driver Constant Current Output

## Features

- Input Voltage Range: 90-264VAC
- High Efficiency: 82~85% typical
- Active PFC: 0.92 typical
- Protections: OVP, OCP, SCP
- Comply with UL8750, IEC61347.1, IEC61347-2-13
- CE compliant
- 2-year warranty



406 × 16.5 × 14.2 (mm)

## Electrical Specifications

Input voltage range	90~264VAC
Frequency	47~63Hz
Power factor	0.95 at 110VAC; 0.90 at 220VAC(typical)
Inrush current	15 A Max (25°C, at 220 VAC, Cold Start)
Input current	0.22A Max at 100VAC; 0.11A Max at 220VAC
Efficiency	82~85% (typical) at 220 VAC maximum load
Maximum power	18W
Line Regulation	± 5%
Load Regulation	± 5%
Leakage Current	0.3mA Max
Turn on delay	<3S at 100VAC maximum load
Protections	Over Voltage, Over Current, Short Circuit

## Environmental Specifications

Operating temperature	-10°C ~ +50°C
Storage temperature	-30°C ~ +70°C
Humidity	10% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input to output: 3000Vac, 10mA, 1 minute
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 50°C ambient
Reference dimension (L x W x H)	406 × 16.5 × 14.2 (mm)

## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

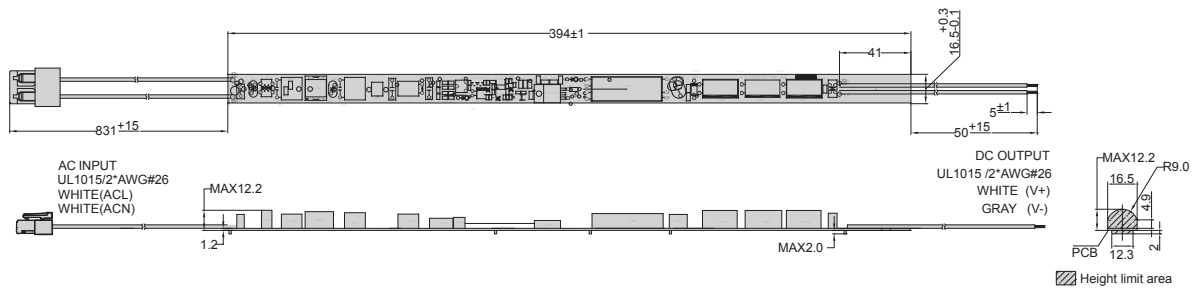
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
OF007A012AQ	120mA	40-60VDC	± 8%	85%	82%
OF014A024AQ	240mA	40-60VDC	± 5%	86%	85%
OF018A030AQ	300mA	40-60VDC	± 5%	86%	85%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

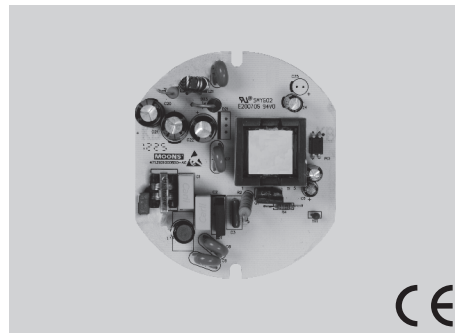
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# OF012/018/024/036 Series - High Bay Light Driver

## Features

- Input Voltage Range: 90-265VAC
- High Efficiency: 89% typical
- Active PFC: 0.99 typical
- Protections: SCP, OVP
- Comply with UL8750, EN61347-1, EN61347-2-13
- CE compliant
- 2-year warranty



77 × 88 × 30 (mm)

## Electrical Specifications

Input voltage range	90~265VAC
Frequency	50~60Hz
Power factor	0.99 at 110VAC; 0.97 at 220VAC(typical)
Inrush current	15 A Max (25°C, at 220 VAC, Cold Start)
Input current	0.45A Max at 100VAC;
Efficiency	89% (typical) at 220 VAC maximum load
Maximum power	36W
Line Regulation	± 5%
Load Regulation	± 5%
Leakage Current	1mA Max
Turn on delay	<3S at 110VAC maximum load; <1.5S at 220VAC maximum load
Protections	Short Circuit, Over Voltage

## Environmental Specifications

Operating temperature	-35°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Humidity	20% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input to output: 3000Vac, 10mA, 1 minute
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 40°C ambient
Reference dimension (L x W x H)	77 × 88 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Electrostatic Discharge	EN61000-4-2
Surge Immunity Test	EN61000-4-5

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

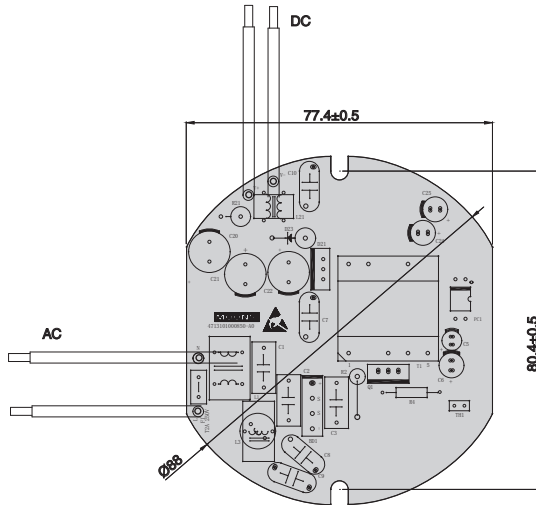
General Power Supplies  
- MF Series

## Model Specifications - constant current

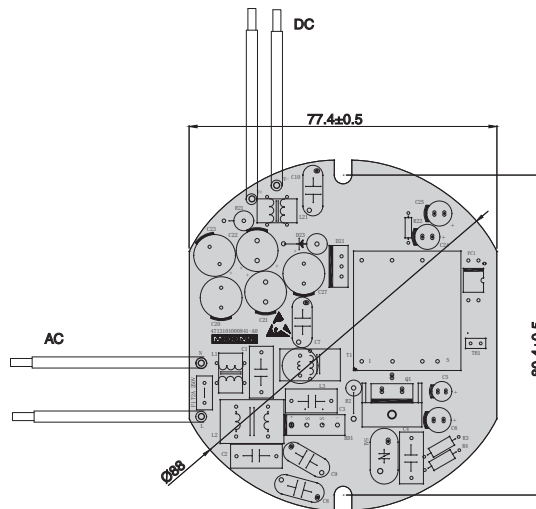
Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
OF012A028AQ	280mA	32-48VDC	± 5%	86%	86%
OF018A028AQ	280mA	42-64VDC	± 5%	86%	87%
OF024A028AQ	280mA	53-80VDC	± 5%	87%	87%
OF036A056AQ	560mA	42-64VDC	± 5%	88%	89%

## Mechanical Outline (unit: mm)

OF012A028AQ OF018A028AQ



OF024A028AQ OF036A056AQ



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

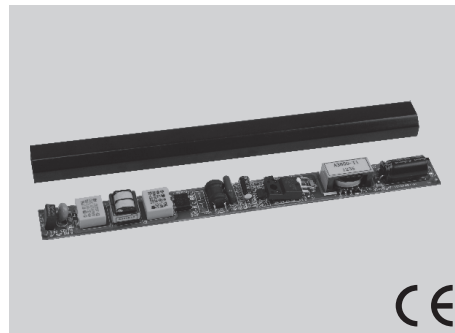
General Power Supplies  
- MF Series



# PE016A023AQ - Non-isolated Fluorescent Lamp LED Driver (Installed)

## Features

- Input Voltage Range: 180-265VAC.
- High Efficiency: 91% typical
- Active PFC: 0.95 typical
- Protections: SCP, OVP
- Comply with UL8750, EN61347-1, EN61347-2-13
- CE compliant
- 2-year warranty



182 × 17 × 11 (mm)

## Electrical Specifications

Input voltage range	180~265VAC
Frequency	47~63Hz
Power factor	0.95 at 220VAC
Inrush current	15 A Max (25°C, at 220 VAC, Cold Start)
Input current	0.1A Max at 220VAC;
Efficiency	91% (typical) at 220 VAC maximum load
Maximum power	16W
Line Regulation	± 3%
Load Regulation	± 5%
Leakage Current	0.3mA Max
Protections	Short Circuit, Over Voltage

## Environmental Specifications

Operating temperature	-10°C ~ +50°C
Storage temperature	-30°C ~ +70°C
Maximum case Temp.	80°C
Humidity	10% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input to output: 3750Vac
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	40,000 hours at 35°C ambient
Reference dimension (L x W x H)	182 × 17 × 11 (mm)

## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	EN55015 Class B
Radiated Emissions	EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Surge Immunity Test	EN61000-4-5

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

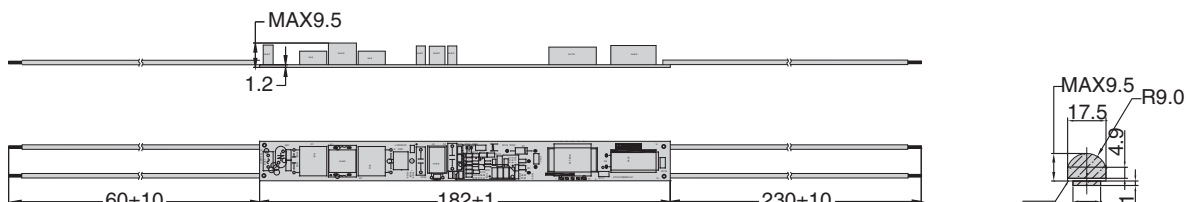
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)
				220VAC
PE016A023AQ	230mA	50-70VDC	± 5%	91%

Mechanical Outline (unit: mm)



AC Input  
 UL1569/2\*AWG#22  
 BROWN (ACL)  
 BLUE (ACN)

DC Output  
 UL1569 /2\*AWG#22  
 RED (V+)  
 BLACK (V-)

▨ Height limit area

Numbering System

LED Driver  
 - General Series  
 - Outdoor Use  
 - PU Series

LED Driver  
 - General Series  
 - Outdoor Use  
 - MU Series

LED Driver  
 - General Series  
 - Outdoor Use  
 - Other Types

LED Driver  
 - General Series  
 - Indoor Use

LED Driver  
 - Intelligent Series  
 - 50W Intelligent Series

LED Driver  
 - Intelligent Series  
 - 30W Intelligent Series

LED Driver  
 - Programmable Series  
 - Clock Control Series

General Power Supplies  
 - MF Series

# PE012 Series - Constant Current Output

## Features

- Input voltage range 176 ~ 264VAC
- High efficiency: 84% typical
- Active PFC: 0.95 typical
- IP20 Compliant
- Protections: OVP, OLP, SCP
- Comply with UL8750, IEC61347.1, IEC61347-2-13
- CE compliant
- 2-year warranty



85 × 36 × 23 mm

## Electrical Specifications

Input voltage range	176~264 VAC
Frequency	47~63 Hz
Power factor	0.95 at 220VAC (typical)
Inrush current	15 A Max (25°C, at 220 VAC, cold start)
Input current	0.1A Max at 200VAC
Efficiency	84% (typical) at 220VAC maximum load
Maximum power	12.6W
Line regulation	± 3%
Load regulation	± 5%
Leakage current	0.3mA Max
Protections	Over Voltage, Over Load, Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +55°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	80°C
Humidity	20% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input/Output 3750VAC
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life time	50,000 hours at 35°C ambient
Reference dimension (L × W × H)	85 × 36 × 23 (mm)

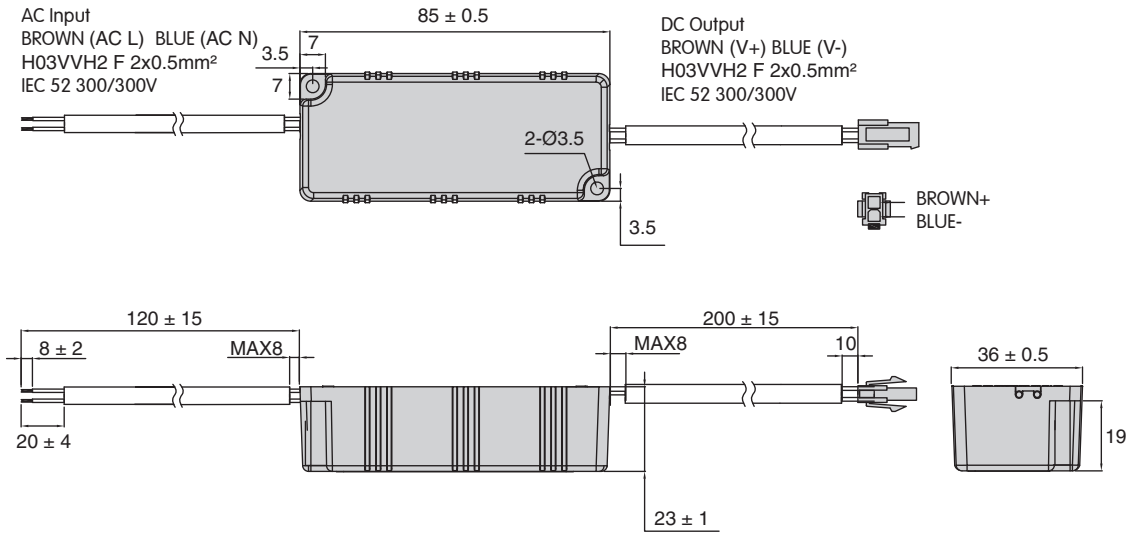
## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	EN55015 Class B
Radiated Emissions	EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)
				220VAC
PE012A035AQ	350mA	18-36VDC	± 5%	84%
PE011A045AQ	450mA	12-24VDC	± 5%	82%
PE009A050AQ	500mA	9-18VDC	± 5%	78%
PE007A070AQ	700mA	8-12VDC	± 5%	80%
PE012A105AQ	1050mA	8-12VDC	± 5%	79%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# PE040 Series - Constant Current Output

## Features

- Input voltage range 176 ~ 264VAC
- High efficiency: 90% typical
- Active PFC: 0.98 typical
- IP20 Compliant
- Protections: OVP, OLP, SCP
- Comply with UL8750, IEC61347.1, IEC61347-2-13
- CE compliant
- 2-year warranty



95 × 70 × 32 mm

## Electrical Specifications

Input voltage range	176~264 VAC
Frequency	47~63 Hz
Power factor	0.95 at 220VAC (typical)
Inrush current	15 A Max (25°C, at 220VAC, cold start)
Input current	0.35A Max at 200VAC
Efficiency	90% (typical) at 220VAC maximum load
Maximum power	52W
Line regulation	± 3%
Load regulation	± 5%
Leakage current	0.3mA Max
Protections	Over Voltage, Over Load, Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +55°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	80°C
Humidity	20% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input/Output 3750VAC
Vibration	5-55Hz/2g, 30minutes
MTBF	300,000 hours full load and 25°C ambient
Life time	50,000 hours at 35°C ambient
Reference dimension (L × W × H)	95 × 70 × 32 (mm)

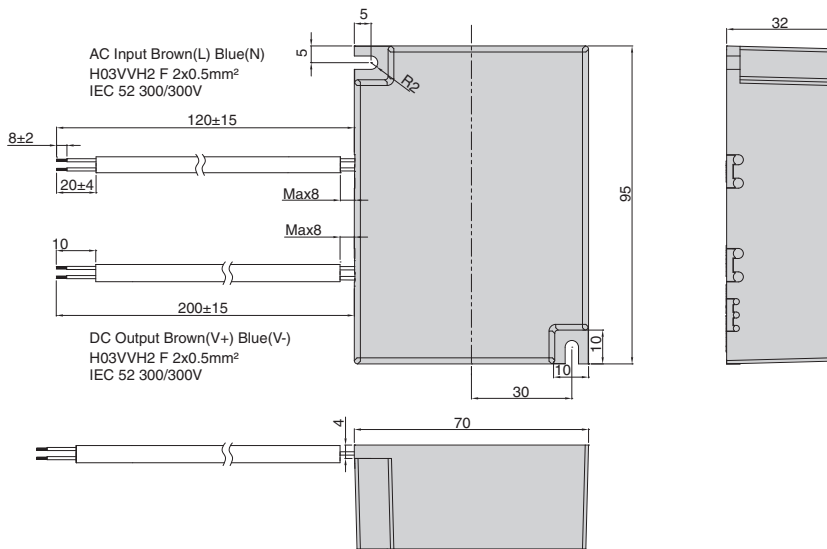
## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	EN55015 Class B
Radiated Emissions	EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

### Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)
				220VAC
PE028A070AQ	700mA	20-40VDC	± 5%	88%
PE032A080AQ	800mA	20-40VDC	± 5%	89%
PE038A085AQ	850mA	25-45VDC	± 5%	89%
PE052A095AQ	950mA	28-55VDC	± 5%	90%

### Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# PF012 Series - Constant Current Output

## Features

- Input Voltage Range: 90-264VAC
- Efficiency: 85% typical
- Active PFC: 0.99 typical
- IP20 Compliant
- Protections: OVP, SCP
- Comply with UL8750, IEC61347.1, IEC61347-2-13
- CE compliant
- 2-year warranty



122 × 39 × 26mm

## Electrical Specifications

Input voltage range	90~264VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.95 at 220VAC (typical)
Inrush current	15 A Max (25°C, at 220 VAC, Cold Start)
Input current	0.2A Max at 110VAC; 0.1A Max at 220VAC
Efficiency	86% (typical) at 220 VAC maximum load
Rated power	12W
Line Regulation	± 3%
Load Regulation	± 5%
Leakage Current	0.5mA Max
Protections	Over Voltage, Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +55°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	80°C
Humidity	20% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input/output 3750VAC
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 35°C ambient
Reference Dimension (L × W × H)	122 x 39 x 26 (mm)

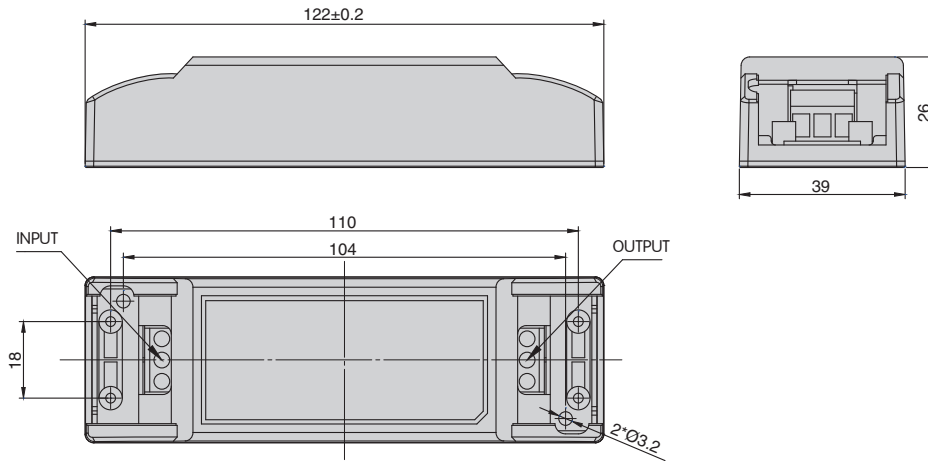
## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PF012A035AQ-C	350mA	18-36VDC	± 5%	85%	85%
PF011A045AQ-C	450mA	12-24VDC	± 5%	83%	83%
PF009A050AQ-C	500mA	9-18VDC	± 5%	80%	80%
PF008A070AQ-C	700mA	8-12VDC	± 5%	80%	80%
PF012A105AQ-C	1050mA	8-12VDC	± 5%	80%	80%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# PF020/030 Series - Constant Current Output

## Features

- Input Voltage Range: 90-264VAC
- Efficiency: 88% typical
- Active PFC: 0.99 typical
- IP20 Compliant
- Protections: OVP, SCP
- Comply with UL8750, IEC61347.1, IEC61347-2-13
- CE Compliant
- 2-year warranty



150 x 43 x 32 (mm)

## Electrical Specifications

Input voltage range	90~264VAC
Frequency	47~63Hz
Power factor	0.95 at 220VAC; 0.97 at 220VAC (typical)
Inrush current	15 A Max (25°C, at 220 VAC, Cold Start)
Input current	0.35A Max at 110VAC; 0.18A Max at 220VAC
Efficiency	88% (typical) at 220 VAC maximum load
Maximum power	32W
Line Regulation	± 3%
Load Regulation	± 5%
Leakage Current	0.5mA Max
Protections	Over Voltage, Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +55°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	80°C
Humidity	20% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input/output 3750VAC
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 35°C ambient
Reference Dimension (L x W x H)	150 x 43 x 32 (mm)

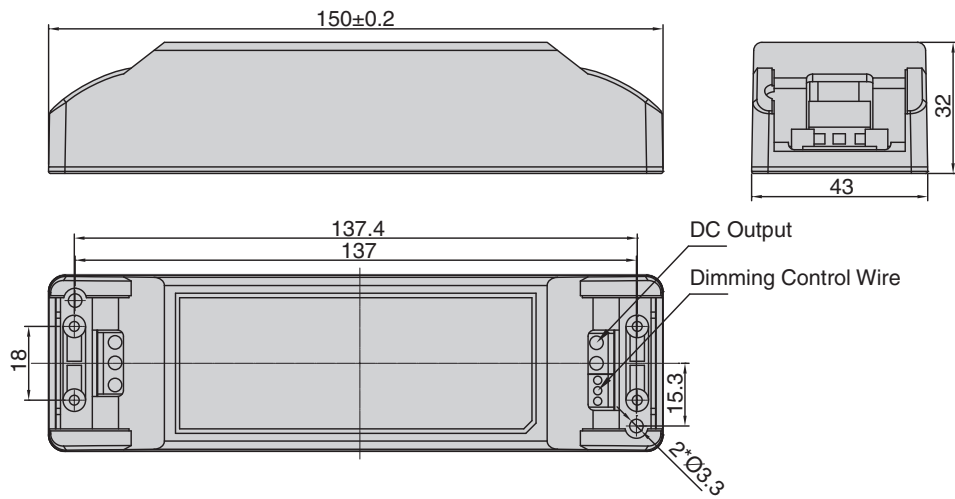
## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PF030A030AQ-C	300mA	60-100VDC	± 5%	87%	87%
PF020A033AQ-C	336mA	28-55VDC	± 5%	86%	85%
PF020A035AQ-C	350mA	29-57VDC	± 5%	89%	89%
PF016A040AQ-C	400mA	22-40VDC	± 5%	86%	84%
PF020A045AQ-C	450mA	22-45VDC	± 5%	89%	89%
PF020A060AQ-C	600mA	14-28VDC	± 5%	85%	84%
PF030A060AQ-C	600mA	25-45VDC	± 5%	88%	87%
PF030A060AQD-C	600mA	30-50VDC	± 5%	86%	86%
PF020A070AQ-C	700mA	14-28VDC	± 5%	86%	85%
PF028A070AQ-C	700mA	20-40VDC	± 5%	87%	86%
PF020A073AQ-C	735mA	15-25VDC	± 5%	86%	85%
PF032A080AQ-C	800mA	20-40VDC	± 5%	88%	87%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# PF040/050 Series - Constant Current Output

## Features

- Input Voltage Range: 90-264VAC
- Efficiency: 88~90% typical
- Active PFC: 0.97 typical
- IP20 Compliant
- Protections: OVP, SCP, OTP, OPP
- Comply with UL8750, IEC61347.1, IEC61347-2-13
- CE compliant
- 2-year warranty



186 × 41 × 32 (mm)

## Electrical Specifications

Input voltage range	90~264VAC
Frequency	47~63Hz
Power factor	0.99 at 110VAC; 0.97 at 220VAC (typical)
Inrush current	15 A Max (25°C, at 220 VAC, Cold Start)
Input current	0.65A Max at 110VAC; 0.3A Max at 220VAC
Efficiency	88~90% (typical) at 220 VAC maximum load
Maximum power	50W
Line Regulation	± 3%
Load Regulation	± 3%
Leakage Current	0.5mA Max
Turn on delay	<3S at 100VAC maximum load
Protections	Over Temperature, Over Voltage, Over current, Short Circuit

## Environmental Specifications

Operating temperature	-25°C ~ +55°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	80°C
Humidity	20% ~ 90%RH
Cooling method	Convection
Isolation voltage	Input/output 3750VAC
Vibration	5-55 Hz/2g, 30 minutes
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	186 × 41 × 32 (mm)

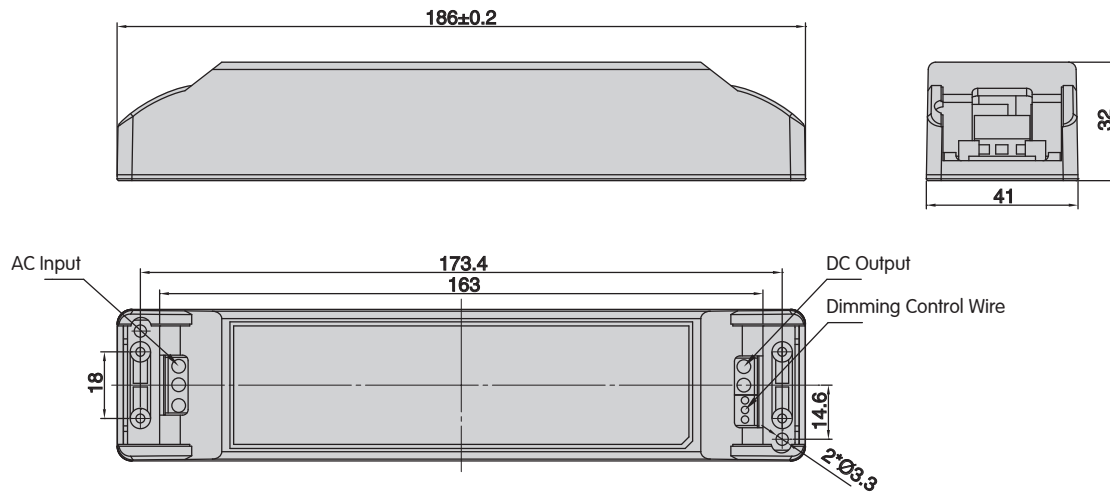
## Safety & EMC Compliance

CUL	UL8750
CE	EN 61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
PF042A030AQ	300mA	90-140VDC	± 5%	88%	88%
PF040A035AQ	350mA	60-114VDC	± 5%	89%	89%
PF050A035AQ	350mA	90-143VDC	± 5%	90%	90%
PF035A070AQ	700mA	25-50VDC	± 5%	88%	88%
PF040A100AQ	1000mA	22-40VDC	± 5%	88%	88%
PF050A119AQ	1190mA	23-42VDC	± 5%	88%	88%
PF040A120AQD	1200mA	23-33VDC	± 5%	87%	88%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105AQI0 (DALI, 1ch)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 1ch
- Compact size, high performance, high reliability
- UL / CE / PSE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	43-67Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Efficiency	90% (typical) at 220 VAC; 89% (typical) at 110 VAC
Output voltage range	56VDC Max
Output current range	200mA~1050mA (settable)
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 76 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310
CE	EN61347-1, EN61347-2-13
PSE	J61347-1, J61347-2-13, J55015
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Electromagnetic immunity	EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed in 50 mA steps from 200 mA to 1050 mA. This programming can be done at the factory or in the customers place of business. This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 90% over a wide power range
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

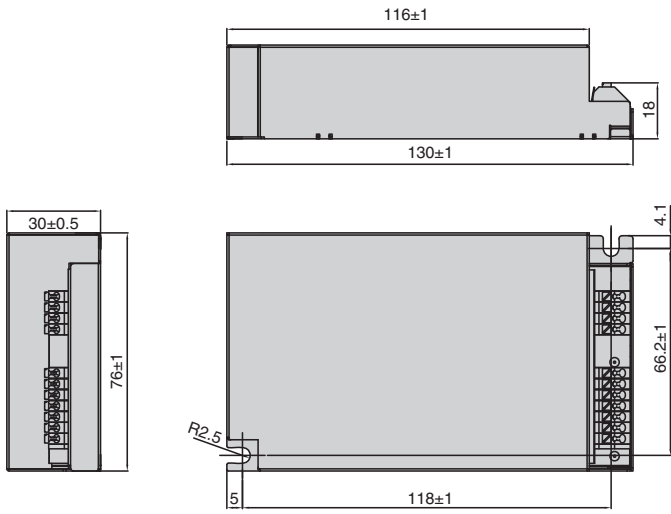
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

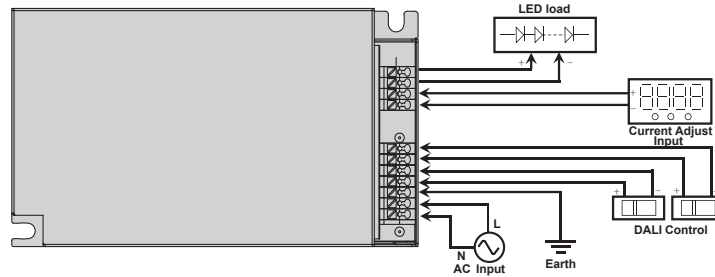
General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

Model Specifications-MU050A105AQI0 (DALI, 1Ch)



■ Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105AQI1 (0-10V, 1ch)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0-10V dimming control, 1ch
- Compact size, high performance, high reliability
- UL / CE / PSE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	43~67Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Efficiency	90% (typical) at 220 VAC; 89% (typical) at 110 VAC
Output voltage range	56VDC Max
Output current range	200mA~1050mA (settable)
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 76 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310
CE	EN61347-1, EN61347-2-13
PSE	J61347-1, J61347-2-13, J55015
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Electromagnetic immunity	EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed in 50 mA steps from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 90% over a wide power range
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above), (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

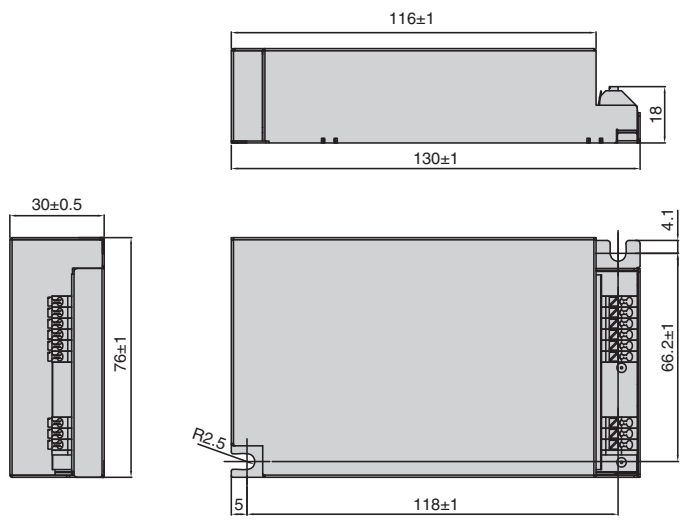
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

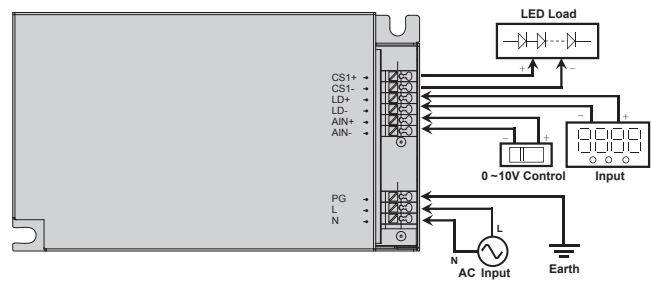
General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

Model Specifications-MU050A105AQI1 (0-10V, 1Ch)



■ Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# 50W Intelligent Series - MU050A105BQI0 (DALI, 2chs)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 2chs
- Compact size, high performance, high reliability
- UL / CE / PSE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	43~67Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Efficiency	90% (typical) at 220 VAC; 89% (typical) at 110 VAC
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 3%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 76 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310
CE	EN61347-1, EN61347-2-13
PSE	J61347-1, J61347-2-13, J55015
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Electromagnetic immunity	EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed in 50 mA steps from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 90% over a wide power range
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

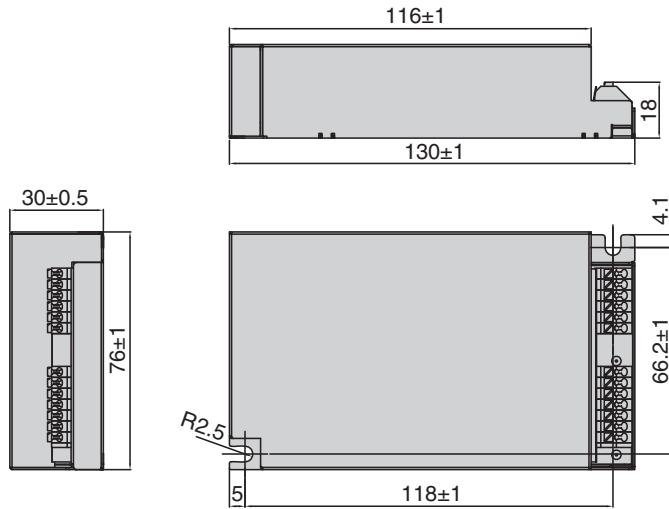
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

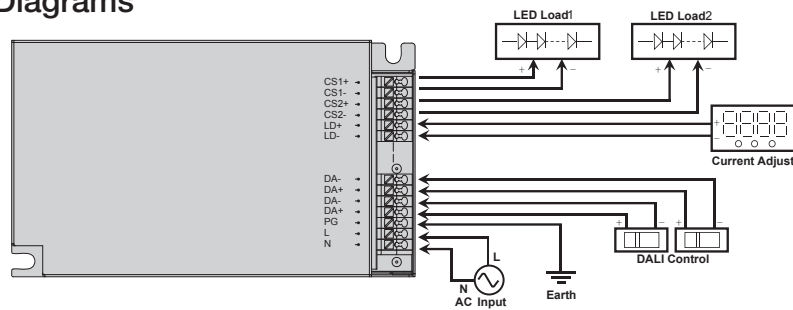
General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

Model Specifications-MU050A105BQI0 (DALI, 2Chs)



■ Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105BQI1(0-10V, 2chs)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0~10V dimming control, 2ch
- Compact size, high performance, high reliability
- UL / CE / PSE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	43~67Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Efficiency	90% (typical) at 220 VAC; 89% (typical) at 110 VAC
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 3%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 76 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310
CE	EN61347-1, EN61347-2-13
PSE	J61347-1, J61347-2-13, J55015
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Electromagnetic immunity	EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed in 50 mA steps from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 90% over a wide power range
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47' Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above), (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

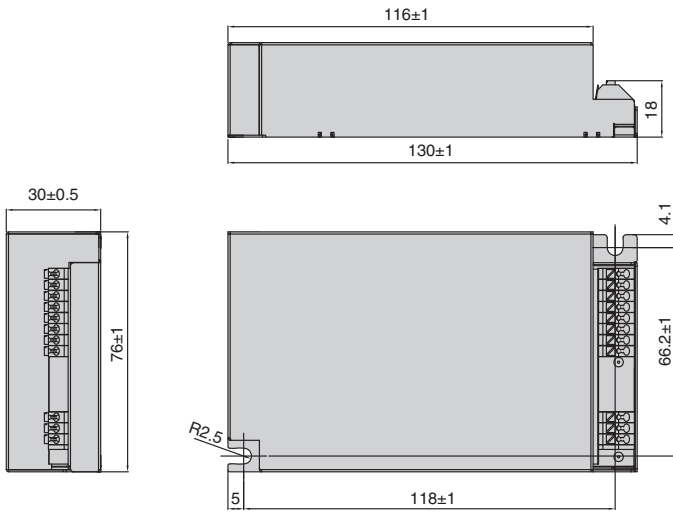
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

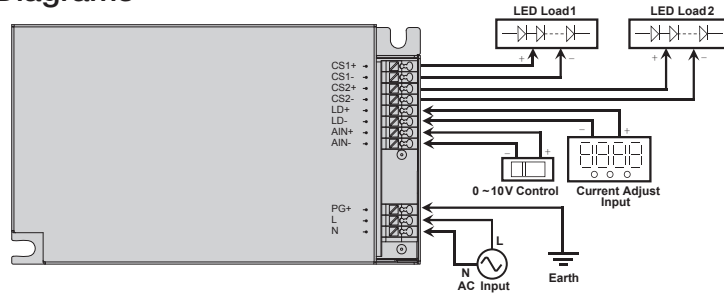
General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

Model Specifications-MU050A105BQI1 (0-10V, 2Chs)



■ Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105BQI2 (DALI, 2chs) each channel is independent

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 2chs
- Compact size, high performance, high reliability
- UL / CE / PSE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	43~67Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Efficiency	90% (typical) at 220 VAC; 89% (typical) at 110 VAC
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 3%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 76 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310
CE	EN61347-1, EN61347-2-13
PSE	J61347-1, J61347-2-13, J55015
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Electromagnetic immunity	EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed in 50 mA steps from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 90% over a wide power range
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

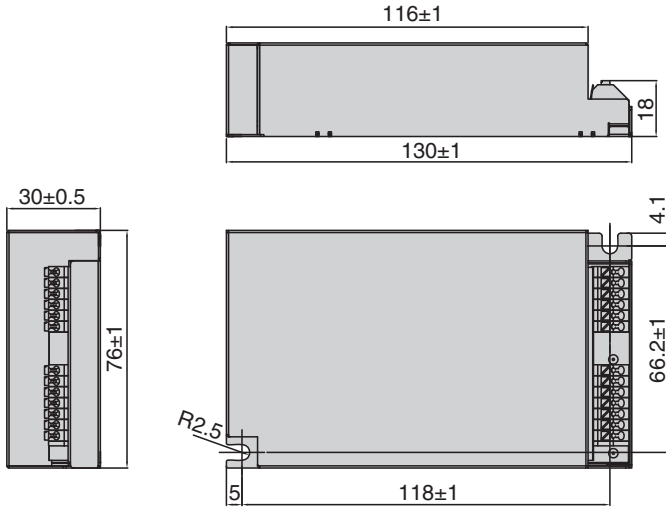
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

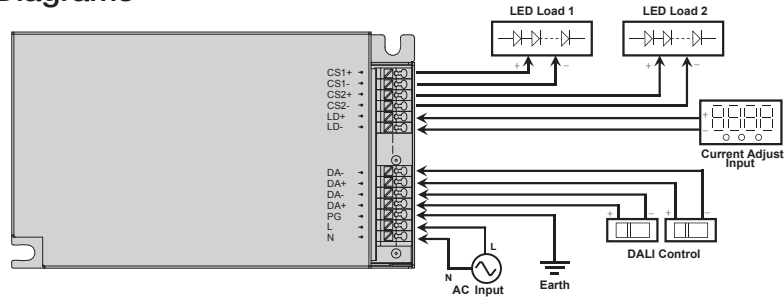
General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

Model Specifications-MU050A105BQI2 (DALI, 2Chs, each channel is independent)



■ Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105CQI0 (DMX, 3chs)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DMX capability, 3chs
- Compact size, high performance, high reliability
- UL / CE / PSE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	43~67Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.98 at 110VAC; 0.94 at 220VAC (typical)
Efficiency	90% (typical) at 220 VAC; 89% (typical) at 110 VAC
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 3%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 76 × 30 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310
CE	EN61347-1, EN61347-2-13
PSE	J61347-1, J61347-2-13, J55015
Conducted emissions	FCC Level B / EN55015
Radiated emissions	FCC Level B / EN55015
Electromagnetic immunity	EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed in 50 mA steps from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 90% over a wide power range
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above), (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

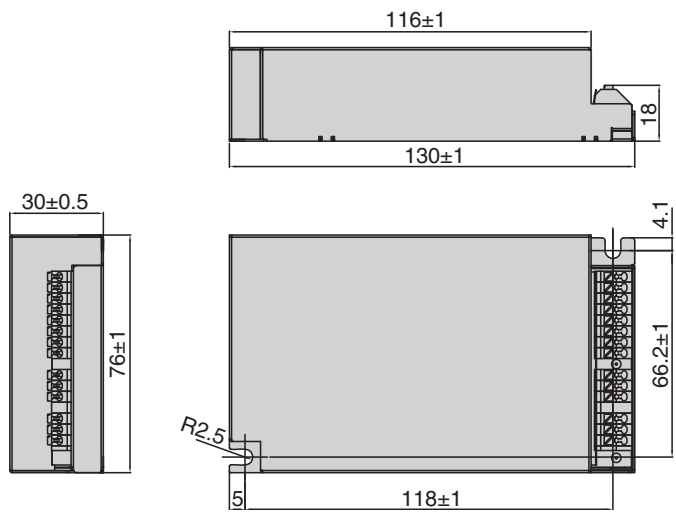
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

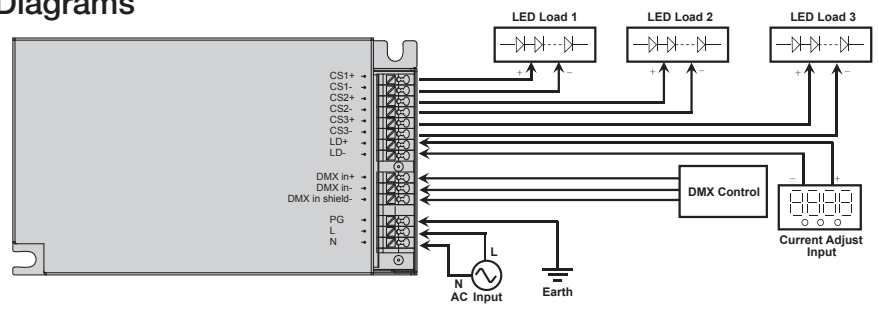
General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

Model Specifications-MU050A105CQI0 (DMX, 3Chs)



■ Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# 50W Intelligent Series - MU050A105AQI01 (DALI,1ch)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



440 × 30 × 21mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.99 at 110VAC; 0.98 at 220VAC (typical)
Efficiency	87% (typical)
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	444 × 30 × 21 (mm)

## Safety & EMC Compliance

UL / CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Radiated emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 87% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

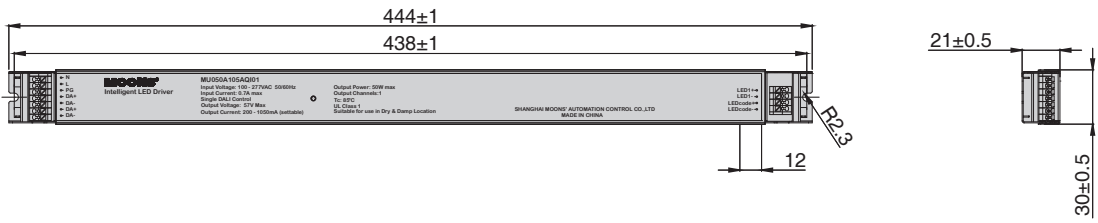
LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

**Mechanical Outline (unit: mm)**



**Schematic Diagrams**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105AQI11(0-10V,1ch)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0-10V dimming control, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



130 × 76 × 30mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63 Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	87% (typical)
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	444 × 30 × 21 (mm)

## Safety & EMC Compliance

UL / CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Radiated emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 87% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

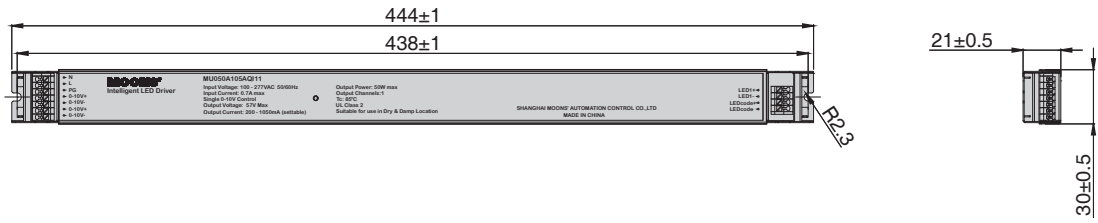
LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

## Mechanical Outline (unit: mm)



## Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105BQI01 (DALI,2chs)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 2chs
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



444 × 30 × 21mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	87% (typical)
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	444 × 30 × 21 (mm)

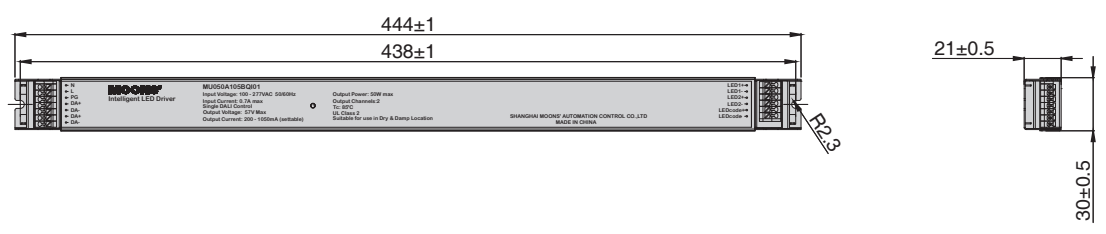
## Safety & EMC Compliance

UL / CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Radiated emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 87% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day,
  - (c) output current,
  - (d) LED bridging
  - (e) LED aging (current compensation at the 30% end of life)

### Mechanical Outline (unit: mm)



### Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105BQI11(0-10V,2chs)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0-10V dimming control, 2ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



444 × 30 × 21mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	87% (typical)
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	444 × 30 × 21 (mm)

## Safety & EMC Compliance

UL / CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Radiated emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 87% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

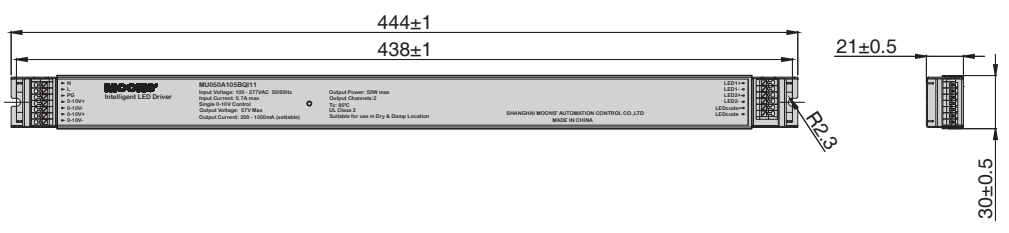
LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

**Mechanical Outline (unit: mm)**



**Schematic Diagrams**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# 50W Intelligent Series - MU050A105BQI21 (DALI,2chs,each channel is independent)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 2chs
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



444 × 30 × 21mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	87% (typical)
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	444 × 30 × 21 (mm)

## Safety & EMC Compliance

UL / CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Radiated emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 87% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47' Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

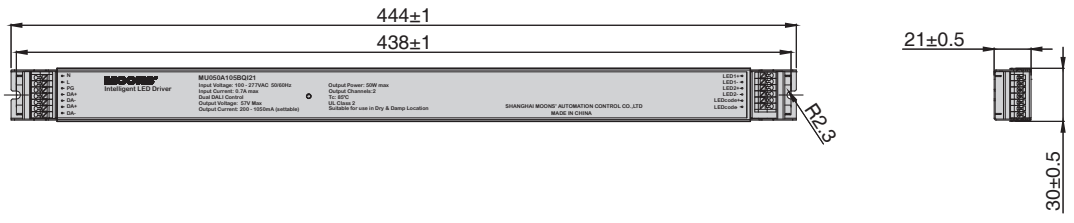
LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

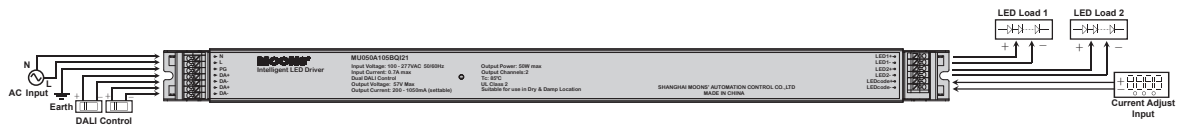
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

**Mechanical Outline (unit: mm)**



**Schematic Diagrams**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 50W Intelligent Series - MU050A105DQI61(DMX,4chs)

## Features

- Adjustable current range from 200mA to 1050mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DMX capability, 4chs
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



444 × 30 × 21mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	50W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	87% (typical)
Output voltage range	56VDC (Max)
Output current range	200mA~1050mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	444 × 30 × 21 (mm)

## Safety & EMC Compliance

UL / CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Radiated emissions	CISPR15 Class B; EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1050 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 87% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day,
  - (c) output current,
  - (d) LED bridging
  - (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

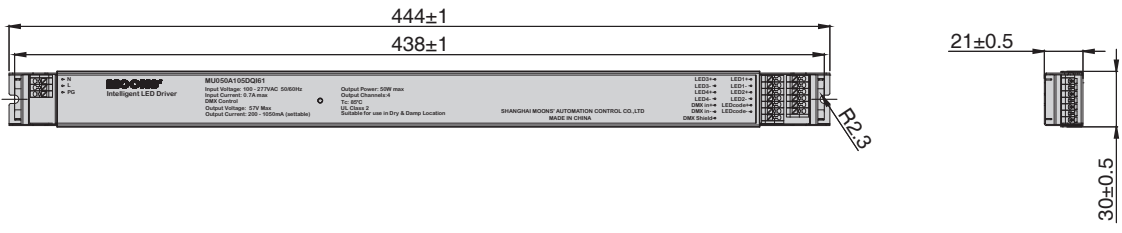
LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

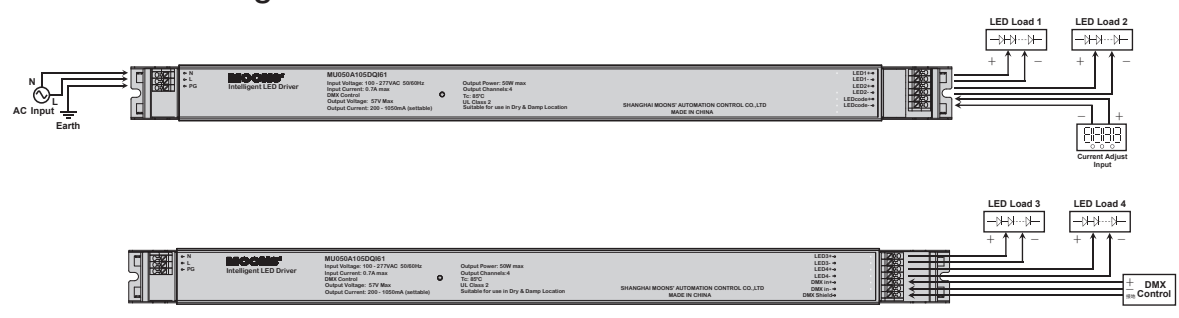
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

## Mechanical Outline (unit: mm)



## Schematic Diagrams



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 30W Intelligent Series - PU030A120AQI0 (DALI,1ch)

## Features

- Adjustable current range from 200mA to 1200mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 1ch
- Compact size, high performance, high reliability
- RoHs compliant
- 2-year warranty



210 × 40.45 × 33.5mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	30W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	85%(typical)
Output voltage range	57VDC (Max)
Output current range	200mA~1200mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	210 × 40.45 × 33.5 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	EN55015 Class B; FCC part15 ClassB;
Radiated emissions	EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1200 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 85% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

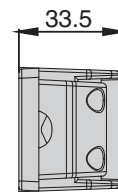
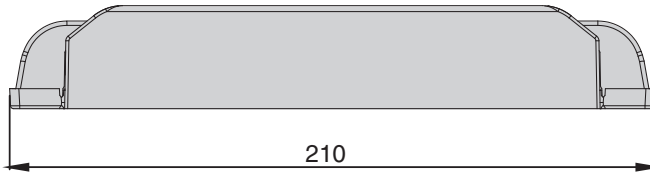
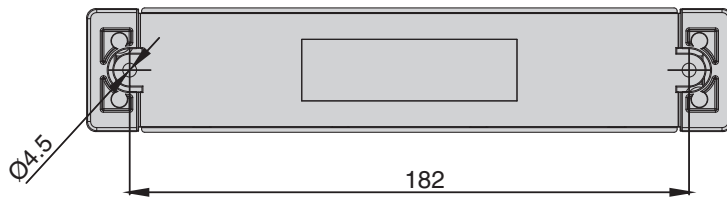
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 30W Intelligent Series - PU030A120AQI3 (0-10V,1ch)

## Features

- Adjustable current range from 200mA to 1200mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0-10V capability, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



210 × 40.45 × 33.5mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	30W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	85%(typical)
Output voltage range	57VDC (Max)
Output current range	200mA~1200mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	210 × 40.45 × 33.5 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	EN55015 Class B; FCC part15 ClassB;
Radiated emissions	EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1200 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 85% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

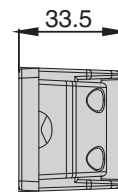
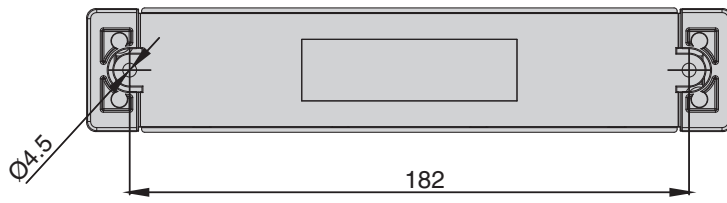
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)

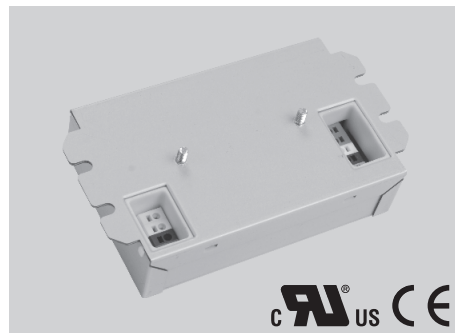




# 30W Intelligent Series - MU030A120AQI0 (DALI,1ch)

## Features

- Adjustable current range from 200mA to 1200mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



130 × 72 × 28mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	30W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	85%(typical)
Output voltage range	57VDC (Max)
Output current range	200mA~1200mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 72 × 28 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	EN55015 Class B; FCC part15 ClassB;
Radiated emissions	EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1200 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 85% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

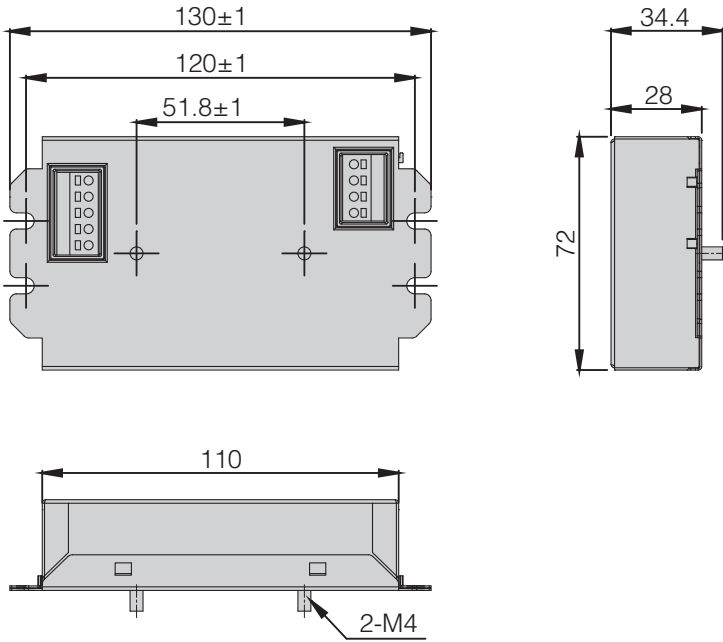
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

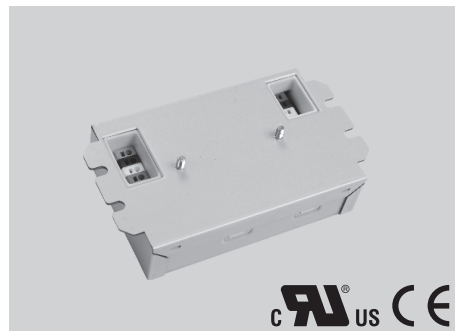
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 30W Intelligent Series - MU030A120AQI3 (0-10V,1ch)

## Features

- Adjustable current range from 200mA to 1200mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0-10V capability, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



130 × 72 × 28mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	30W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	85%(typical)
Output voltage range	57VDC (Max)
Output current range	200mA~1200mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 72 × 28 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	EN55015 Class B; FCC part15 ClassB;
Radiated emissions	EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1200 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 85% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

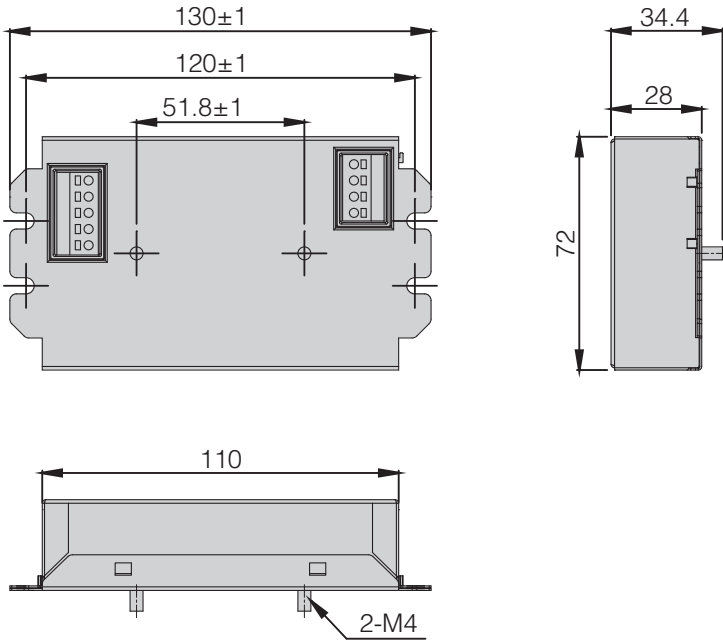
LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 30W Intelligent Series - MU030A120AQI02 (DALI,1ch)

## Features

- Adjustable current range from 200mA to 1200mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- Built-in DALI capability, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



130 × 72 × 28mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	30W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	85%(typical)
Output voltage range	57VDC (Max)
Output current range	200mA~1200mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 72 × 28 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	EN55015 Class B; FCC part15 ClassB;
Radiated emissions	EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1200 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 85% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

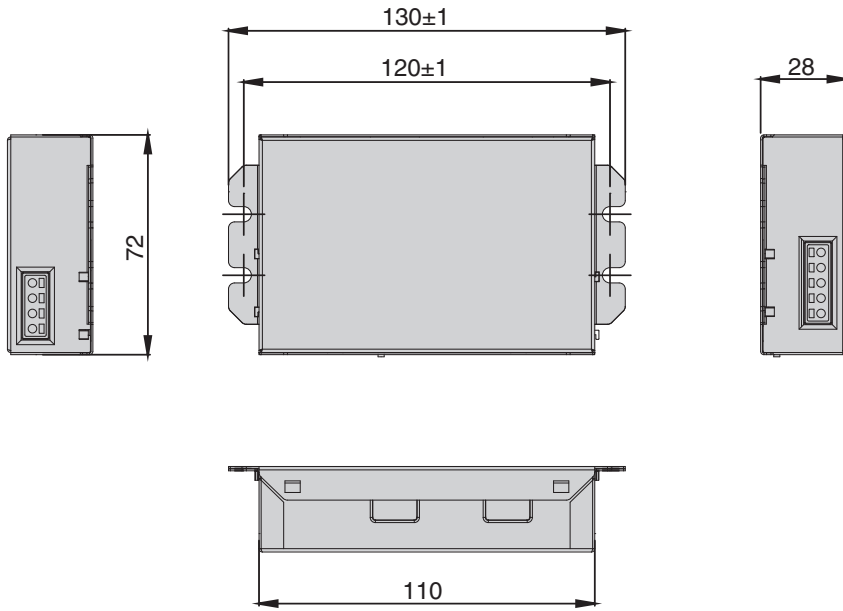
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

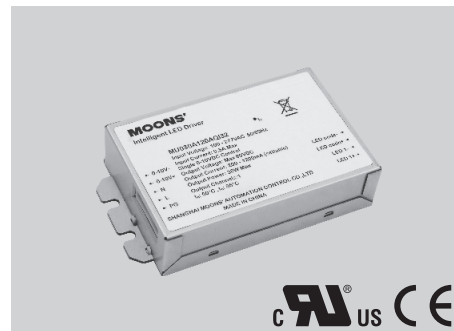
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# 30W Intelligent Series - MU030A120AQI32 (0-10V,1ch)

## Features

- Adjustable current range from 200mA to 1200mA.
- Flicker-free dimming from 100% to 0.1%, gamma-corrected curve.
- 0-10V capability, 1ch
- Compact size, high performance, high reliability
- UL / CE
- 2-year warranty



130 × 72 × 28mm

## Electrical Specifications

Input voltage range	100~277VAC
Frequency	47~63Hz
Input current	0.7A(MAX)
Rated power	30W
Power factor	0.95 at 110VAC; 0.92 at 220VAC (typical)
Efficiency	85%(typical)
Output voltage range	57VDC (Max)
Output current range	200mA~1200mA (settable)
Current accuracy	± 5%
Protections	Over voltage, short circuit, over temperature: auto recovery

## Environmental Specifications

Operating temperature	-20°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Maximum case temp.	85°C
Cooling method	Convection
Reference dimension (L x W x H)	130 × 72 × 28 (mm)

## Safety & EMC Compliance

CUL	UL8750, UL1310, CAN/CSA-C22.2 No.223-M91
CE	EN 61347.1; EN61347-2-13
Conducted emissions	EN55015 Class B; FCC part15 ClassB;
Radiated emissions	EN55015 Class B; FCC part15 ClassB;
Harmonic current emission	IEC / EN61000-3-2 Class C
Electromagnetic immunity	IEC / EN61547

## Function Description

- **Adjustable current output:**  
The current output can programmed from 200 mA to 1200 mA.  
This programming can be done at the factory or in the customers place of business.  
This permits optimization of the the current for the LED light engine and conformance to Energy Star Requirements.
- **Resolution:** 20 bit resolution Max
- **Dimming:** Supports a wide range of dimming from 0.1% to 100% with linear or gamma corrected dimming curve & flicker-free at all levels.
- **High Efficiency:** 85% (typical)
- **Interface:** LED Code
- **Temperature Management:** By connecting a 47'Ω NTC thermistor, temperature feedback is provided to insure that normal LED operating temperatures are maintained.
- **Programming (internal)(optional):**
  - (a) temperature (see above),
  - (b) time-of-day, (c) output current,
  - (d) LED bridging (e) LED aging (current compensation at the 30% end of life)

Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

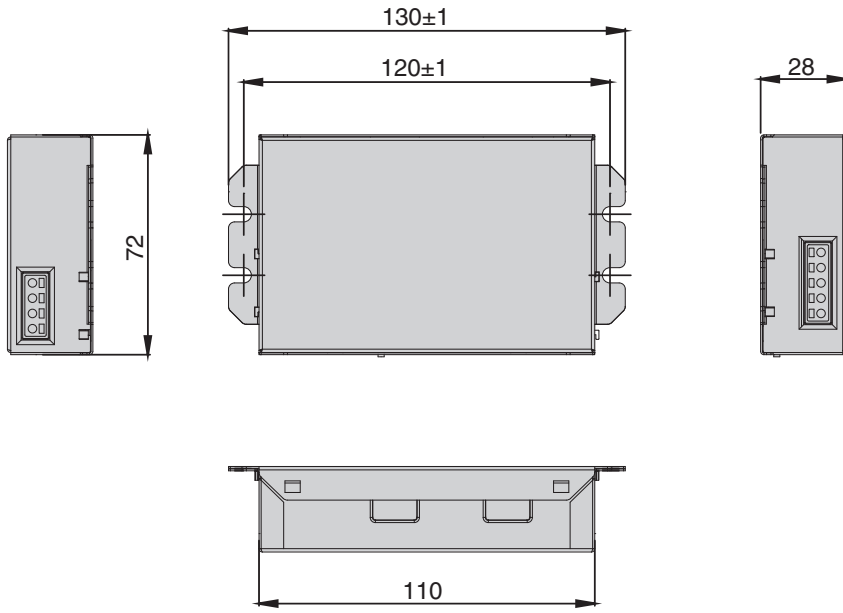
LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

■ Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# MU035AxxxAQI1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 89% typical
- Active PFC: 0.98 typical
- Lightning protection
- IP67 Compliant
- Protections: OVP, OLP, SCP, OTP
- Safety compliant: Comply with UL8750, UL1310, UL1012, IEC61347-1, IEC61347-2-13
- EMI standard: Comply with FCC Part 15 Class B, EN55015 Class B



193 × 42.5 × 34.5 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.95 at 220 VAC (typical)
Inrush Current	15A Max (25°C, at 220 VAC, cold start)
Input Current	0.45A Max at 110VAC; 0.25A Max at 220VAC
Efficiency	89% (typical) at 220 VAC maximum load
Maximum Power	35W
Line Regulation	± 5%
Load Regulation	± 5%
Leakage Current	1mA Max (at 277VAC 60Hz input)
Protections	Over Voltage, Over Load, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-35°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Operating Humidity	10% ~ 100% RH
Storage Humidity	5% ~ 100% RH
Cooling method	Convection
Isolation voltage	Input/output: 3000 VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	193 x 42.5 x 34.5 (mm)

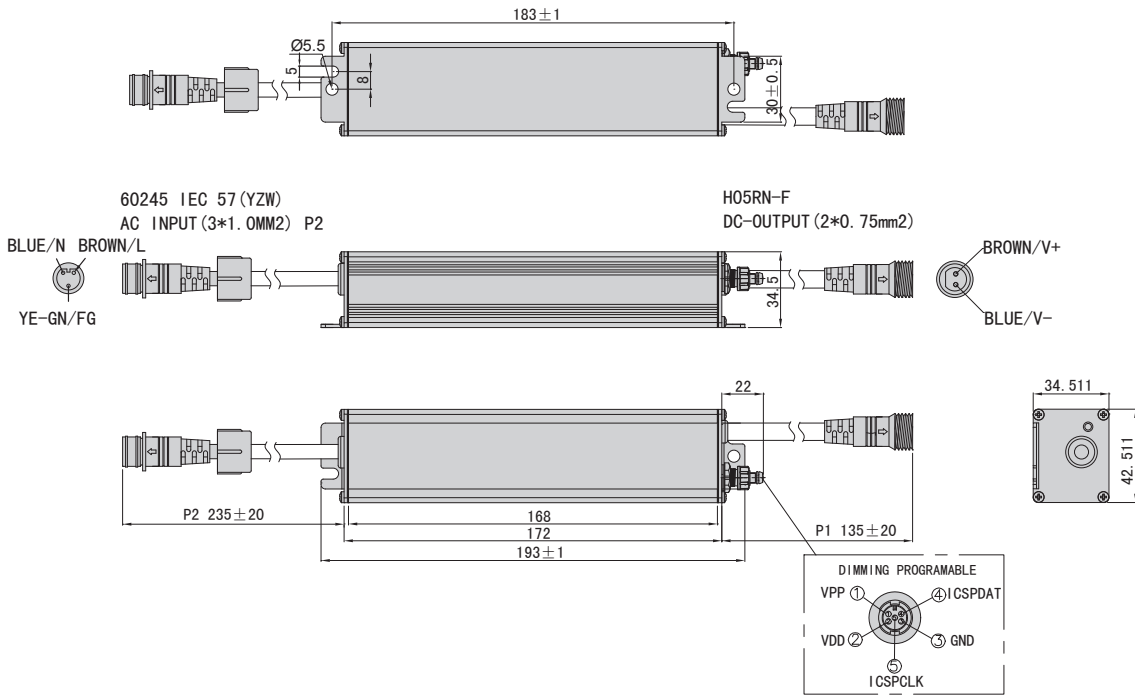
## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Efficiency (typical)	
			110VAC	220VAC
MU035A035AQ11	350mA	60-100VDC	89%	89%
MU035A070AQ11	700mA	30-50VDC	87%	87%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU050AxxxAQI1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 90% typical
- Active PFC: 0.98 typical
- IP67 Compliant
- Protections: OVP, OLP, SCP, OTP
- Safety compliant: Comply with UL8750, UL1310, UL1012, IEC61347-1, IEC61347-2-13
- EMI standard: Comply with FCC Part 15 Class B, EN55015 Class B



193 × 42.5 × 34.5 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.95 at 220 VAC (typical)
Inrush Current	15A Max (25°C, at 230 VAC, cold start)
Input Current	0.7A Max at 110VAC; 0.35A Max at 220VAC
Efficiency	90% (typical) at 220 VAC maximum load
Maximum Power	50W
Line Regulation	± 5%
Load Regulation	± 5%
Leakage Current	0.5mA Max (at 277VAC 60Hz input)
Protections	Over Voltage, Over Load, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-30°C ~ +60°C
Storage temperature	-40°C ~ +85°C
Operating Humidity	10% ~ 100% RH
Storage Humidity	5% ~ 100% RH
Cooling method	Convection
Isolation voltage	Input/output: 3000 VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	193 x 42.5 x 34.5 (mm)

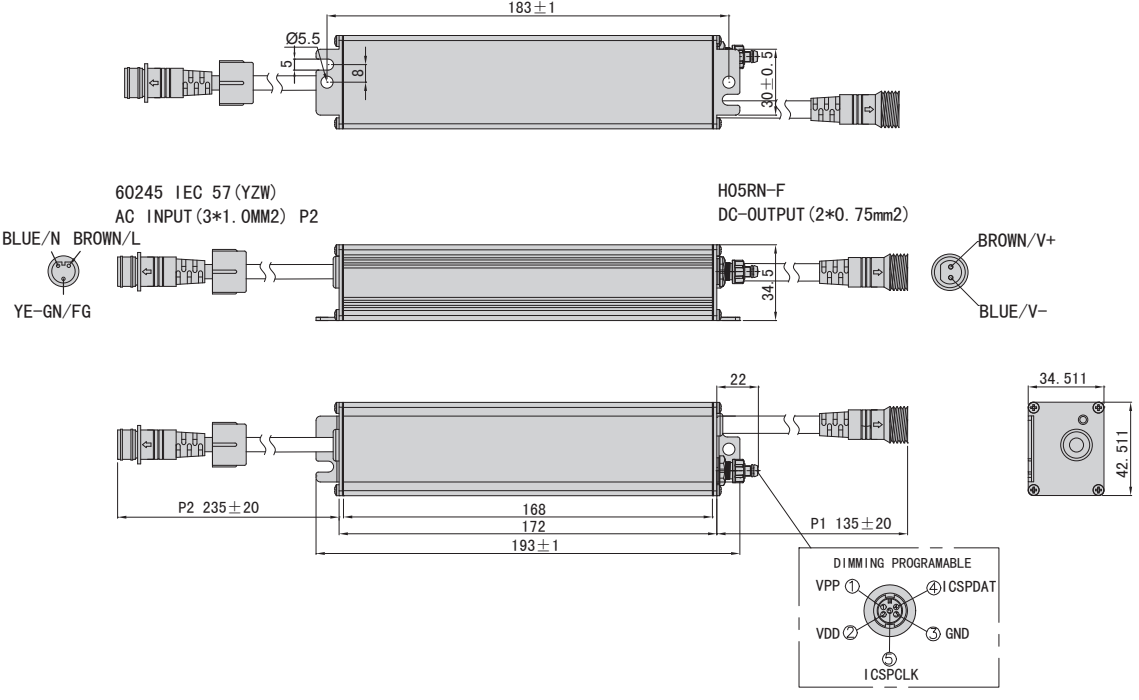
## Safety & EMC Compliance

CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No. 107.1, CSA-C22.2 NO. 223-M91 Class 2
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Efficiency (typical)	
			110VAC	220VAC
MU050A035AQ11	350mA	71-142VDC	89%	90%
MU050A070AQ11	700mA	36-72VDC	88%	89%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU060AxxxAQI1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 90% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 Compliant
- Protections: OVP, SCP, OTP
- Safety compliant: UL8750, UL1012, CSA-C22.2 No.107.1, IEC61347-1, IEC61347-2-13



190 × 67.5 × 37 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.95 at 220 VAC (typical)
Inrush Current	65A Max (25°C, at 220 VAC, cold start)
Input Current	1.3A Max at 110VAC; 0.6A Max at 220VAC
Efficiency	90% (typical) at 220 VAC maximum load
Maximum Power	60W
Line Regulation	± 1%
Load Regulation	± 3%
Leakage Current	1mA Max
Protections	Over Voltage, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	90°C
Humidity	5% ~ 100% RH
Storage Humidity	10% ~ 90% RH
Cooling method	Convection
Isolation voltage	Input/output: 3750 VAC; Input/chassis: 1500VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	190 x 67.5 x 37 (mm)

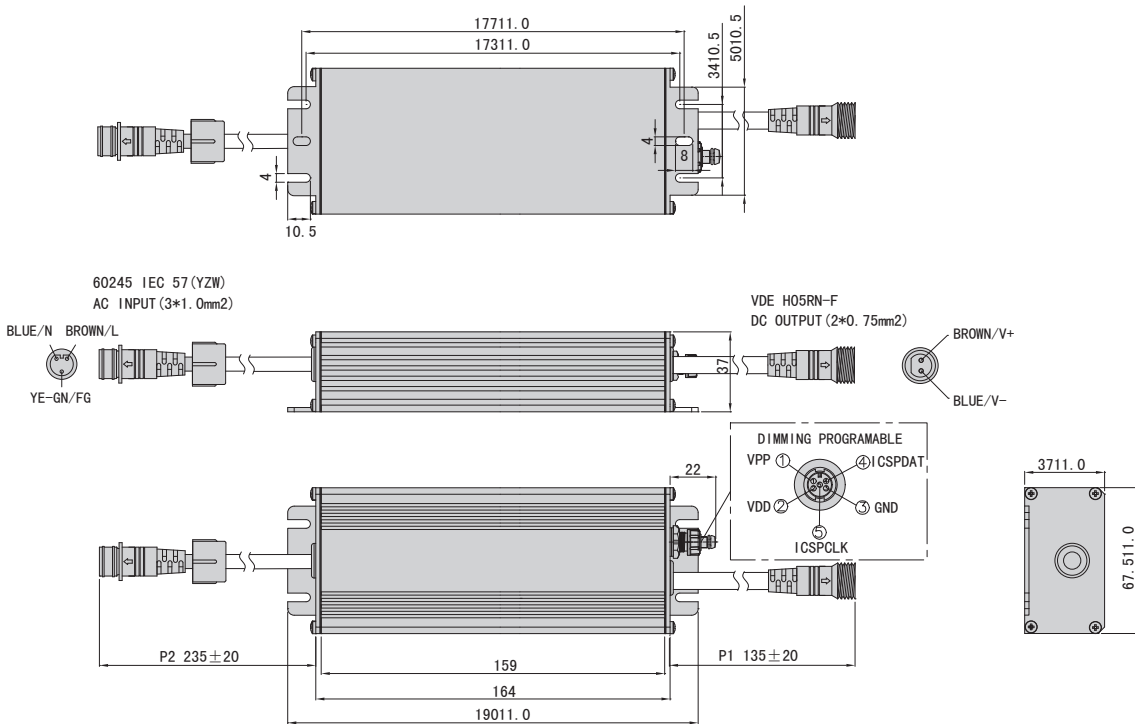
## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU060A035AQ1	350mA	103-171VDC	± 3%	88%	90%
MU060A070AQ1	700mA	52-86VDC	± 3%	88%	90%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU075AxxxAQ1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 90% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 Compliant
- Protections: OVP, SCP, OTP
- Safety compliant: UL8750, UL1012, CSA-C22.2 No.107.1, IEC61347-1, IEC61347-2-13



190 x 67.5 x 37 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.95 at 220 VAC (typical)
Inrush Current	65A Max (25°C, at 220 VAC, cold start)
Input Current	1.3A Max at 110VAC; 0.6A Max at 220VAC
Efficiency	90% (typical) at 220 VAC maximum load
Maximum Power	60W
Line Regulation	± 1%
Load Regulation	± 3%
Leakage Current	1mA Max
Protections	Over Voltage, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	90°C
Humidity	5% ~ 100% RH
Cooling method	Convection
Isolation voltage	Input/output: 3750 VAC; Input/chasis: 1500 VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L x W x H)	190 x 67.5 x 37 (mm)

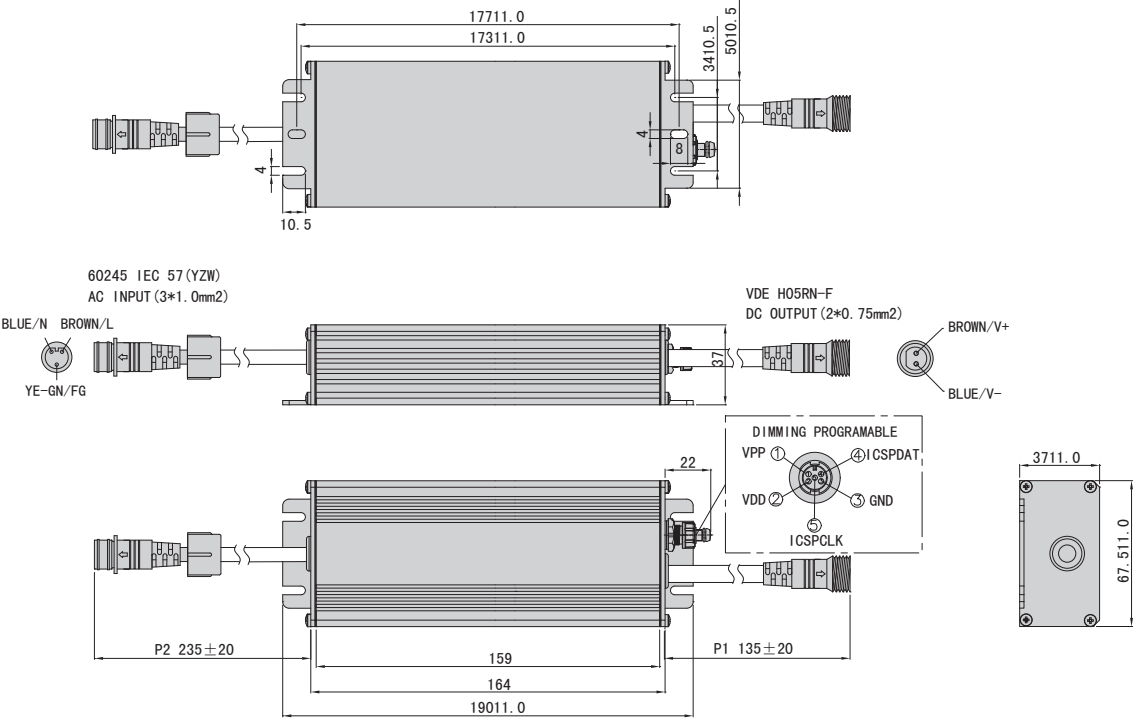
## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU075A035AQ1	350mA	128-214VDC	± 3%	88%	90%
MU075A070AQ1	700mA	64-107VDC	± 3%	88%	90%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# MU100AxxxAQI1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 91% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 Compliant
- Protections: OVP, SCP, OTP
- Safety compliant: UL8750, UL1012, CSA-C22.2 No.107.1, IEC61347-1, IEC61347-2-13



221 × 67.5 × 37 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.98 at 220 VAC (typical)
Inrush Current	65A Max (25°C, at 220 VAC, cold start)
Input Current	1.3A Max at 110VAC; 0.6A Max at 220VAC
Efficiency	91% (typical) at 220 VAC maximum load
Maximum Power	100W
Line Regulation	± 1%
Load Regulation	± 3%
Leakage Current	1mA Max
Protections	Over Voltage, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	90°C
Humidity	5% ~ 100% RH
Cooling method	Convection
Isolation voltage	Input/output: 3750 VAC; Input/chasis: 1500 VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	221 × 67.5 × 37 (mm)

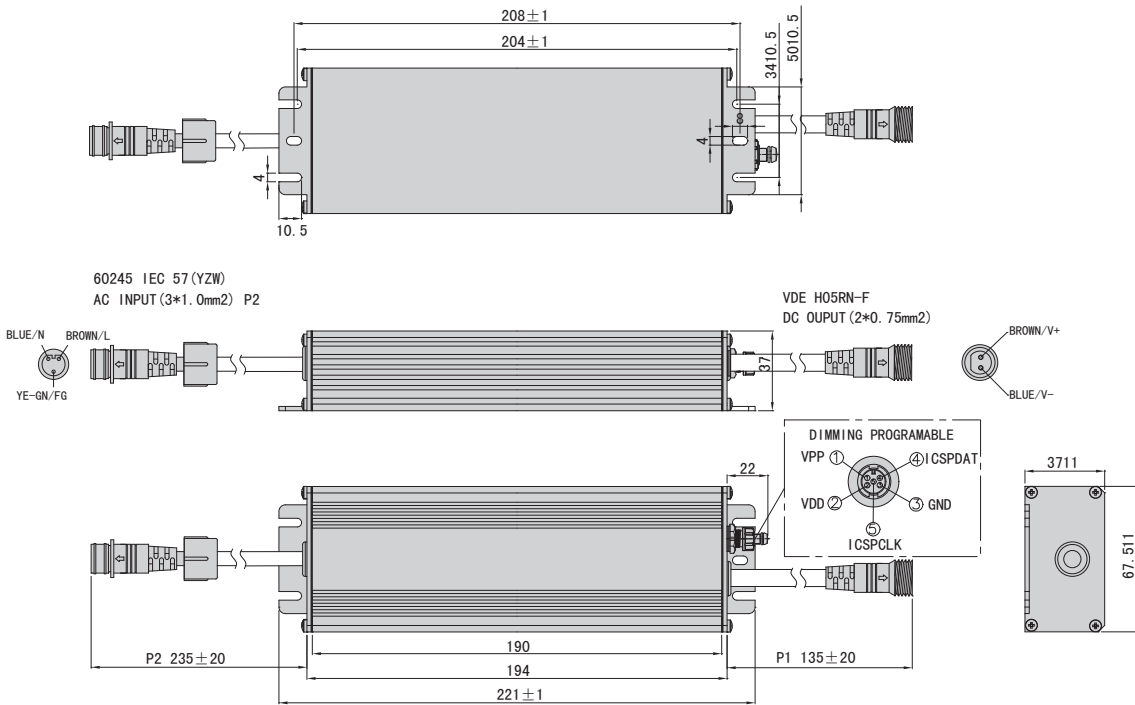
## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU100A035AQ11	350mA	172-286VDC	± 3%	89%	91%
MU100A070AQ11	700mA	86-143VDC	± 3%	89%	91%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU150AxxxAQI1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 90% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 Compliant
- Protections: OVP, SCP, OTP
- Safety compliant: UL8750, UL1012, CSA-C22.2 No.107.1, IEC61347-1, IEC61347-2-13



213 × 86 × 43 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.95 at 220 VAC (typical)
Inrush Current	65A Max (25°C, at 220 VAC, cold start)
Input Current	1.3A Max at 110VAC; 0.6A Max at 220VAC
Efficiency	92% (typical) at 220 VAC maximum load
Maximum Power	100W
Line Regulation	± 1%
Load Regulation	± 3%
Leakage Current	1mA Max
Protections	Over Voltage, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	90°C
Humidity	5% ~ 100% RH
Cooling method	Convection
Isolation voltage	Input/output: 3750 VAC; Input/chasis: 1500 VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	213 x 86 x 43 (mm)

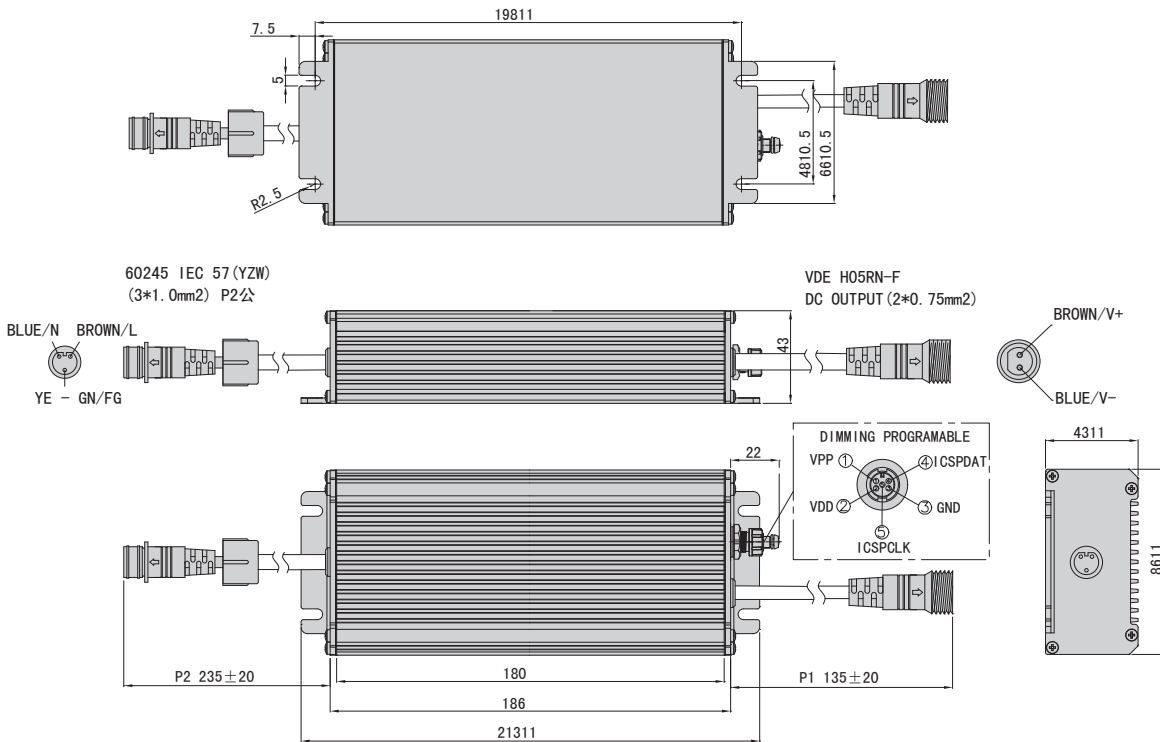
## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU150A035AQ11	350mA	256-428VDC	± 3%	90%	92%
MU150A070AQ11	700mA	128-214VDC	± 3%	90%	92%

Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MU200AxxxAQI1 Series

## Features

- Five sections time-shared dimming for 24hs
- Adjustable output current (AOC)
- PWM dimming
- Input voltage range 90 ~ 305 VAC
- High efficiency: 92% typical
- Active PFC: 0.99 typical
- Lightning protection
- IP67 Compliant
- Protections: OVP, SCP, OTP
- Safety compliant: UL8750, UL1012, CSA-C22.2 No.107.1, IEC61347-1, IEC61347-2-13



223 × 95 × 46 mm

## Electrical Specifications

Input voltage range	90~305 VAC
Frequency	47~63 Hz
Power Factor	0.99 at 110 VAC; 0.95 at 220 VAC (typical)
Inrush Current	65A Max (25°C, at 220 VAC, cold start)
Input Current	1.3A Max at 110VAC; 0.6A Max at 220VAC
Efficiency	92% (typical) at 220 VAC maximum load
Maximum Power	200W
Line Regulation	± 1%
Load Regulation	± 3%
Leakage Current	1mA Max
Protections	Over Voltage, Short Circuit, Over Temperature

## Environmental Specifications

Operating temperature	-35°C ~ +70°C
Storage temperature	-40°C ~ +85°C
Maximum case Temp.	90°C
Humidity	5% ~ 100% RH
Cooling method	Convection
Isolation voltage	Input/output: 3750 VAC; Input/chasis: 1500 VAC
MTBF	300,000 hours full load at 25°C ambient
Life Time	50,000 hours at 50°C ambient
Reference Dimension (L × W × H)	223 x 95 x 46 (mm)

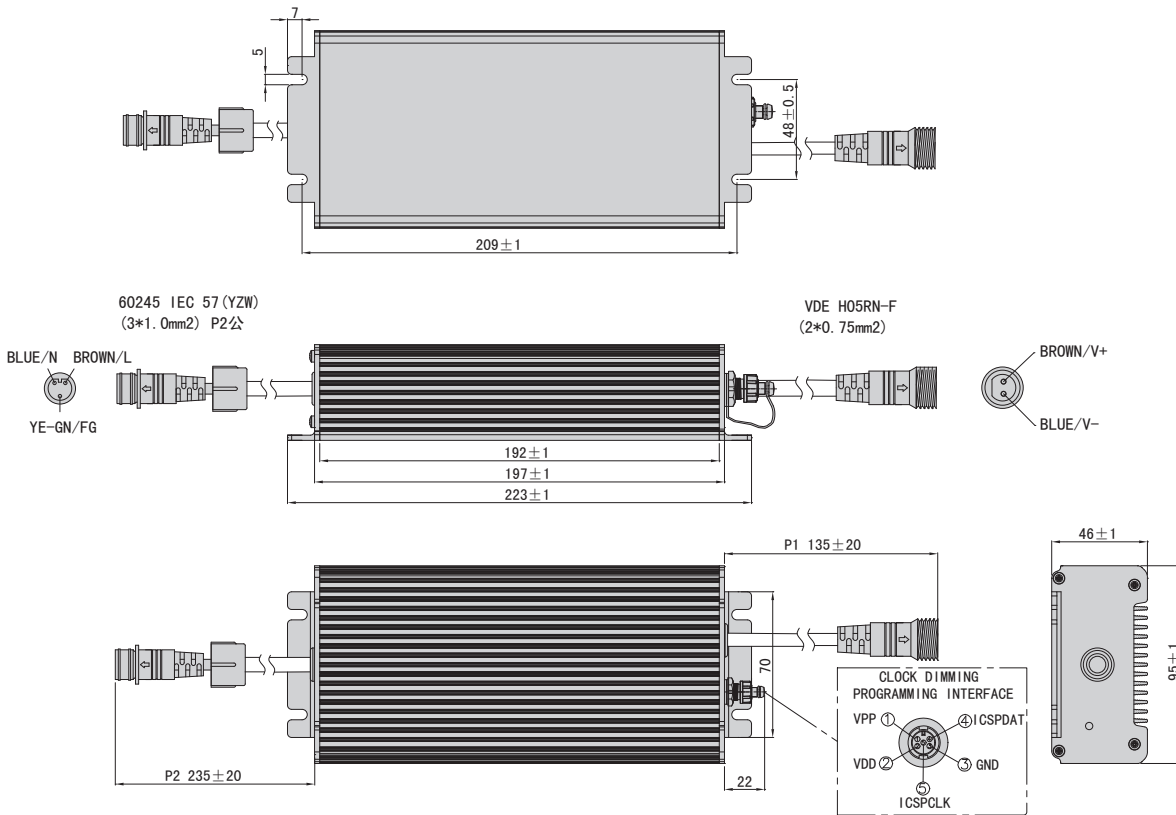
## Safety & EMC Compliance

CUL	UL8750, UL1012, CSA-C22.2 No. 107.1
CE	EN61347-1, EN61347-2-13
Conducted Emissions	FCC Part15 / EN55015 Class B
Radiated Emissions	FCC Part15 / EN55015 Class B
Harmonic Current Emissions	EN61000-3-2
Voltage Fluctuations and Flicker	EN61000-3-3
Electrostatic Discharge	EN61000-4-2
RFE Field Susceptibility	EN61000-4-3
Electrical Fast Transient	EN61000-4-4
Surge Immunity Test	EN61000-4-5
Conducted Radio Frequency	EN61000-4-6
Power Frequency Magnetic Field Test	EN61000-4-8
Voltage Dips	EN61000-4-11
Electromagnetic Immunity	EN61547

## Model Specifications - constant current

Part Number	Output Current	Output Voltage	Current Accuracy	Efficiency (typical)	
				110VAC	220VAC
MU200.	350mA	343-571VDC	± 3%	88%	90%
MU200A070AQ1	700mA	172-286VDC	± 3%	88%	90%

## Mechanical Outline (unit: mm)



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

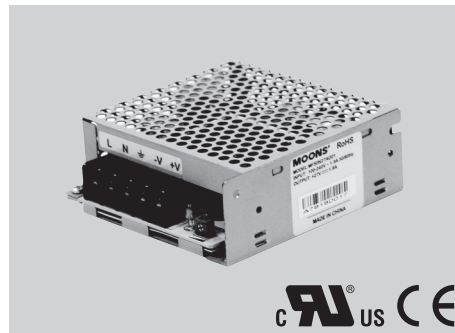
LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MF50N Series

## Features

- Universal AC input / full range: 90-264VAC or 125-370VDC
- Safety: CE / UL
- EMI: compliance to FCC-B, EN55011 / EN55022-B, CISPR22-B
- EMS: compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11
- Protections: SCP, OCP, OVP
- LED indicator for power on
- Terminal block: vertical terminal / horizontal terminal / connector modes available (horizontal terminal is standard)
- 100% full load burn-in test
- Compact size, high performance, high reliability
- RoHS compliant
- 2-year warranty



single output  
99.5 × 97 × 36mm

## General Specifications

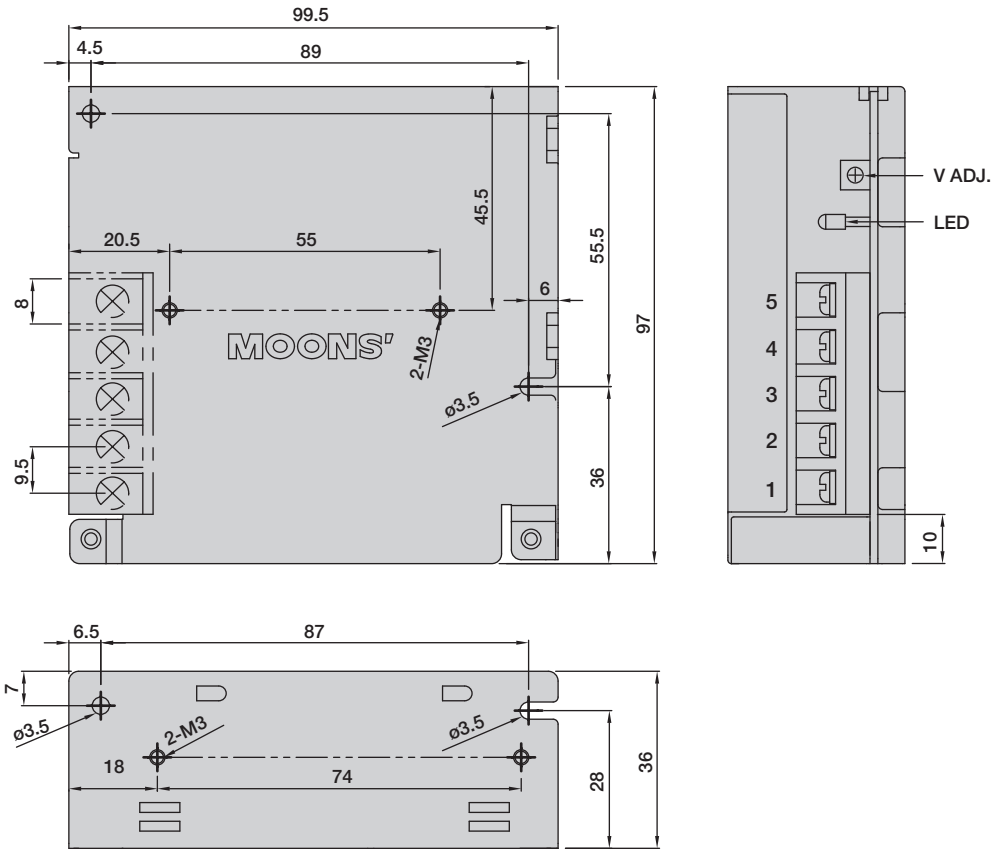
	MF50N 3AG	MF50N 5AG	MF50N 7AG	MF50N 12AG	MF50N 15AG	MF50N 24AG	MF50N 27AG	MF50N 36AG	MF50N 48AG
Rated output voltage	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V
Output current range	0~10A	0~10A	0~6.7A	0~4.2A	0~3.4A	0~2.1A	0~1.9A	0~1.4A	0~1.1A
Rated output power	33W	50W	50.2W	50.4W	51W	50.4W	51.3W	50.4W	52.8W
Output voltage Adj. range	3.3~3.8V	4.75~5.5V	6.75~8.25V	11.0~13.2V	13.5~16.5V	21.6~26.4V	24.3~29.0V	32.4~39.6V	43.2~52.8V
Ripple & noise (p-p) <sup>*1, *2</sup>	50mV		80mV	100mV		150mV			
Line regulation <sup>*2</sup>	± 0.3%								
Load regulation <sup>*2</sup>	± 1.0%			± 0.3%					
Output voltage tolerance <sup>*2</sup>	± 1%								
Hold time (typical) <sup>*1</sup>	16ms / 50ms								
Input voltage Range	90 ~ 264VAC (47 ~ 63Hz) or 125 ~ 370VDC								
Input AC current (typical) <sup>*1</sup>	1.3A / 0.8A								
Inrush current (typical) <sup>*1</sup>	18A / 36A (cold start)								
Efficiency (typical) <sup>*1</sup>	74% / 75%	78% / 79%	80% / 82%	81% / 83%	83% / 84%	85% / 86%	84% / 85%	85% / 86%	85% / 86%
Leakage current (typical) <sup>*1</sup>	0.5mA / 0.75mA (MAX 1.0mA)								
Over current protection <sup>*3</sup>	105% ~ 150%								
Over voltage protection <sup>*3</sup>	4.0~4.8V	5.7~7.5V	8.5~11.0V	14.0~17.0V	17.2~20.3V	27.6~32.4V	29.0~35.0V	41.4~48.6V	55.2~62.5V
Hold time (typical) <sup>*1</sup>	< 0.03% / °C (0~50°C)								
Operating temperature	- 20 °C ~ + 70 °C (Refer to output derating curve)								
Operating humidity	20 ~ 90 %RH (Non-condensing)								
Storage temperature	- 30°C ~ +85°C								
Storage humidity	10 ~ 95%RH (Non-condensing)								
Cooling method	Cooling by free air convection								
Withstand voltage	Input / output: 3.0kVAC (20mA); input - FG: 2.0kVAC (20mA); output - FG: 500VAC (50mA), 1 minute								
Isolation resistance	>100MΩ output - FG:500VDC Ta=25°C and 70%RH								
Vibration	10-55Hz, 10min. 1 cycle, 2G constant; X, Y, Z axes, 1 hour each								
Safety	Compliance to UL60950-1, CSA60950-1, EN60950-1, GB4943								
Emi conduction & radiation <sup>*4</sup>	Compliance to FCC- B, EN55011 / EN55022-B, VCCI-B								
Ems immunity <sup>*4</sup>	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11								
Weight (typical)	400g								
Reference Dimension (L × W × H)	99.5 × 97 × 36 (mm)								

### Note:

- \*1 All parameters not specially mentioned are measured at 115 / 230VAC input, rated load and 25°C of ambient temperature.
- \*2 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- \*3 Protection type: Hiccup mode, recovers automatically after fault condition is removed.
- \*4 The power supply is considered as a component to be installed into a final equipment which should be re-confirmed to meets EMC directives.

**Mechanical Outline (unit: mm)**

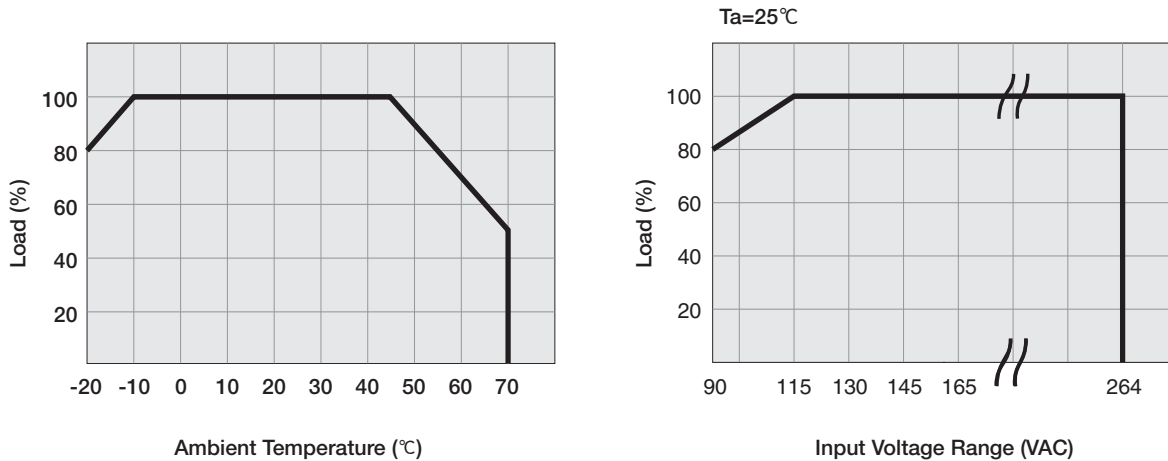
**Model Number: MF50N24AG-H**



**• Pin Configuration**

Pin No.	Output
1	Input / L
2	Input / N
3	FG $\perp$
4	Output -V
5	Output +V

**Derating Curve**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# MF100A Series

## Features

- Universal AC input / full range: 84-264VAC or 120-370VDC
- Active PFC filter build-in, PF>0.95, compliance to EN61000-3-2
- Safety: UL / TUV / CB / CE
- Protections: SCP, OCP, OVP
- LED indicator for power on
- Terminal block: vertical terminal / horizontal terminal / connector modes available (vertical terminal is standard)
- Remote ON / OFF control (optional)
- 100% full load burn-in test
- Compact size, high performance, high reliability
- RoHS compliant
- 2-year warranty



single output  
170 × 99 × 44mm

## General Specifications

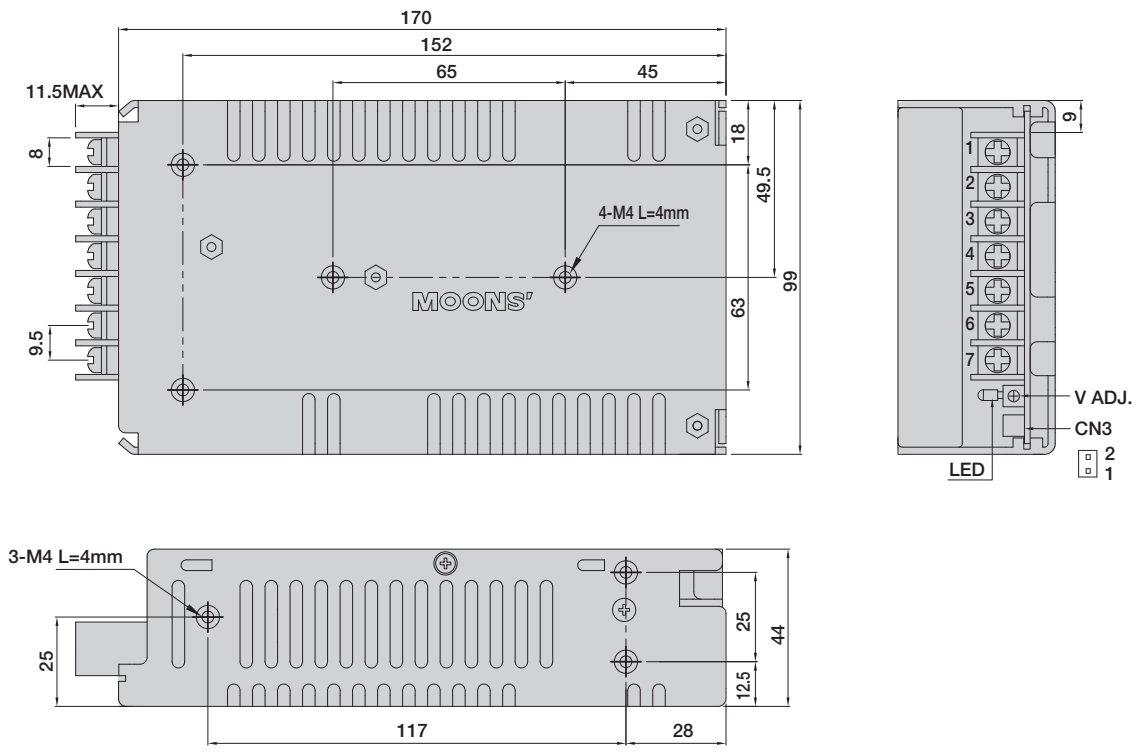
	MF100A 3AG	MF100A 5AG	MF100A 7AG	MF100A 12AG	MF100A 15AG	MF100A 24AG	MF100A 27AG	MF100A 36AG	MF100A 48AG
Rated output voltage	3.3 V	5 V	7.5 V	12 V	15 V	24 V	27 V	36 V	48 V
Output current range	0~20 A	0~20 A	0~13.4 A	0~8.5 A	0~6.7 A	0~4.3 A	0~3.8 A	0~2.9 A	0~2.1 A
Rated output power	66 W	100 W	100 W	102 W	100 W	103 W	102 W	104 W	101 W
Output voltage Adj. range <sup>*1</sup>	2.97~3.63 V	4.5~5.5 V	6.75~8.25 V	10.8~13.2 V	13.5~16.5 V	21.6~26.4 V	24.3~29.7 V	32.4~39.6 V	43.2~52.8 V
Ripple & noise (p-p) <sup>*1, *2</sup>	100 mV	100 mV	100 mV	100 mV	100 mV	150 mV	170 mV	190 mV	240 mV
Line regulation <sup>*2</sup>	20 mV	20 mV	30 mV	48 mV	60 mV	96 mV	112 mV	120 mV	150 mV
Load regulation <sup>*2</sup>	40 mV	40 mV	60 mV	96 mV	120 mV	120 mV	120 mV	120 mV	120 mV
Output voltage tolerance <sup>*2</sup>	± 1 %								
Hold-up time (typical) <sup>*1</sup>	16ms / 20ms								
Input voltage range	85 ~ 264 VAC (47-63Hz) or 120 ~ 370 VDC								
Input current (typical) <sup>*1</sup>	0.9A / 0.5A	1.2A / 0.6A							
Inrush current (typical) <sup>*1</sup>	20A / 40A (cold start)								
Power factor (typical)	0.98 / 0.93	0.99 / 0.95							
Efficiency (typical) <sup>*1</sup>	70% / 71%	75% / 77%	78% / 81%	79% / 82%	80% / 83%	81% / 84%	81% / 84%	81% / 84%	81% / 84%
Leakage current (typical) <sup>*1</sup>	0.25mA / 0.5mA (MAX 0.75mA)								
Over current protection <sup>*3</sup>	105% - 150%								
Over voltage protection <sup>*4</sup>	3.79~4.95 V	5.75~6.95 V	8.62~10.13 V	13.8~16.2 V	17.2~20.3 V	27.6~32.4 V	31.2~36.8 V	41.4~48.6 V	55.2~64.8 V
Temperature coefficient	< 0.02% / °C								
Operating temperature	- 20 ~ + 70 °C (Refer to output derating curve)								
Operating humidity	20 ~ 90 %RH (Non-condensing)								
Storage temperature	- 30 ~ +85 °C								
Storage humidity	10 ~ 95%RH (Non-condensing)								
Cooling method	Cooling by free air convection / external colling fan								
Withstand voltage	Input / output: 3.0kVAC (20mA); input - FG : 2.0kVAC (20mA); output - FG : 500VAC (20mA), 1 minute								
Isolation resistance	>100MΩ output - FG:500VDC Ta=25°C and 70%RH								
Vibration	10 - 55Hz, 10min. 1 cycle, 2G constant; X, Y, Z axes 1 hour each								
Safety standards	UL60950-1, CSA60950-1, EN60950-1, GB4943								
EMI conduction & radiation <sup>*5</sup>	Compliance to FCC-Class B, EN55011/EN55022-B, CISPR22 Class B								
EMS immunity <sup>*5</sup>	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11								
Optional function	Remote ON/OFF control								
Weight (typical)	550 g								
Reference Dimension (L × W × H)	170 × 99 × 44 (mm)								

### Note:

- \*1 All parameters not specially mentioned are measured at 115 / 230VAC input, rated load and 25°C of ambient temperature.
- \*2 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- \*3 OCP type: constant current limiting, recovers automatically after fault condition is removed (hiccup mode customizable)
- \*4 OVP type: shutdown output voltage, re-power on to recover.
- \*5 The power supply is considered as a component to be installed into a final equipment which should be re-confirmed to meets EMC directives.

**Mechanical Outline (unit: mm)**

Model Number: MF100A24AG-V



**Pin Configuration**

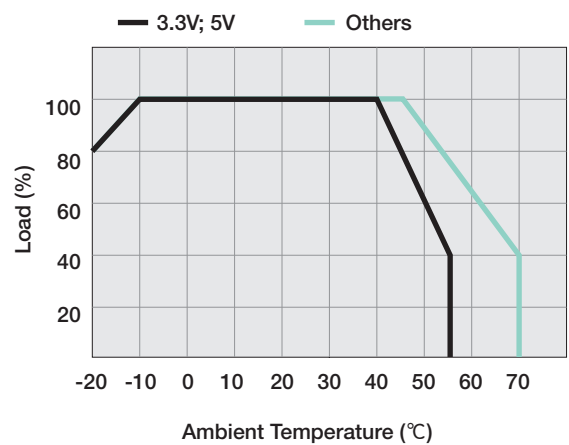
Pin No.	Output
1	AC / L
2	AC / N
3	FG $\perp$
4,5	DC output - V
6,7	DC output +V

**CN3: JST S2B-XH or Equivalence(Optional)**

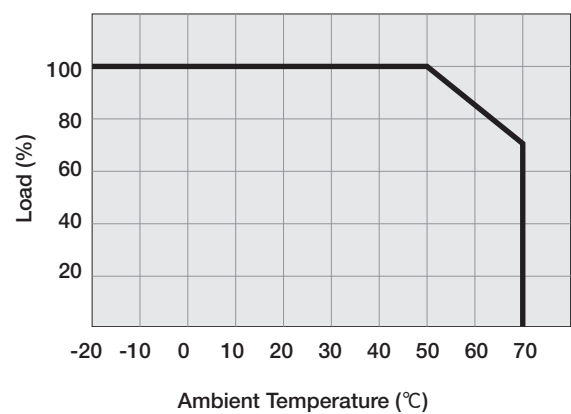
Pin No.	Output	Matching Conn.	Maching Pin.
1	RC+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	RC-		

**Derating Curve**

**Convection**



**Force-air Cooling (at 18 CFM or 1.2 m/s)**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MF150A Series

## Features

- Universal AC input / full range: 85-264VAC or 120-370VDC
- Active PFC filter build-in, PF>0.95, compliance to EN61000-3-2
- Safety: UL / TUV / CB / CE
- Protections: SCP, OCP, OVP, OTP
- LED indicator for power on
- Terminal block: vertical terminal / horizontal terminal / connector modes available (vertical terminal is standard)
- Peak current for motor applications: models 24V, 27V, 36V, 48V (optional)
- Remote ON / OFF control (optional)
- 100% full load burn-in test
- Compact size, high performance, high reliability
- RoHS compliant
- 2-year warranty



single output  
170 × 99 × 50mm

## General Specifications

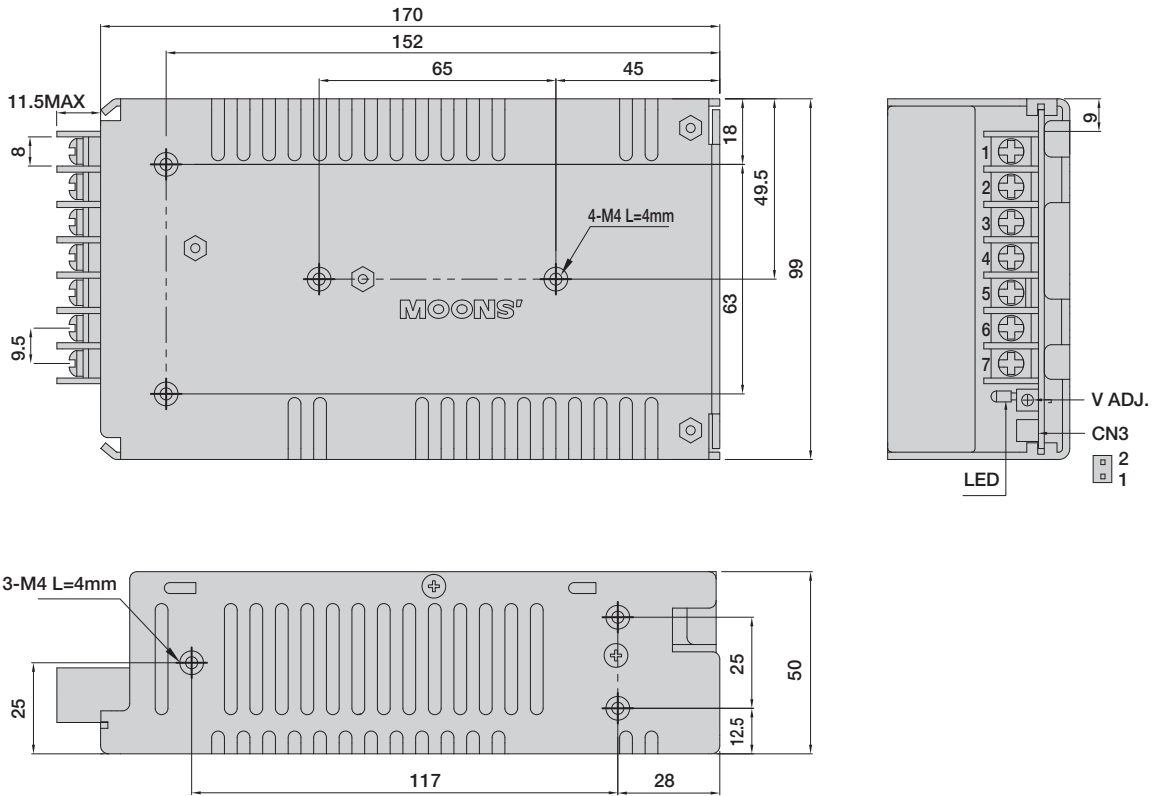
	MF150A 3AG	MF150A 5AG	MF150A 7AG	MF150A 12AG	MF150A 15AG	MF150A 24AG	MF150A 27AG	MF150A 36AG	MF150A 48AG
Rated output voltage	3.3V	5V	7.5V	12V	15V	24V	27V	36V	48V
Output current range	0~24A	0~24A	0~16A	0~12.5A	0~10A	0~6.3A	0~5.6A	0~4.2A	0~3.2A
Peak output current (optional)	-	-	-	-	-	9.5A	8.1A	6.3A	4.8A
Rated output power	79W	120W	120W	150W	150W	151W	151W	151W	154W
Output voltage Adj. range *1	2.97~3.63V	4.5~5.5V	6.75~8.25V	10.8~13.2V	13.5~16.5V	21.6~26.4V	24.3~29.7V	32.4~39.6V	43.2~52.8V
Ripple & noise (p-p) *1, *2	100mV	100mV	100mV	100mV	100mV	150mV	170mV	190mV	240mV
Line regulation *2	20mV	20mV	30mV	48mV	60mV	96mV	112mV	120mV	150mV
Load regulation *2	40mV	40mV	60mV	96mV	120mV	120mV	120mV	120mV	120mV
Output Voltage Tolerance *2	± 1 %								
Hold-up time (typical) *1	16ms / 20ms								
Input voltage range	85 ~ 264VAC (47-63Hz) or 120 ~ 370VDC								
Input current (typical) *1	1.3A / 0.7A		1.8A / 0.9A						
Inrush current (typical)	20A / 40A (cold start)								
Power factor (typical)	0.98 / 0.93		0.99 / 0.95						
Efficiency (typical) *1	71% / 73%	76% / 79%	79% / 81%	81% / 84%	81% / 84%	81% / 84%	81% / 84%	82% / 85%	83% / 86%
Leakage current (typical) *1	0.25mA / 0.5mA (MAX 0.75mA)								
Over current protection *3	105% - 150%								
Over voltage protection *4	3.79~4.95V	5.75~6.95V	8.62~10.13V	13.8~16.2V	17.2~20.3V	27.6~32.4V	31.2~36.8V	41.4~48.6V	55.2~64.8V
Temperature coefficient	< 0.02% / °C								
Operating temperature	- 20 ~ + 70°C (Refer to output derating curve)								
Operating humidity	20 ~ 90 %RH (Non-condensing)								
Storage temperature	- 30 ~ +85°C								
Storage humidity	10 ~ 95%RH (Non-condensing)								
Cooling method	Cooling by free air convection / external colling fan								
Withstand voltage	Input / output: 3.0kVAC (20mA); input - FG: 2.0kVAC (20mA); output - FG : 500VAC (20mA) , 1 minute								
Isolation resistance	>100 MΩ output - FG: 500VDC Ta=25°C and 70%RH								
Vibration	10 - 55Hz, 10min. 1 cycle, 2G constant, X, Y, Z axes 1 hour each								
Safety standards	UL60950-1, CSA60950-1, EN60950-1, GB4943								
EMI conduction & radiation *5	Compliance to FCC-Class B, EN55011/EN55022-B, CISPR22 Class B								
EMS immunity *5	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11								
Optional function	Remote ON/OFF control, peak current output, over-temperature protection								
Weight (typical)	620g								
Reference Dimension (L x W x H)	170 x 99 x 50 (mm)								

### Note:

- \*1 All parameters not specially mentioned are measured at 115 / 230VAC input, rated load and 25°C of ambient temperature.
- \*2 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- \*3 OCP type: constant current limiting, recovers automatically after fault condition is removed (hiccup mode customizable)
- \*4 OVP type: shutdown output voltage, re-power on to recover.
- \*5 The power supply is considered as a component to be installed into a final equipment which should be re-confirmed to meets EMC directives.

**Mechanical Outline (unit: mm)**

**Model Number: MF150A24AG-V**



**• Pin Configuration**

Pin no.	Output
1	AC input / L
2	AC input / N
3	FG $\perp$
4,5	DC output -V
6,7	DC output +V

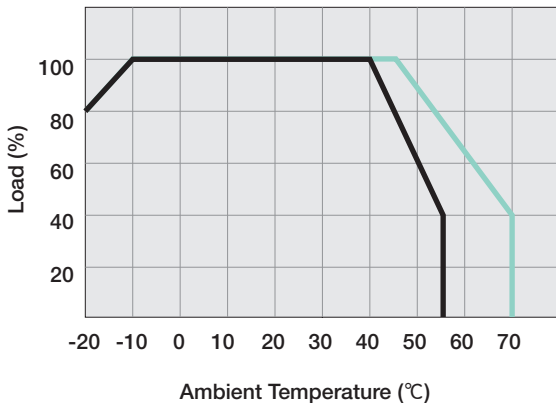
**• CN3: JST S2B-XH or Equivalent (optional)**

Pin No.	Assignment	Output	Maching Pin.
1	RC+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2	RC-		

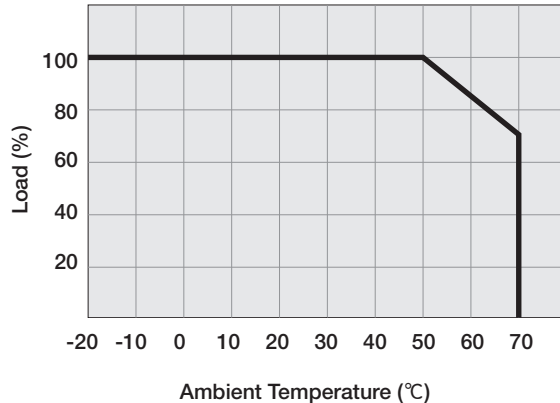
**Derating Curve**

**• Convection**

— 3.3V; 5V    — Others



**• Force-air Cooling (at 18 CFM or 1.2 m/s)**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MF320A Series

## Features

- Universal AC input / full range: 85-264VAC or 120-370VDC
- Active PFC filter build-in, PF>0.95, compliance to EN61000-3-2
- Safety: UL / TUV / CB / CE
- Protections: SCP, OCP, OVP, OTP
- LED indicator for power on
- Terminal block: vertical terminal / horizontal terminal / connector modes available (vertical terminal is standard)
- Peak current for motor applications: models 24V, 27V, 30V, 36V, 48V (optional)
- Remote ON / OFF control (optional)
- 100% full load burn-in test
- Compact size, high performance, high reliability
- RoHS compliant
- 2-year warranty



single output  
199 × 99 × 52mm

## General Specifications

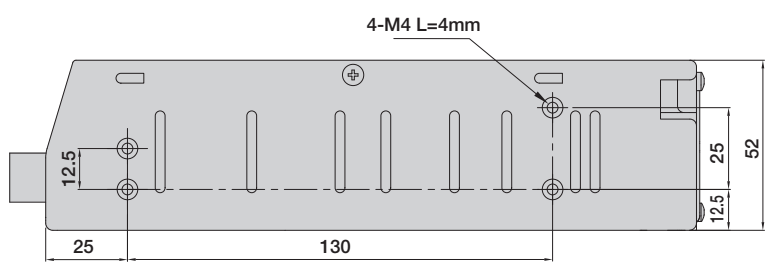
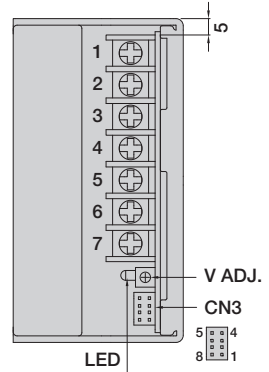
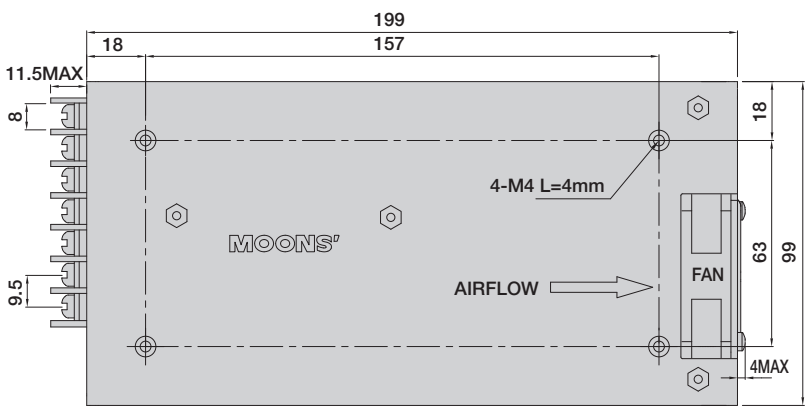
	MF320A 5AG	MF320A 7AG	MF320A 12AG	MF320A 15AG	MF320A 24AG	MF320A 27AG	MF320A 30AG	MF320A 36AG	MF320A 48AG	
Rated output voltage	5V	7.5V	12V	15V	24V	27V	30V	36V	48V	
Output current range	0~50A	0~40A	0~26A	0~21A	0~13A	0~12A	0~10.8A	0~9A	0~6.7A	
Peak output current (optional)	-	-	-	-	17.3A	17A	13A	11.5A	8.7A	
Rated output power	250W	300W	312W	315W	312W	324W	324W	324W	321W	
Output voltage Adj. range *1	3.0~5.5V	6.75~8.25V	10.8~13.2V	13.5~16.5V	21.6~26.4V	24.3~29.7V	27.0~33.0V	30.0~40.0V	43.2~52.8V	
Ripple & noise (p-p) *1, *2	100mV	100mV	100mV	120mV	150mV	150mV	200mV	200mV	240mV	
Line regulation *2	20mV	30mV	48mV	48mV	48mV	54mV	60mV	72mV	96mV	
Load regulation *2	40mV	60mV	96mV	120mV	120mV	150mV	180mV	180mV	240mV	
Output voltage tolerance *2	± 1 %									
Hold-up time (typical) *1	16ms / 20ms									
Input voltage range	85 ~ 264VAC (47-63Hz) or 120 ~ 370VDC									
Input current (typical) *1	3.2A / 1.6A		3.6A / 1.8A							
Inrush current (typical) *1	20A / 40A (cold start)									
Power factor (typical) *1	0.99 / 0.95									
Efficiency (typical) *1	74% / 78%		79% / 83%		82% / 86%		83% / 87%			
Leakage current (typical) *1	0.25mA / 0.5mA (MAX 0.75)									
Over current protection *3	105% - 150%									
Over voltage protection *4	5.75~6.95V	8.62~10.13	13.8~16.2V	17.2~20.3V	27.6~32.4V	31.1~36.5V	34.5~40.5V	41.4~48.6V	55.2~64.8V	
Over temp. Protection *4	90°C ± 5 (Detect on heatsink of power transistor)									
Temperature coefficient	< 0.02% / °C (0-50°C)									
Operating temperature	- 20 ~ + 70°C (Refer to output derating curve)									
Operating humidity	20 ~ 90%RH (Non-condensing)									
Storage temperature	- 30 ~ +85°C									
Storage humidity	10 ~ 95%RH (Non-condensing)									
Cooling method	built-in DC fan									
Withstand voltage	Input / output: 3.0kVAC (10mA); input - FG: 2.0kVAC (10mA); output - FG: 500VAC (10mA), 1 minute									
Isolation resistance	>100MΩ output - FG:500VDC Ta=25°C and 70%RH									
Vibration	10 - 55Hz, 10min. 1 cycle, 2G constant, X, Y, Z axes 1 hour each									
Safety standards	UL60950-1, CSA60950-1, EN60950-1, GB4943									
EMI conduction & radiation *5	Compliance to FCC-Class B, EN55011/EN55022-B, CISPR22 Class B									
EMS immunity *5	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11									
Optional function	Remote ON/OFF control, line drop compensation, peak current output, output failure alarm									
Weight (typical)	900g									
Reference Dimension (L × W × H)	199 × 99 × 52 (mm)									

### Note:

- \*1 All parameters not specially mentioned are measured at 115 / 230VAC input, rated load and 25°C of ambient temperature.  
 \*2 Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  
 \*3 OCP type: constant current limiting, recovers automatically after fault condition is removed (hiccup mode customizable)  
 \*4 OVP type: shutdown output voltage, re-power on to recover.  
 \*5 The power supply is considered as a component to be installed into a final equipment which should be re-confirmed to meets EMC directives.

**Mechanical Outline (unit: mm)**

**Model Number: MF320A24AG-V**



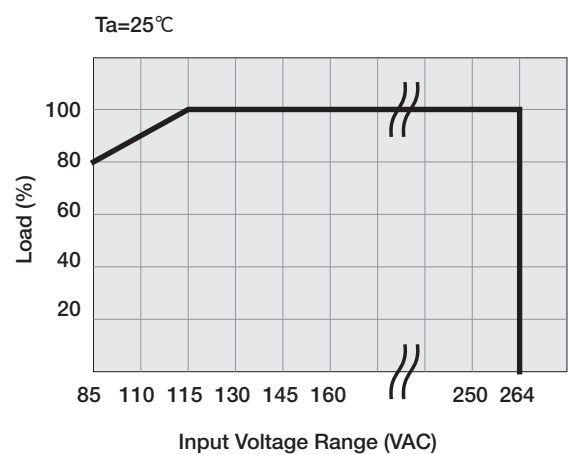
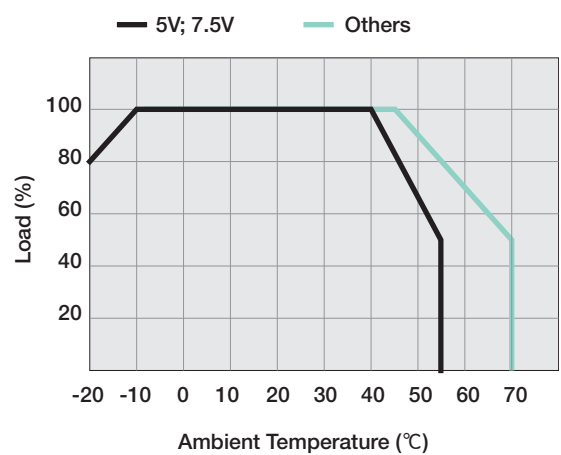
**• Pin Configuration**

Pin No.	Output
1	AC input / L
2	AC input / N
3	FG $\perp$
4, 5	DC output -V
6, 7	DC output +V

**• CN3: JST S8B\_PHDSS or Equivalent (optional)**

Pin No.	Output	Pin No.	Output
1	COM	8	PF
2	RC+	7	RC-
3	VO-	6	-S
4	VO+	5	+S

**Derating Curve**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series

# MF300A5AG - PSU For LED Screen Displays (Ultrathin)

## Features

- Universal AC input : 90-264VAC
- Active PFC filter build-in, PF>0.95, compliance to EN61000-3-2.
- Ultrathin: 25.5mm height, high performance
- Protections: short circuit, overload, over voltage, over temperature.
- LED indicator for power on.
- Fan speed automatically adjusts with the load which improves fan life.
- 100% full load burn-in test.
- Safety: UL / CE
- Compliance to RoHS.
- 2-year warranty.



single output  
215 × 115 × 25.5mm

## General Specifications

	MF300A5AG
Rated output voltage	5V
Output current range	60A
Rated output power	300W
Output voltage Adj. range	4.9-5.4V
Ripple & noise (p-p) * 1, 2	150mV
Output voltage tolerance * 1	± 5%
Hold time (typical) * 1	16ms
Input voltage range	90 ~ 264VAC (47-63Hz)
Input AC current (typical) * 1	5 / 2.5A
Inrush current (typical) * 1	60A (cold start)
Power factor (typical) * 1	0.99 (at 110V / 60A) 0.97 (at 230V / 60A)
Efficiency (typical) * 1	86% (at 110V / 40A) 85% (at 230V / 60A)
Leakage current (typical) * 1	1mA (MAX)
Over current protection * 3	110 - 130%
Over voltage protection * 4	5.75~6.95V
Over temperature protection * 4	90°C ± 5 (detect on heatsink of power transistor)
Temperature coefficient	< 0.03% /°C (0-50°C)
Operating temperature	- 40 ~ +70°C (refer to output derating curve)
Operating humidity	10 ~ 90%RH (non-condensing)
Storage temperature	- 40 ~ +85°C
Storage humidity	10 ~ 90%RH (non-condensing)
Cooling method	Forced air cooling by built-in fan
Withstand voltage	Input - Output: 3.0kVAC (15mA); Input - FG: 1.5kVAC (15mA)
Isolation resistance	>100MΩ Output -FG: 500VDC Ta=25°C and 70%RH
Vibration	10-55Hz,10min. 1cycle, 2G Constant, X, Y, Z axes 1hour each
Safety	UL60950-1, CSA60950-1, EN60950-1, GB4943
EMI conduction & radiation	Compliance with FCC-Class B, EN55011/EN55022-B, CISPR22 Class B
EMS Immunity	Compliance with EN61000-4-2, 3, 4, 5, 6, 8, 11
Weight (typical)	900g
Reference dimension (L x W x H)	215 x 115 x 25.5 (mm)

### Note:

- \*1 At rated output power, rated input voltage (115 / 230VAC) and 25°C of ambient temperature.  
 \*2 Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  
 \*3 Constant current limit with automatic recovery. To avoid overload or short circuit for long time.  
 \*4 Shutdown output voltage, re-power on to recover.

Numbering System

LED Driver  
 - General Series  
 - Outdoor Use  
 - PU Series

LED Driver  
 - General Series  
 - Outdoor Use  
 - MU Series

LED Driver  
 - General Series  
 - Outdoor Use  
 - Other Types

LED Driver  
 - General Series  
 - Indoor Use

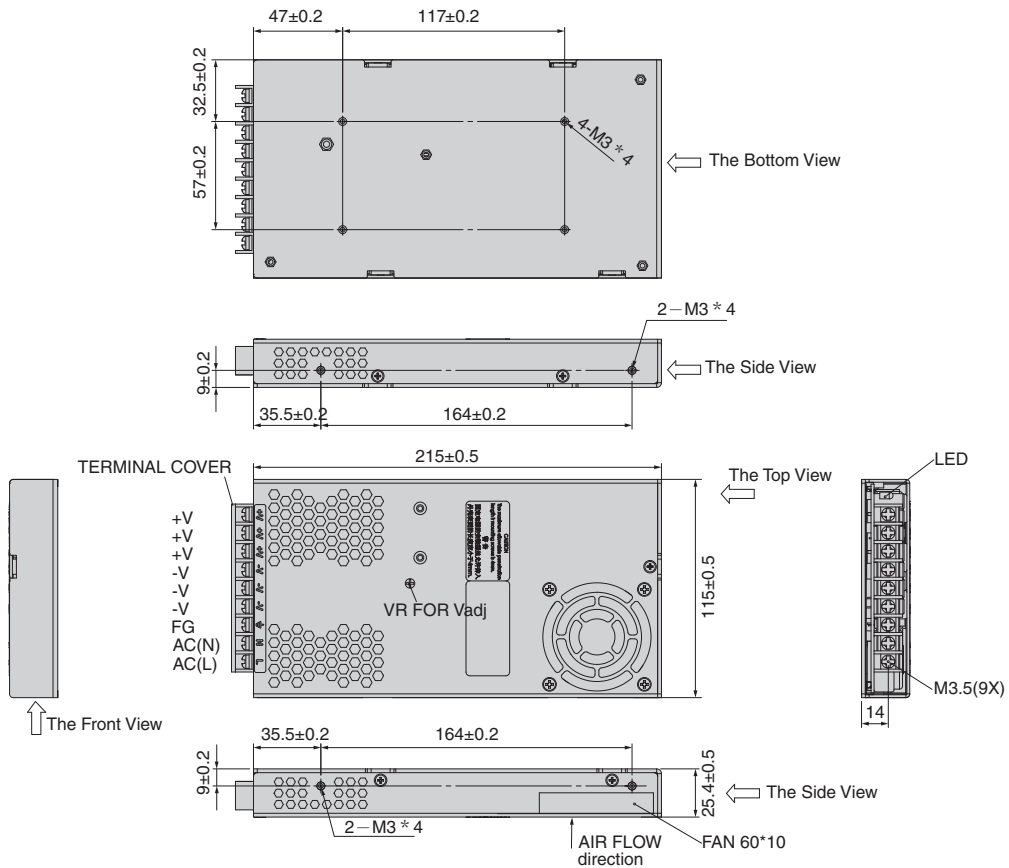
LED Driver  
 - Intelligent Series  
 - 50W Intelligent Series

LED Driver  
 - Intelligent Series  
 - 30W Intelligent Series

LED Driver  
 - Programmable Series  
 - Clock Control Series

General Power Supplies  
 - MF Series

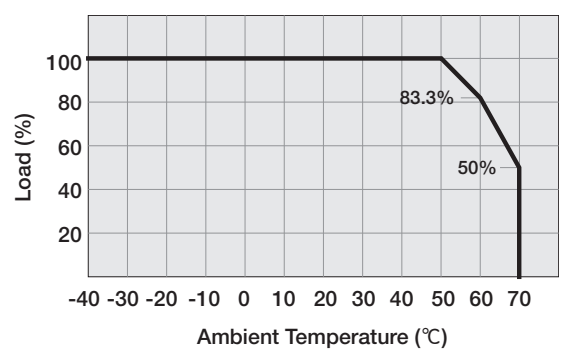
**Mechanical Outline (unit: mm)**



**• Pin Configuration**

Pin No.	Output
1	AC input / L
2	AC input / N
3	FG $\perp$
4、5、6	DC output -V
7、8、9	DC output +V

**Derating Curve**



Numbering System

LED Driver  
- General Series  
- Outdoor Use  
- PU Series

LED Driver  
- General Series  
- Outdoor Use  
- MU Series

LED Driver  
- General Series  
- Outdoor Use  
- Other Types

LED Driver  
- General Series  
- Indoor Use

LED Driver  
- Intelligent Series  
- 50W Intelligent Series

LED Driver  
- Intelligent Series  
- 30W Intelligent Series

LED Driver  
- Programmable Series  
- Clock Control Series

General Power Supplies  
- MF Series



# MOONS' PSE Certification List

No.	Model	Input	Output
1	PF45A24AS0	100-240Vac, 50/60Hz, 0.75A	24Vdc, 1.87A, 45W
2	PU040A070AQ	100-240Vac, 50/60Hz, 0.5A max	700mA, 18-54Vdc, 40W
	PU040A090AQ		900mA, 18-45Vdc, 40W
	PU040A105AQ		1050mA, 12-36Vdc, 40W
	PU040A120AQ		1200mA, 12-33Vdc, 40W
3	PU040A035AQ	100-240Vac, 50/60Hz, 0.48A max	350mA, 38-114Vdc, 40W
	PU040A045AQ		450mA, 30-89Vdc, 40W
4	MU060A035AQ	100-240Vac, 50/60Hz, 0.7A max	350mA, 102-170Vdc, 60W
	MU060A045AQ		450mA, 80-134Vdc, 60W
5	PF20N40AS0	100Vac, 50/60Hz, 35VA	0.4A, 40Vdc
	PF15N40AS0		0.3A, 45.6Vdc
	PF14N40AS0		0.285A, 45.6Vdc
6	MF6N14AS0	100Vac, 50/60Hz, 15VA	0.45A, 13.3Vdc
7	ME222A60BS0	100Vac, 50/60Hz, 260VA	CH1:60Vdc, 3.5A CH2:12Vdc, 0.8A
8	PF19A040AQ0	100Vac, 50/60Hz, 20VA	400mA, 32-48Vdc
9	MU100A070AQ	100-240Vac, 50/60Hz, 1.2A max	700mA, 86-143Vdc, 100.1w
	MU100A035AQ		350mA, 172-286Vdc, 100.1w
	MU100A045AQ		450mA, 132-222Vdc, 99.9w
	MU100A105AQ		1050mA, 57-95Vdc, 99.8w
	MU100A140AQ		1400mA, 43-71Vdc, 99.4w
10	ME143A40IS0	200Vac, 50/60Hz, 180VA	0.4A, 39.6Vdc, 9ch
11	MU050A105AQI0	100-277V, 50/60Hz, 0.7-0.3A, 60VA	200-1050mA, 57V Max, 50w Max
	MU050A105AQI1		
	MU050A105BQI0		
	MU050A105BQI1		
	MU050A105BQI2		
	MU050A105CQI0		
12	MF200A300CQ(PSU1)	100-240Vac, 50/60Hz, 2.6A	"CH1,CH2: 32-60VDC/3A CH3: 12VDC/0.8A"
13	MF050A105BQI0X	100-277V, 50/60Hz, 0.7-0.3A, 60VA	200-1050mA, 57V Max, 50w Max
14	MU017A035AQ	100-240VAC, 50/60Hz, Max 0.21A	350mA, 32-48VDC Max 16.8W
	MU017A090AQ	100-240VAC, 50/60Hz, Max 0.2A	900mA, 15-19VDC Max 17.1W
15	MU040A070AQ	100-277VAC, 50/60Hz, 0.42A	700mA, 18-54VDC, 40W
16	MU060A070AQ	100-240VAC, 50/60Hz, 0.7A Max	700mA, 52-86VDC, 60W

## MEMO

### Attention:

All specifications in catalog are for customer's reference. We recommend customer confirm specifications with our salesman before placing orders. We are not responsible for any consequence due to change in specifications.

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