

■ Features

- Power rating: 320W
- Input Voltage: 90-305Vac
- Constant voltage design
- Output Current (0mA-22000mA)
- Efficiency to 93%
- Protections: SCP, OTP, OVP, and OCP
- IP67
- 5-year warranty
- Surge Protection: L/N-PE: 6kV, L-N 4kV

RoHS
Compliant



*Product images are for illustrative purposes only and may vary from actual design.

■ Application

- LED strips, LED signs, billboards and landscaping lights

■ Model List

Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min.	Output Current Max.	Efficiency	Certification
L3WV-320S012ST	90 ~ 305Vac	264W	12V	0	22000mA	91%	UL/cUL/TUV/SAA/CE
L3WV-320S024ST	90 ~ 305Vac	320W	24V	0	13340mA	93%	UL/cUL/TUV/SAA/CE
L3WV-320S036ST	90 ~ 305Vac	320W	36V	0	8900mA	93%	UL/cUL/TUV/SAA/CE
L3WV-320S042ST	90 ~ 305Vac	320W	42V	0	7650mA	93%	UL/cUL/TUV/SAA/CE
L3WV-320S048ST	90 ~ 305Vac	320W	48V	0	6700mA	93%	UL/cUL/TUV/SAA/CE

■ Input Characteristics

Parameter	Min	Typ.	Max	Remarks
Rated AC input range	100Vac		277Vac	Derated@90-100Vac
AC input range	90Vac		305Vac	
Input frequency range	47Hz		63Hz	
Max input current			4.3A	90Vac, full load
Inrush current			80A	230Vac/50Hz, cold start
No load power		0.8W	1W	277Vac/50Hz, No load
Power factor	0.95	0.97		230Vac/50Hz, full load
	0.9	0.92		100-277Vac/50Hz, 75-100% Load
THD		8%	10%	230Vac/50Hz, full load
			20%	100-277Vac/50Hz, 75-100% Load

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■ Output Characteristics

Parameter		Min	Typ.	Max	Remarks
Output voltage range	L3WV-320S012ST	11.4V	12V	12.6V	Full load
	L3WV-320S024ST	22.8V	24V	25.2V	
	L3WV-320S036ST	34.2V	36V	37.8V	
	L3WV-320S042ST	39.9V	42V	44.1V	
	L3WV-320S048ST	45.6V	48V	50.4V	
Output current range	L3WV-320S012ST	0		22000mA	
	L3WV-320S024ST	0		13340mA	
	L3WV-320S036ST	0		8900mA	
	L3WV-320S042ST	0		7650mA	
	L3WV-320S048ST	0		6700mA	
Efficiency@230Vac	L3WV-320S012ST	90%	91%		Output 12V/22A Output 24V/13.34A
	L3WV-320S024ST	92%	93%		
	L3WV-320S036ST	92%	93%		
	L3WV-320S042ST	92%	93%		
	L3WV-320S048ST	92%	93%		
Output current tolerance		-5%		+5%	Full load
Output voltage ripple (pk-pk)			1%	2%	Oscilloscope/20MHz, output with a 0.1uf ceramic capacitor and a 10uf electrolytic capacitor
Start-up time			0.75s	1s	115Vac
			0.5s	1s	230Vac
Output overshoot/undershoot		-10%		+10%	When the driver is on or off
Line regulation		-1%		+1%	Full load
Load regulation		-3%		+3%	
Transient response	Overshoot amplitude	-10%		+10%	di/dt=1A/μs, 25%-50%-25%
	Recover time			10ms	

■ Environmental Requirements

Parameter	Min	Typ.	Max	Remarks
Operating Temperature	-40C°	25C°	+60C°	
Storage Temperature	-40C°	25C°	+85C°	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		4,000m	
Cooling method	Air Cooling			

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■ Safety Compliance

Certification	Standard	Status	Remark
UL/cUL	UL8750	✓	
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013 EN62493:2015	✓	
SAA	AS/NZS61347.2.13	✓	
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	
Item	Standard	Remark	
Insulation Strength	Input-output	3750Vac/10mA Max/60s	Reinforced insulation
	Primary-Earth	1875Vac/10mA Max/60s	Basic insulation
	Sec.- Earth	1000Vac/10mA Max/60s	Function insulation
Insulation Resistance	Input-output	≥10 MΩ	Testing Voltage: 500Vdc
Ground Resistor	≤0.1Ω	25A/1min	
Leakage Current	≤0.75mA	277Vac	
Item	Criterion	Remark	
Conduction Emission	EN55015:2013+A1:2015		
Radiation Emission	EN55015:2013+A1:2015		
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C	
Surge	IEC/EN61000-4-5	Difference mode 4kV, Common mode 6kV Criterion B	

■ Other Characteristics

Parameter		Min	Typ.	Max	Remarks
Protection	OCP	115%Io		130%Io	Hiccup mode
	OVP	105%Vo		130%Vo	The output voltage will be limited at the design range
	OTP	100℃	110 ℃	120 ℃	Shut down, when temperature is decreased, it will auto recover
	Short Circuit Protection	Driver will not damage with short circuit power <20W			Hiccup mode
Life Time		55,000hrs			230Vac full load, Tc 75℃
MTBF		200,000hrs			230Vac full load, Ta=25℃, (MIL-HDBK-217F)
Temperature Coefficient		-0.03%/℃		+0.03%/℃	Tc: 0℃~90℃
Tc		90℃			
Warranty		5 years			Tc 75℃
Net Weight		1840g			
Dimension		252x90x45mm			LxWxH
Packaging		1.8kg /unit; 7pcs/carton			

*Note: All the parameters above are tested at 25 °C, unless specified

■ Performance Curves

Fig. 1 O/P Voltage VS Output Current

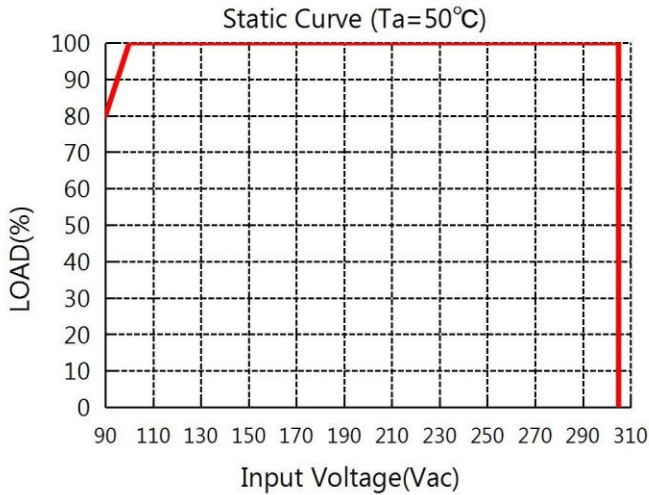


Fig. 2 O/P Power VS Ambient Temperature

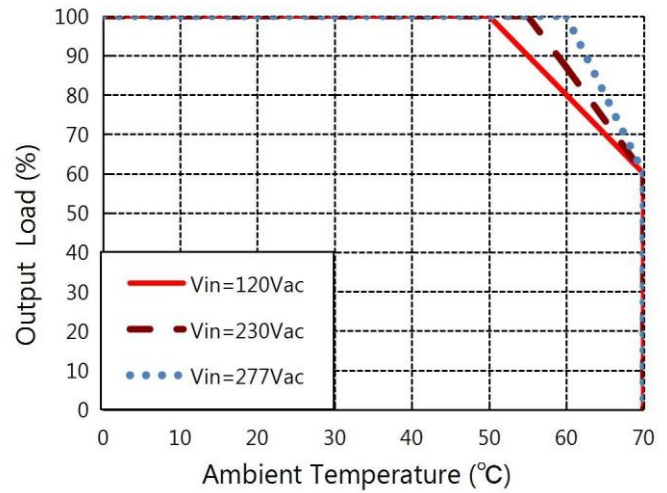


Fig. 3 Power Factor VS Output Power

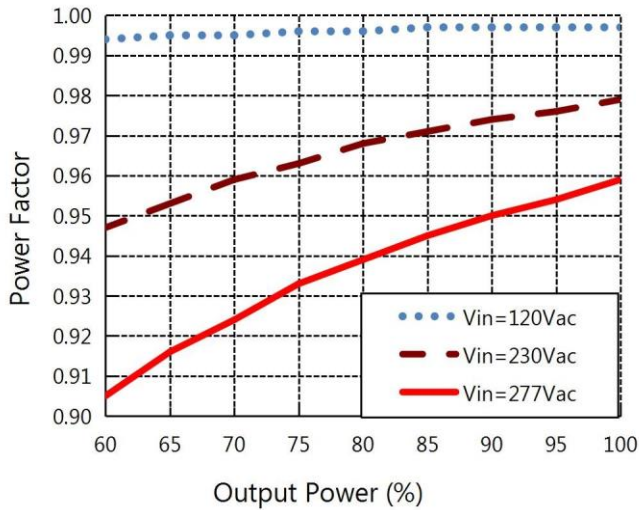
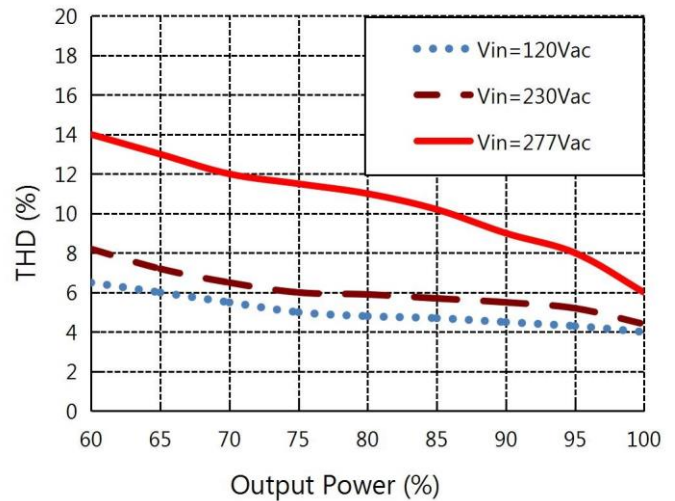


Fig. 4 THD VS Output Power



■ Performance Curves(cont.)

Fig. 5 Efficiency VS Output Power

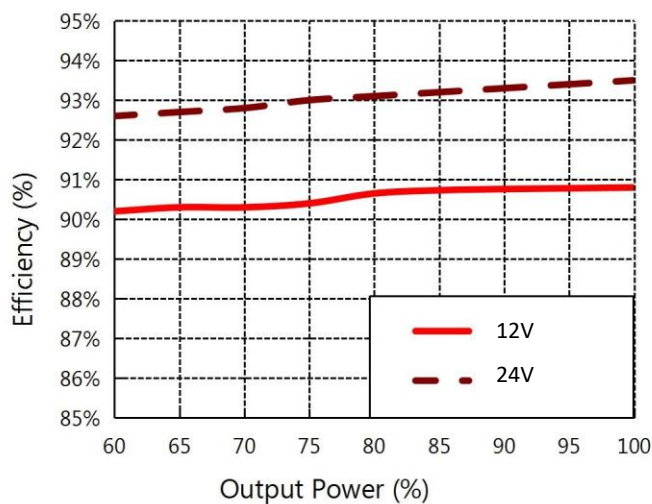
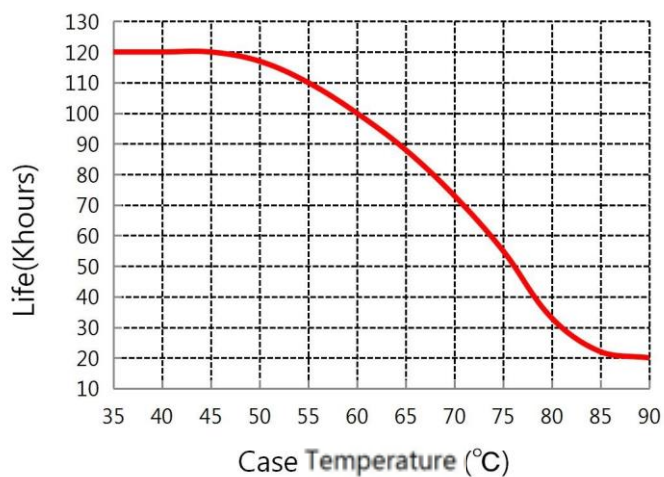
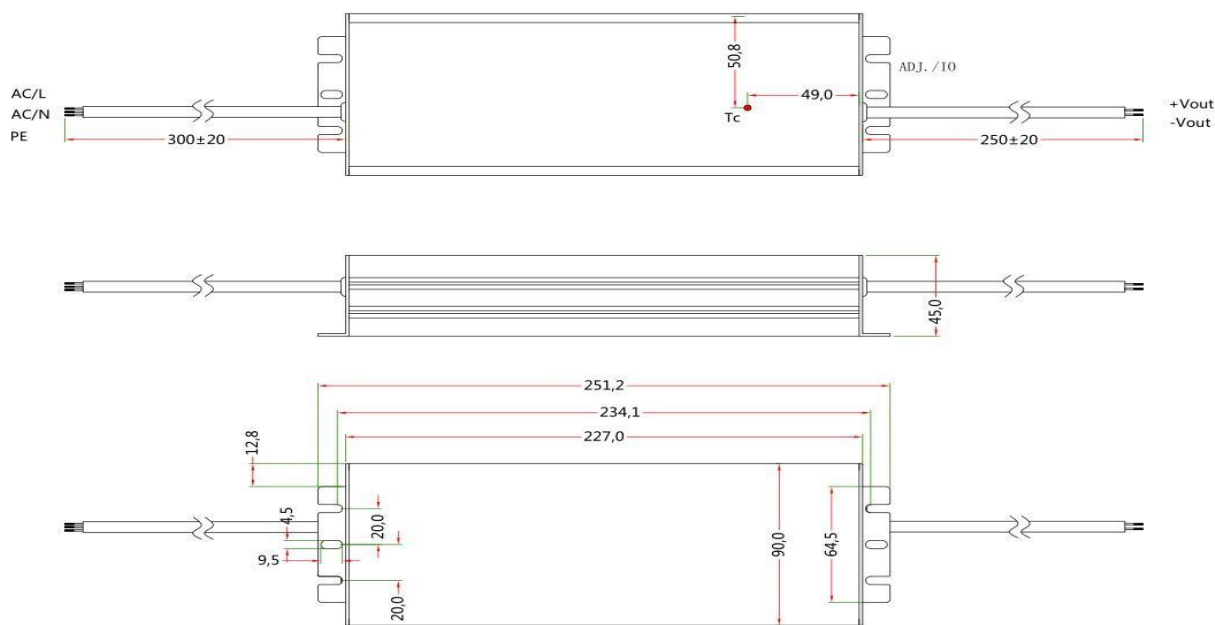


Fig. 6 Lifespan VS Case Temperature



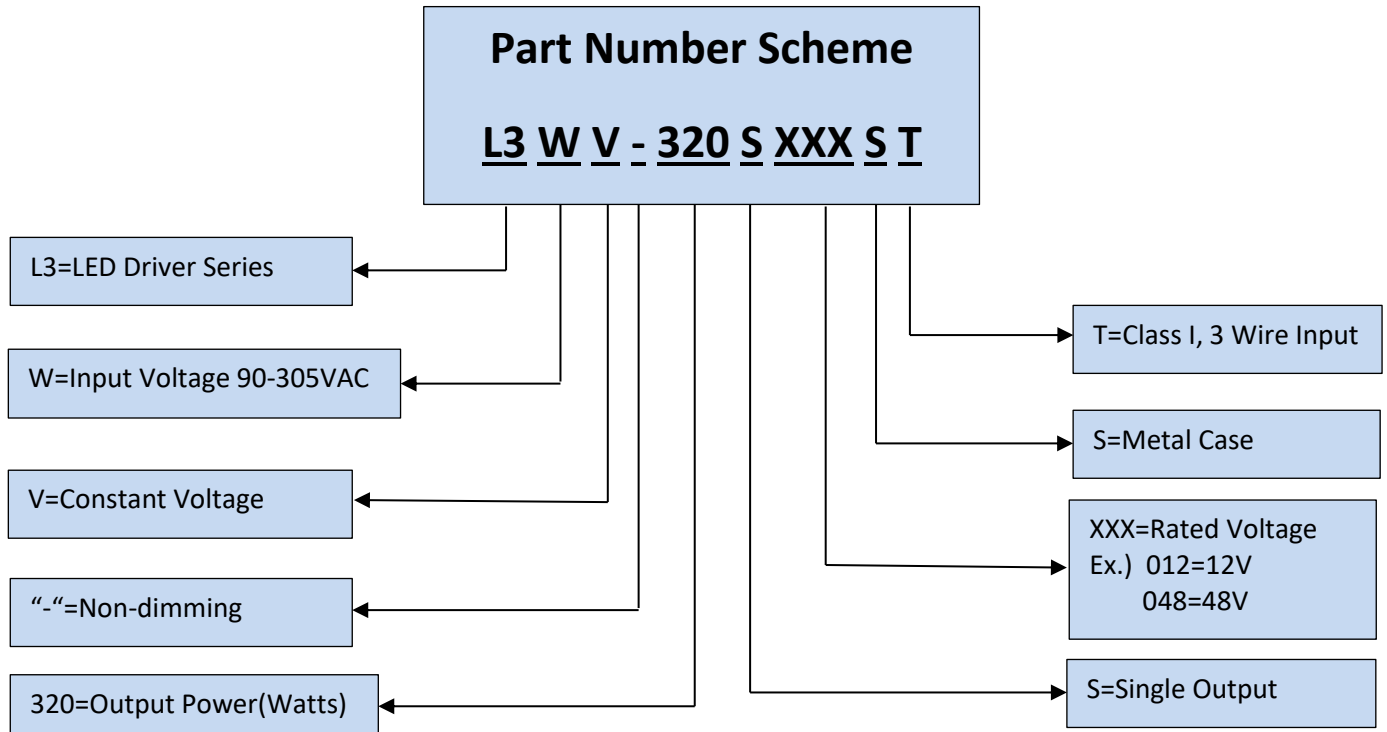
■ Mechanical Diagram



Wire Specifications

Input	UL SJTW #18AWG 3*0.824 mm ² , O.D: 7.8mm, GREEN: PE, BLACK: L, WHITE: N
Output	UL SJTW #14AWG 2*2.08 mm ² , O.D: 9.0mm, RED: V+, BLACK: V-

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