

**SERIES:** ETMA 200W | **DESCRIPTION:** MEDICAL AC-DC POWER SUPPLY

**FEATURES**

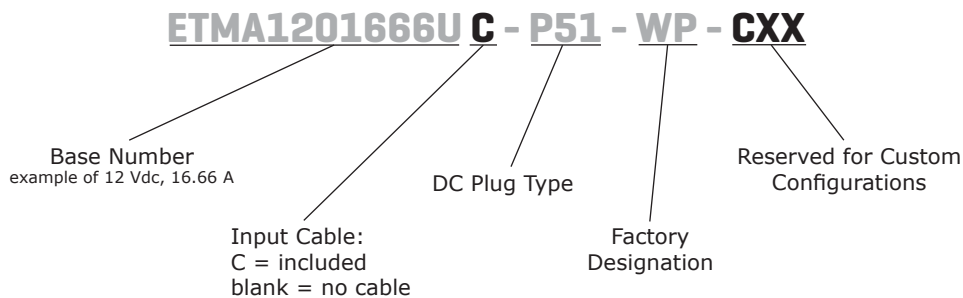
- up to 200 W power
- universal input (90~264 Vac)
- single regulated output from 12~48 V
- over voltage, overload and short circuit protections
- full medical safety approvals
- active PFC
- level V efficiency
- custom designs available



| MODEL        | output voltage | output current max | output power max | ripple <sup>1</sup> max | efficiency level |
|--------------|----------------|--------------------|------------------|-------------------------|------------------|
|              | (Vdc)          | (A)                | (W)              | (mVp-p)                 |                  |
| ETMA1201666U | 12             | 16.66              | 200              | 240                     | V                |
| ETMA1601250U | 16             | 12.5               | 200              | 300                     | V                |
| ETMA1901053U | 19             | 10.53              | 200              | 300                     | V                |
| ETMA2001000U | 20             | 10                 | 200              | 300                     | V                |
| ETMA240833U  | 24             | 8.33               | 200              | 300                     | V                |
| ETMA360555U  | 36             | 5.55               | 200              | 300                     | V                |
| ETMA480416U  | 48             | 4.16               | 200              | 300                     | V                |

Notes: 1. At full load, 100 ~ 240 Vac input, 20 MHz bandwidth oscilloscope, each output terminated with 10 µF aluminum electrolytic and 0.1 µF ceramic capacitors.

**PART NUMBER KEY**



## INPUT

| parameter                 | conditions/description | min | typ | max | units |
|---------------------------|------------------------|-----|-----|-----|-------|
| voltage                   |                        | 90  |     | 264 | Vac   |
| frequency                 |                        | 47  |     | 63  | Hz    |
| current                   | at 90 Vac, 60 Hz       |     |     | 3   | A     |
| inrush current            | at 230 Vac, cold start |     |     | 150 | A     |
| no load power consumption |                        |     |     | 0.5 | W     |

## OUTPUT

| parameter               | conditions/description | min | typ   | max | units |
|-------------------------|------------------------|-----|-------|-----|-------|
| line regulation         |                        |     | ±1    |     | %     |
| load regulation         |                        |     | ±5    |     | %     |
| hold-up time            | at 115 Vac             | 16  |       |     | ms    |
| temperature coefficient |                        |     | ±0.05 |     | %/°C  |

## PROTECTIONS

| parameter                | conditions/description    | min | typ | max | units |
|--------------------------|---------------------------|-----|-----|-----|-------|
| over voltage protection  | 12 V output               | 110 |     | 133 | %     |
|                          | 16, 20 V outputs          | 110 |     | 130 | %     |
|                          | 19 V output               | 111 |     | 137 | %     |
|                          | 24, 36 V outputs          | 110 |     | 125 | %     |
|                          | 48 V output               | 110 |     | 120 | %     |
| overload protection      | shutdown and auto restart | 110 |     | 160 | %     |
| short circuit protection | continuous, auto restart  |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter             | conditions/description  | min     | typ | max   | units |
|-----------------------|---|---------|-----|-------|-------|
| isolation voltage     | input to output for 2 seconds   |         |     | 5,656 | Vdc   |
|                       | input to frame ground for 2 seconds   |         |     | 2,121 | Vdc   |
| insulation resistance | input to output, at 500 Vdc   | 20      |     |       | MΩ    |
|                       | input to frame ground, at 500 Vdc   | 20      |     |       | MΩ    |
| safety approvals      | UL/cUL (UL 60601-1), EN 60601-1, IEC 60601-1  |         |     |       |       |
| EMI/EMC               | FCC 47 CFR Part 18, CE, EN 61000-3-(2, 3), EN 55011, IEC 61000-4-(2, 3, 4, 5, 6, 8, 11) |         |     |       |       |
| leakage current       | earth, at 264 Vac   |         | 190 | 300   | μA    |
|                       | enclosure, at 264 Vac   |         | 10  | 100   | μA    |
| MTBF                  | at 25°C, max. load  | 140,000 |     |       | hours |
| RoHS compliant        | yes   |         |     |       |       |

## ENVIRONMENTAL

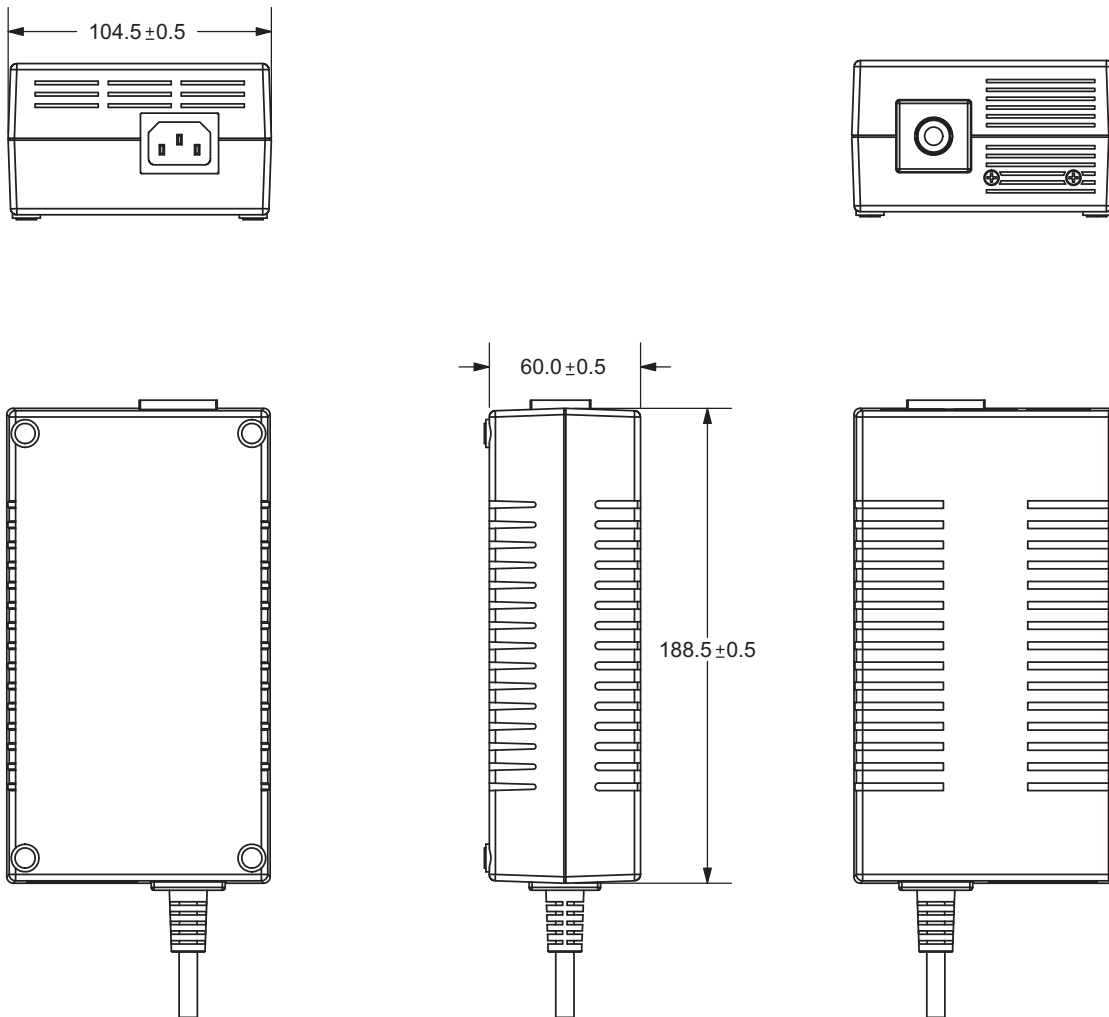
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 50  | °C    |
| storage temperature   |                        | -10 |     | 70  | °C    |
| humidity              | non-condensing         | 20  |     | 90  | %     |

## MECHANICAL

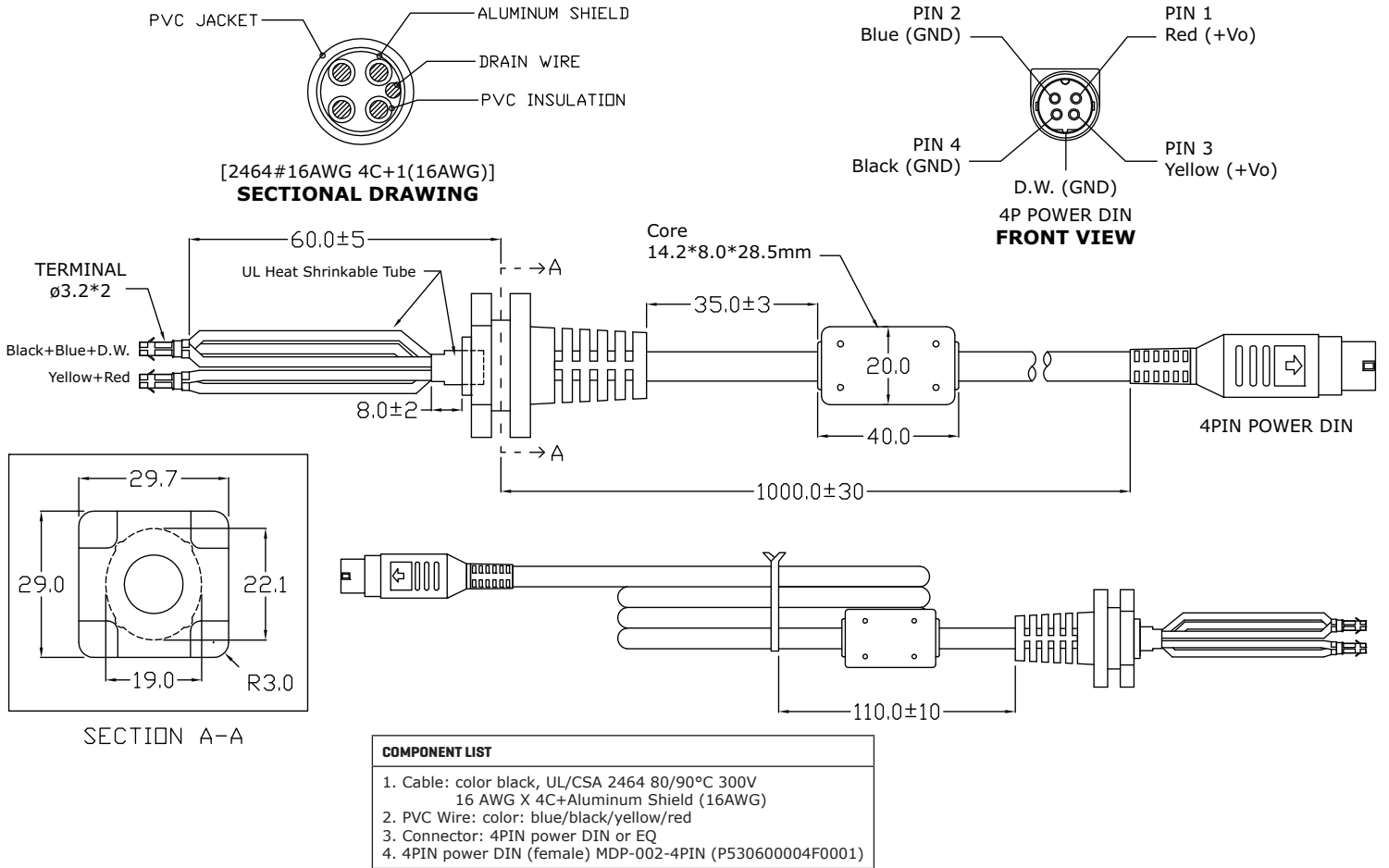
| parameter  | conditions/description                     | min | typ  | max | units |
|------------|--|-----|------|-----|-------|
| dimensions | 7.42 x 4.11 x 2.36 (188.5 x 104.5 x 60 mm) |     |      |     | inch  |
| input plug | IEC320 / C14                               |     |      |     |       |
| weight     |  |     | 1.06 |     | kg    |

## MECHANICAL DRAWING

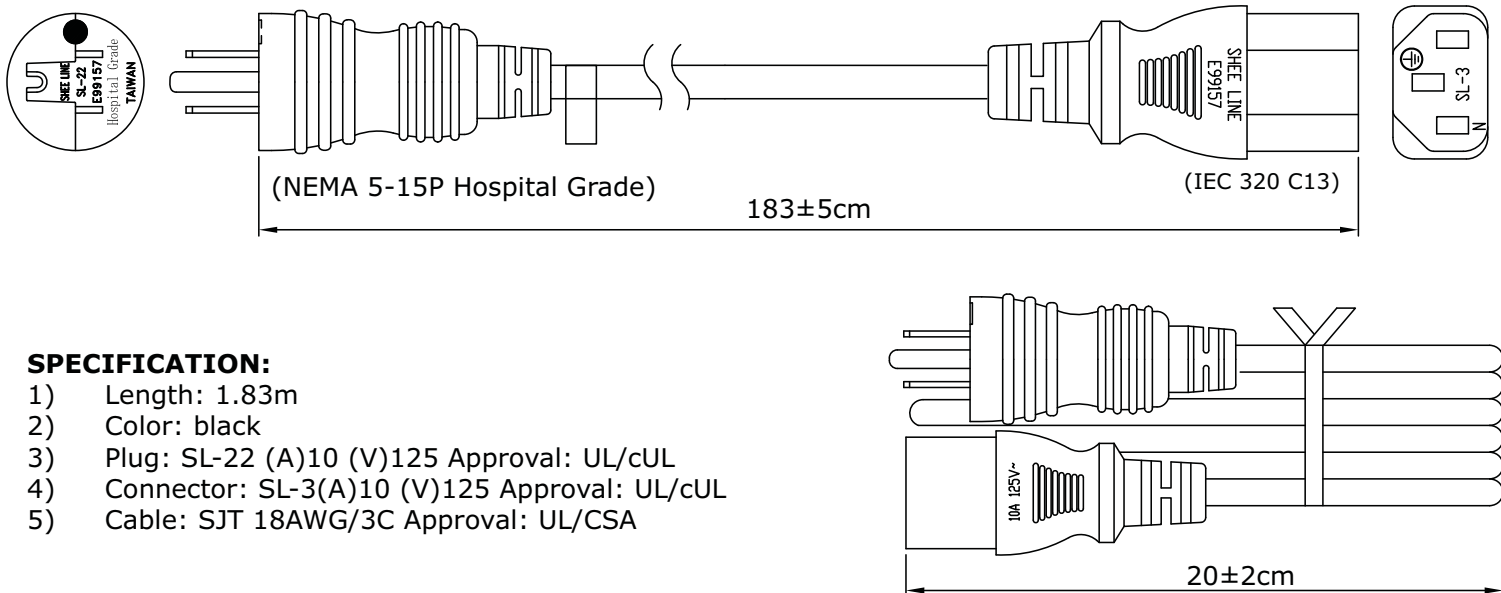
units: mm



## DC CORD



## AC CORD



## REVISION HISTORY

| rev. | description  | date       |
|------|--|------------|
| 1.0  | initial release  | 03/05/2012 |
| 1.01 | V-Infinity branding removed, safety and EMI/EMC data updated | 08/13/2012 |
| 1.02 | replaced TUV approval with Nemko                             | 09/04/2013 |

The revision history provided is for informational purposes only and is believed to be accurate.



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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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