

## 9290 007 12703

|                 |                                   |
|-----------------|-----------------------------------|
| Brand Name      | XITANIUM                          |
| Description     | Xitanium 300W 1.5A Prog+ GL-R sXt |
| Input Voltage   | 120 ~ 230 ~ 277VAC                |
| Input Frequency | 50/60Hz                           |
| RoHS            | Yes                               |
| Status          | Preliminary                       |

### Electrical Specifications

| Output Power (W) | Output Voltage (V) | Output Current range (ADC) | Efficiency@ Max Load at 1.5A 200V (70C Tcase) |         |         | Max Case Temp. (°C) | Input Current (Arms) |         |         | Max. Input Power (W) | Inrush Current (A <sub>pk</sub> / $\mu$ s / %width)<br>120VAC & 277VAC: acc. NEMA |            |            | THD @ Max Load (%) | Power Factor @ Max Load | Surge Protection DM/CM (kV) | Weight (Lbs/kg)  | Envir. Protection Rating |
|------------------|--------------------|----------------------------|---|---------|---------|---------------------|----------------------|---------|---------|----------------------|---|------------|------------|--------------------|-------------------------|-----------------------------|------------------|--------------------------|
|                  |                    |                            | 120V AC                                       | 230V AC | 277V AC |                     | 120 VAC              | 230 VAC | 277 VAC |                      | 120 VAC   | 230 VAC    | 277 VAC    |                    |                         |                             |                  |                          |
| 300              | 80 ~ 280           | 0.1 ~ 1.5                  | 120V AC                                       | 230V AC | 277V AC | 80°C                | 120 VAC              | 230 VAC | 277 VAC | 330                  | 120 VAC   | 230 VAC    | 277 VAC    | <20%<br>See graph  | >0.95<br>See graph      | 4/4                         | 1.6 kg / 3.6 lbs | UL damp and dry          |
|                  |                    |                            | 91.7 %  | 93.6 %  | 93.8 %  |                     | 2.73                 | 1.42    | 1.21    |                      | 77/440/10   | 170/220/50 | 166/530/10 |                    |                         |                             |                  |                          |

### Wiring Diagram



#### Input and output lead wires.

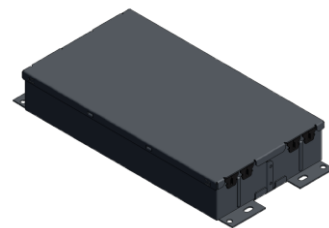
Leadwires are 18AWG/0.82mm<sup>2</sup> 105°C/600V, solid copper.

#### Lead length

Standard lead length: 275 mm ( $\pm$ 30mm) on all wires outside the enclosure

| Dimming Method  | Dimming Range                                      |            | Other Comments   |
|-----------------|--|------------|--|
| 1-10V Isolated  | 10% ~ 100%   |            | Dimming source current: 150 $\mu$ A ( $\pm$ 3%).<br>Min. output current: 100mA |
| DALI            | 1 ~ 254  | 10% ~ 100% | Linear or logarithmic variation.<br>Min. output current: 100mA                 |
| AmpDim          | 30% ~ 100%   |            | Linear   |
| Prog. AOC range | 0.35A to 1.5A<br>Factory default AOC value: 1000mA |            |  |

### Enclosure



| Dimensions      | (mm)              |
|-----------------|-------------------|
| Case Length     | 213.9             |
| Case Width      | 118.3             |
| Case Height     | 37.6              |
| Mounting Length | 224.6/226.2       |
| Mounting Width  | 55.8...63.8/102.7 |
| Overall Length  | 240.5             |



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| RoHS            | Yes                               |
| Status          | Preliminary                       |

### Electrical Specifications

#### Product Data

|  |  |
|--|--|
| Order code                                 | 9290 007 12703   |
| Full product code                          | 9290 007 12703   |
| Full product name                          | XITANIUM 300W 1.5A Prog+ GL-R sXt  |
| Net weight per piece                       | 1.6 kg / 3.6 lbs   |
| Interfaces                                 | 1-10V Dimming, DALI, AmpDim, Integrated Dynadimmer AOC(via DALI only), MTP (via RNTC), CLO             |
| Ambient temperature range                  | -40 to +55°C   |
| Emergency DC detection (DCemDim)           | NO   |
| 1-10V dimming specifications               | 150µA ± 3% source current from driver. See dim curve for details.                                      |
| Line voltage                               | 120 ~ 277VAC   |
| Line current                               | 2.71A @ 120VAC, 1.42A @ 230VAC, 1.21A @ 277VAC   |
| Line frequency                             | 50/60Hz  |
| Min. mains voltage operational             | 108VAC   |
| Max. mains voltage operational             | 305VAC   |
| Envir. Protection Rating                   | UL damp and dry, IP rating = none, for built-in use only   |
| Life @ TC 70C                              | Refer to graph below   |
| Life @ TC 80C                              | Refer to graph below   |
| Suitable for outdoor use                   | Yes  |
| Max TC                                     | 80C  |
| Maximum ballast number on MCB 16A B/C type | 3/6  |
| Input overvoltage                          | Will survive input overvoltage stress of 320VAC for max.48 hours and 350VAC for max. 2 hours           |
| Touch current                              | <0.7mA peak (IEC 61347 -1:2007 (2 <sup>nd</sup> edition)+A1:2010+A2:2012)<br><0.75mA rms (per UL 8750) |
| Output current ripple                      | Max. 15% @ 1.5A (ripple = pk/avg)  |
| THD total                                  | Refer to graph   |
| PF @ Max Load                              | Refer to graph   |
| Insulation between input and output        | Basic  |
| Insulation towards enclosure               | Double   |
| Protections                                | Short-circuit and open-circuit protection for LED + and LED-   |
| Standby power                              | < 1.0W   |
| Safety approbations                        | UL8750, IEC 61347 -1:2007 (2 <sup>nd</sup> edition)+A1:2010+A2:2012                                    |
| Emissions                                  | FCC 47 CFR Part 15 Class A, CISPR 15   |
| Surge protection                           | 4kV CM/DM (IEEE / ANSI C62.41.2)   |

Installation & Application Notes:

#### Section I – Physical Characteristics

- 1.1 LED Driver shall be installed inside an electrical enclosure (built-in use only)
- 1.2 Wiring inside electrical enclosure shall comply with 600V/105°C rating or higher.

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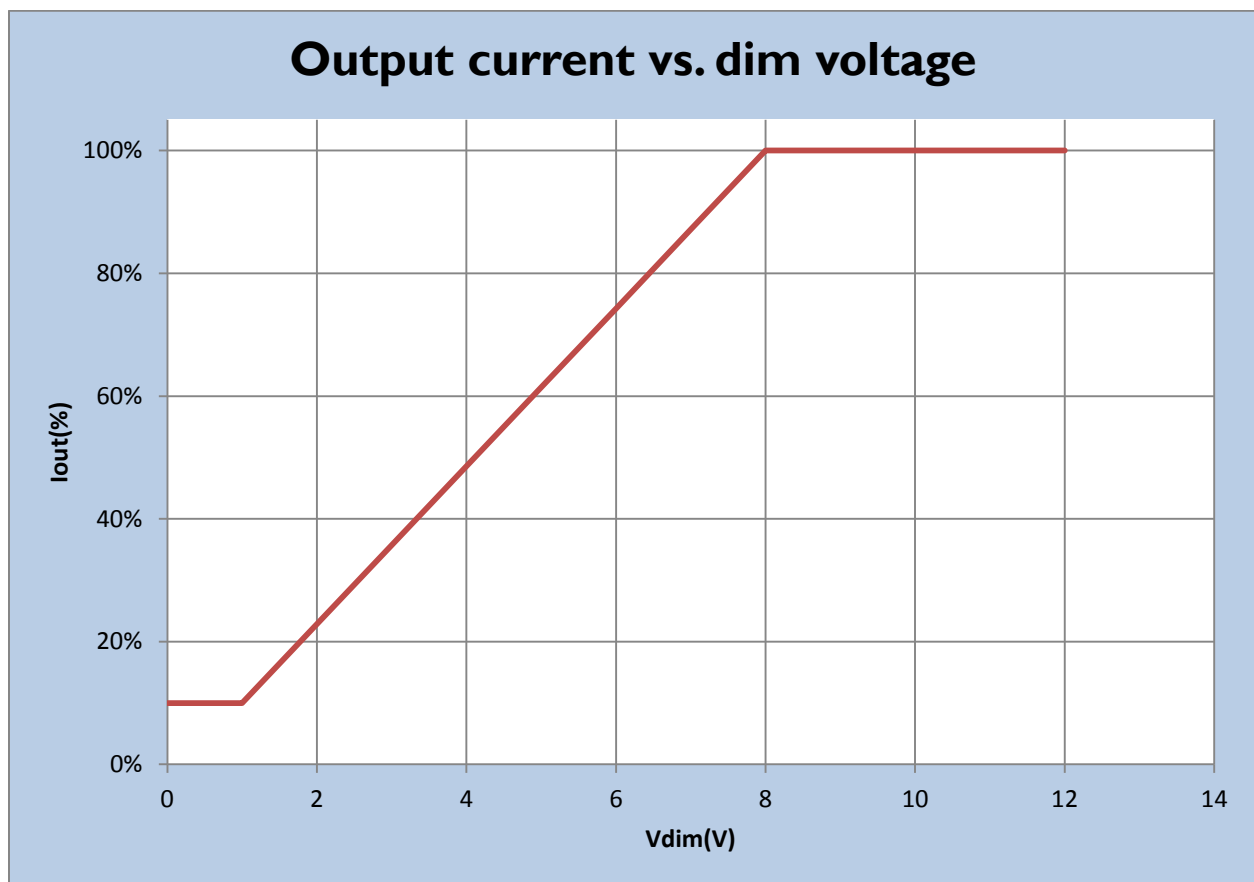
### Electrical Specifications

#### I-10V dimming curve

Dimming source current from the driver:  $150\mu\text{A}$  ( $\pm 3\%$ ) (@  $0 < V_{\text{dim}} < 8\text{V}$ )

LED current tolerance at any value of  $V_{\text{dim}}$ :  $\pm 5\%$  of  $I_{\text{max}}$

Minimum dim level: 10% or 100mA if AOC < 1000mA



I-10V interface is enabled by factory default

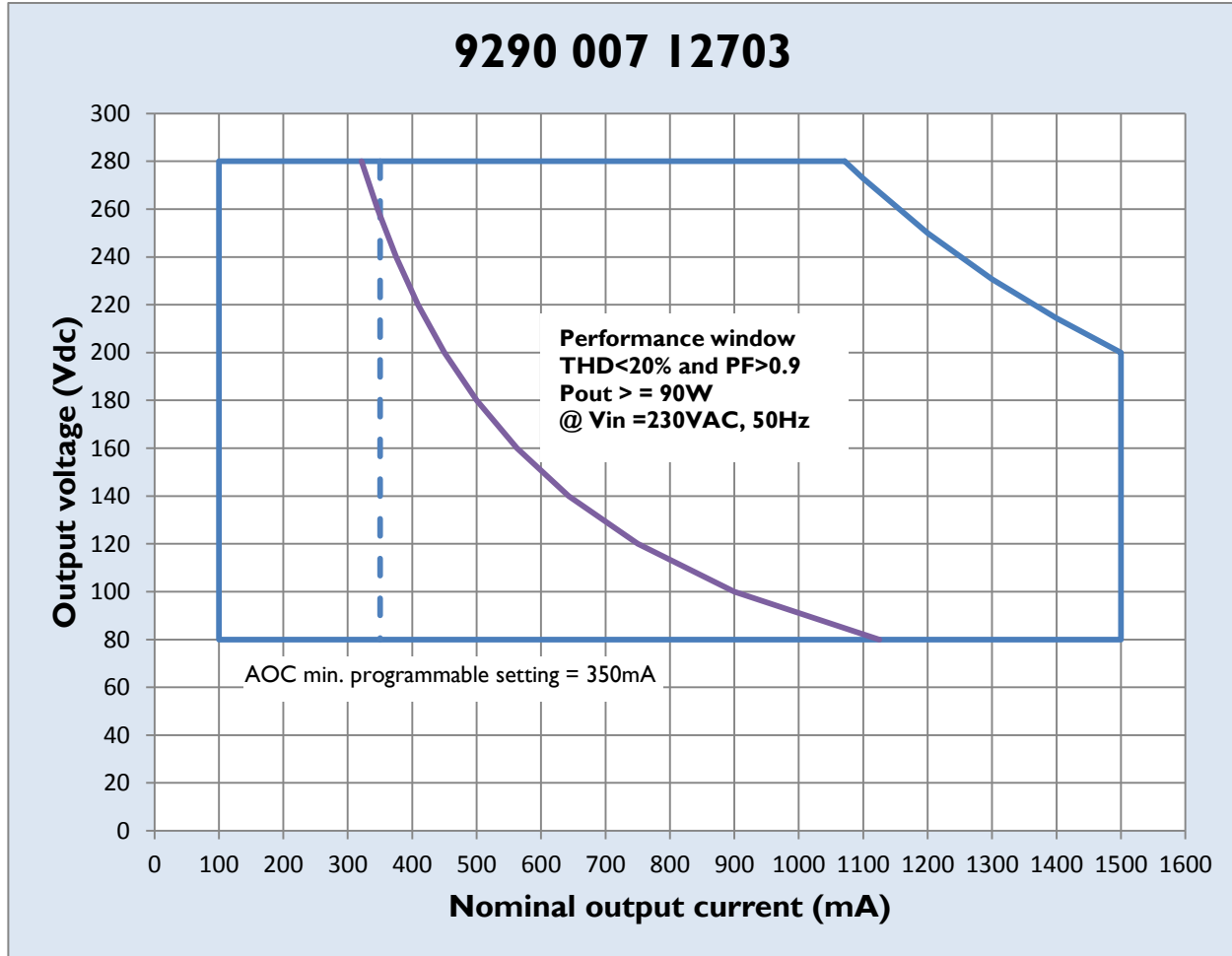


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### Electrical Specifications

Output operating window:





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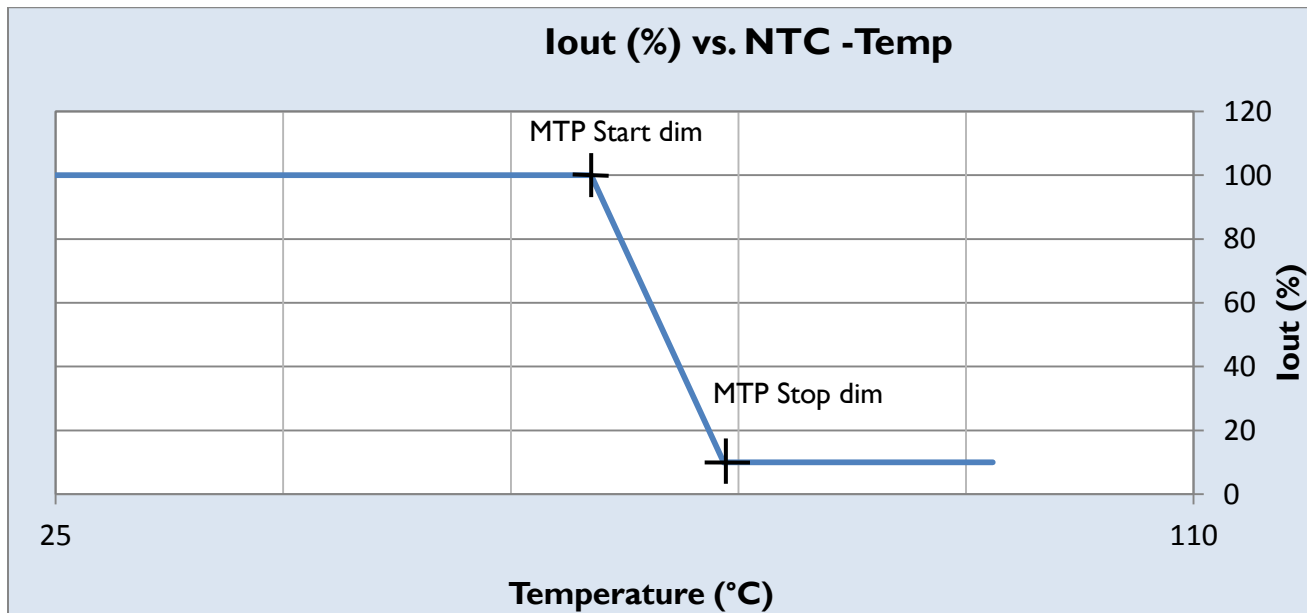
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| RoHS            | Yes                               |
| Status          | Preliminary                       |

### Electrical Specifications

#### Module Thermal Protection

Factory defaults: MTP enabled, Philips LED Light Engine option enabled

| MTP option  | Default programmed values                           | Dimming range |
|---|---|---------------|
| Philips LED Light Engine                                | MTP Start dim: 2263 ohms<br>MTP Stop dim: 1757 ohms | 100% to 10%   |
| Custom: enter selected NTC value and B(25-85°C)         |   | 100% to 10%   |
| NTC1 preset: 10k NTC<br>Murata: NCPI8XH103J03RB         |   | 100% to 10%   |
| NTC2 preset: 15k NTC+390ohms<br>Murata: NCPI5XWI53E03RC |   | 100% to 10%   |



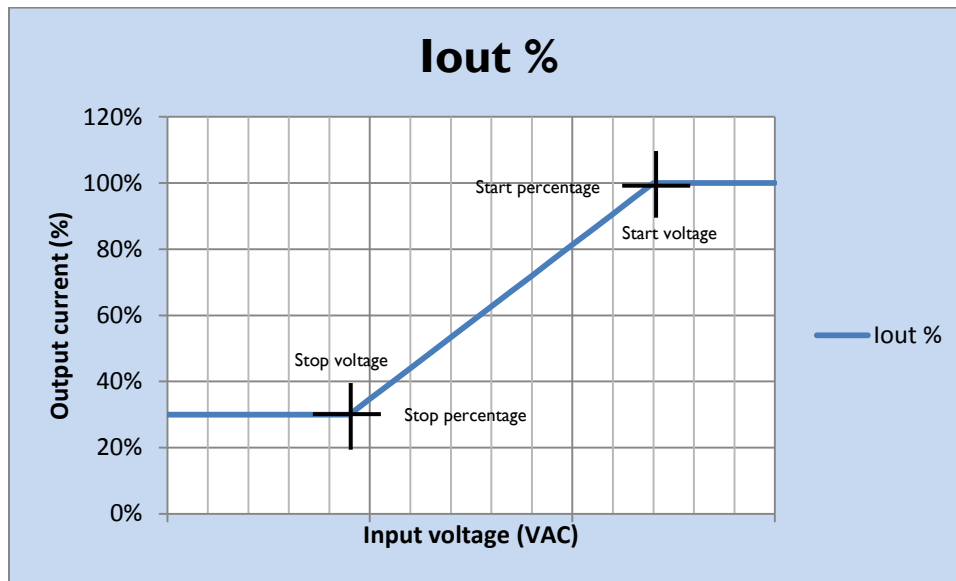
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| RoHS            | Yes                               |
| Status          | Preliminary                       |

## Electrical Specifications

AmpDim curve:

| Parameter        | Min    | Max    | Increments                    |
|------------------|--------|--------|-------------------------------|
| Start voltage    | 170VAC | 250VAC | 1V (configurable by software) |
| Stop voltage     | 150VAC | 230VAC | 1V (configurable by software) |
| Start percentage | 30%    | 100%   | 1% (configurable by software) |
| Stop percentage  | 30%    | 100%   | 1% (configurable by software) |



Current tolerance  $\Delta I$  (%) = (Start percentage – Stop percentage)  $\times$  5/(Start voltage – Stop voltage)

Note: phase-cut dimming is *not* allowed.

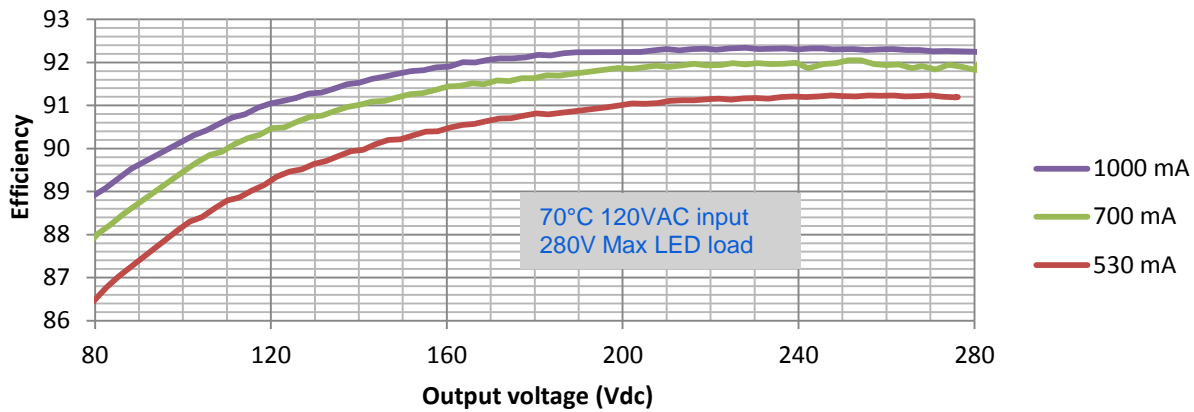


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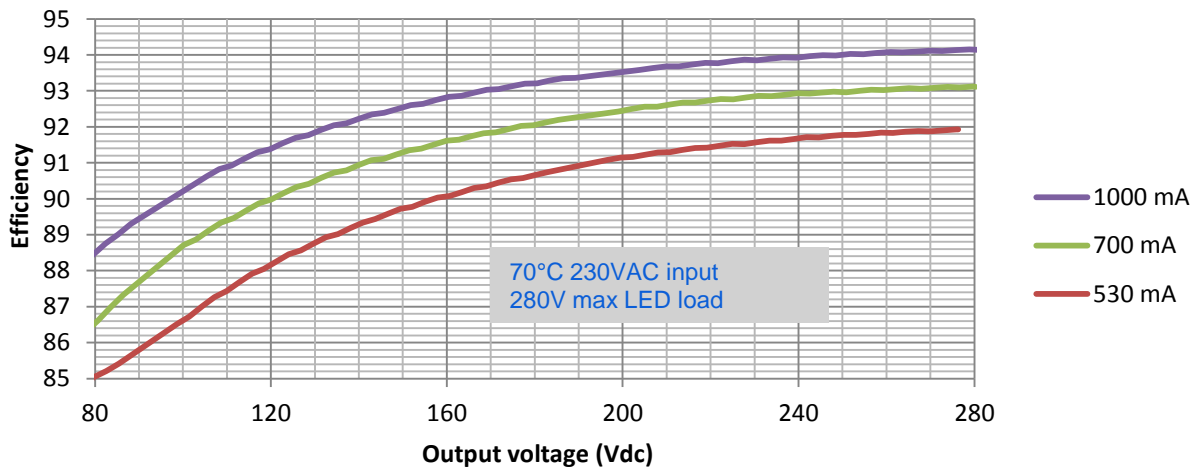
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| Input Voltage   | 120 ~ 230 ~ 277VAC               |
| Input Frequency | 50/60Hz                          |
| RoHS            | Yes                              |
| Status          | Preliminary                      |

### Electrical Specifications

#### Efficiency vs. output voltage at 120VAC in



#### Efficiency vs. output voltage at 230VAC in



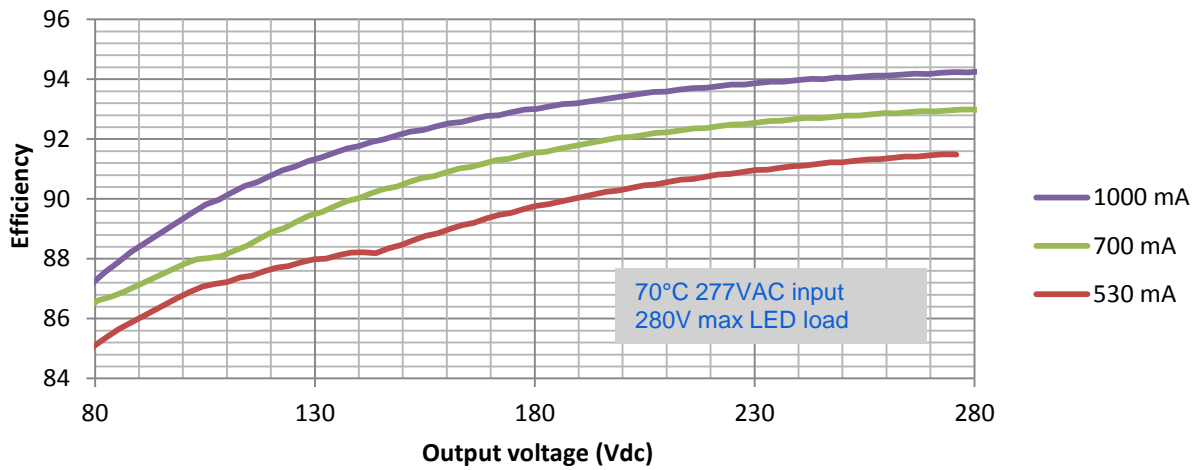


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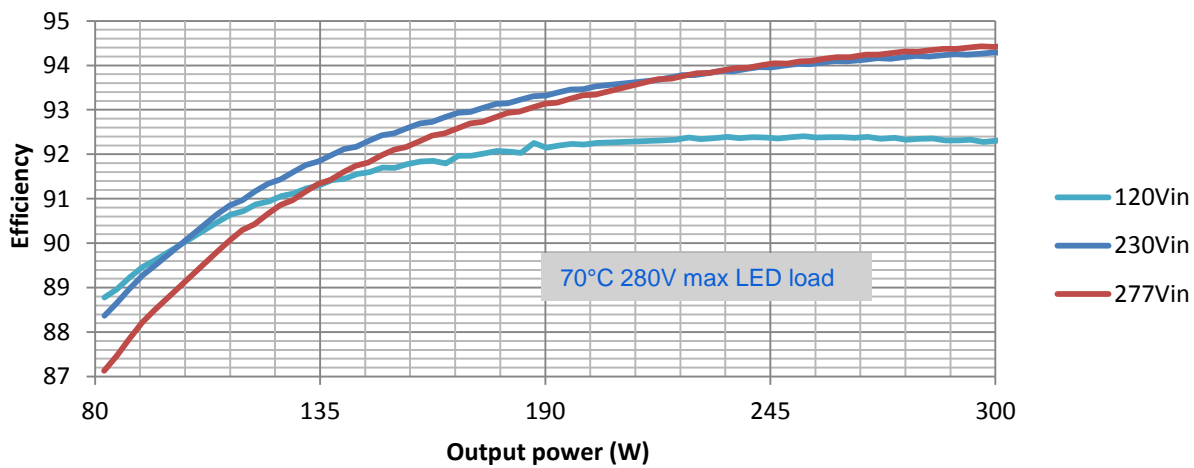
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| Input Frequency | 50/60Hz                          |
| RoHS            | Yes                              |
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## Electrical Specifications

### Efficiency vs. output voltage at 277VAC in



### Efficiency vs. output power





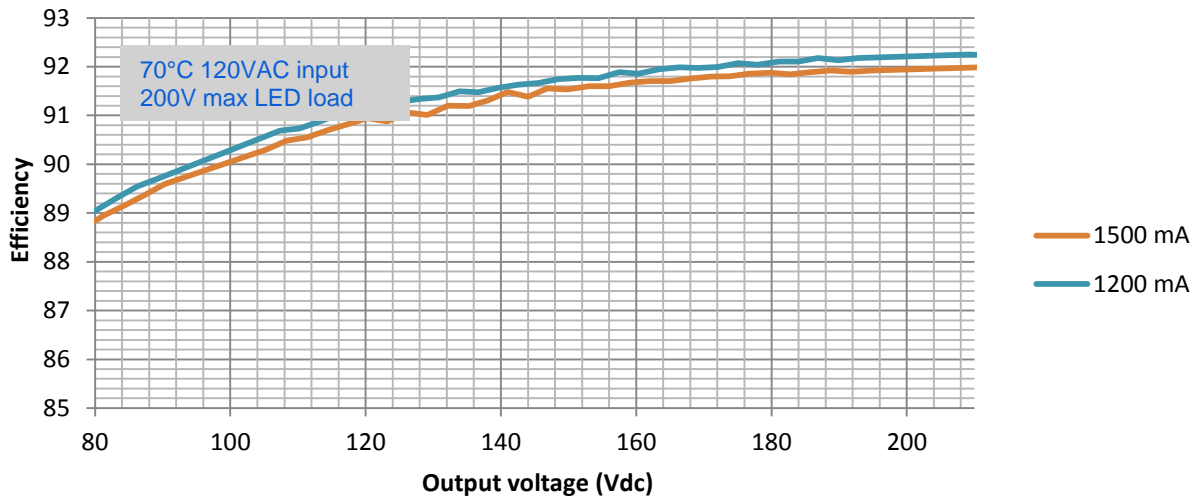


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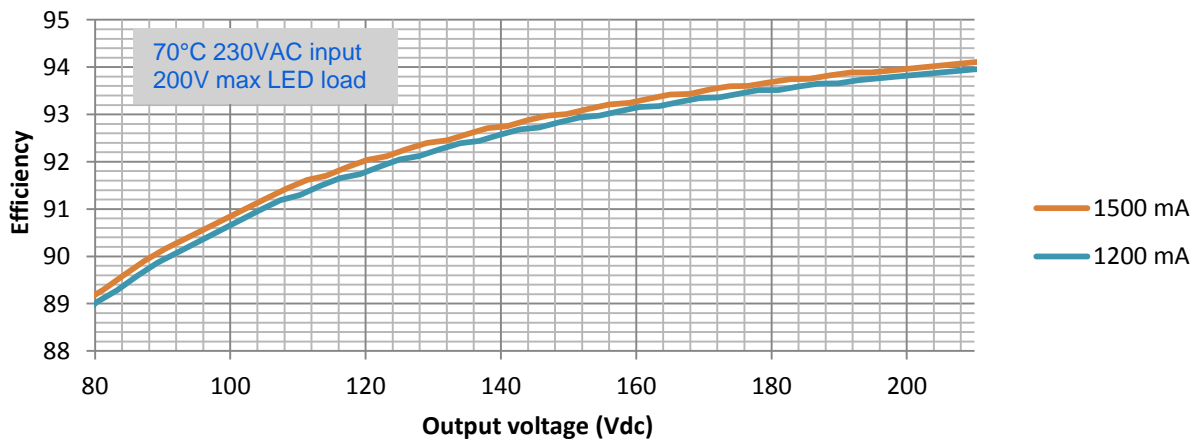
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| Input Frequency | 50/60Hz                          |
| RoHS            | Yes                              |
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### Electrical Specifications

#### Efficiency vs. output voltage at 120VAC in



#### Efficiency vs. output voltage at 230VAC in



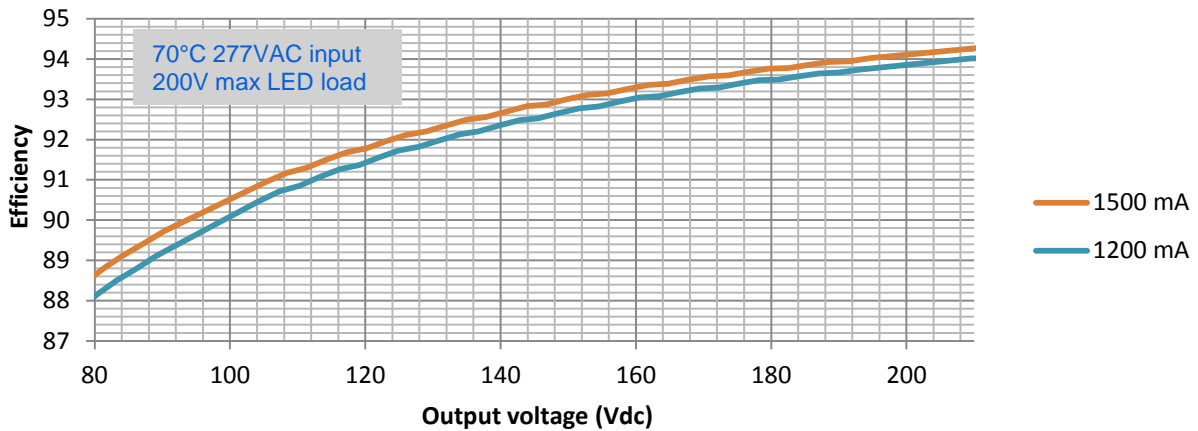


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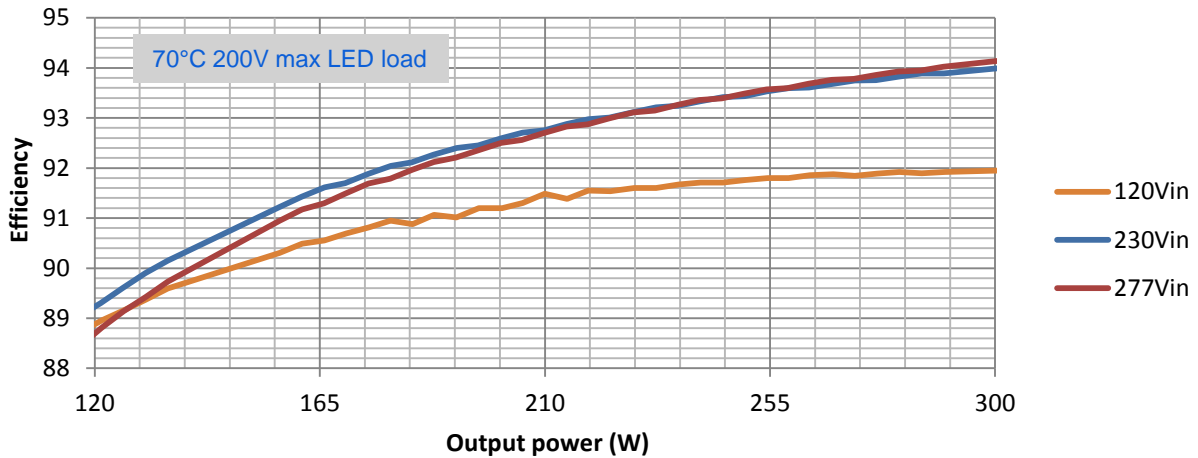
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| Input Frequency | 50/60Hz                          |
| RoHS            | Yes                              |
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### Electrical Specifications

#### Efficiency vs. output voltage at 277VAC in



#### Efficiency vs. output power

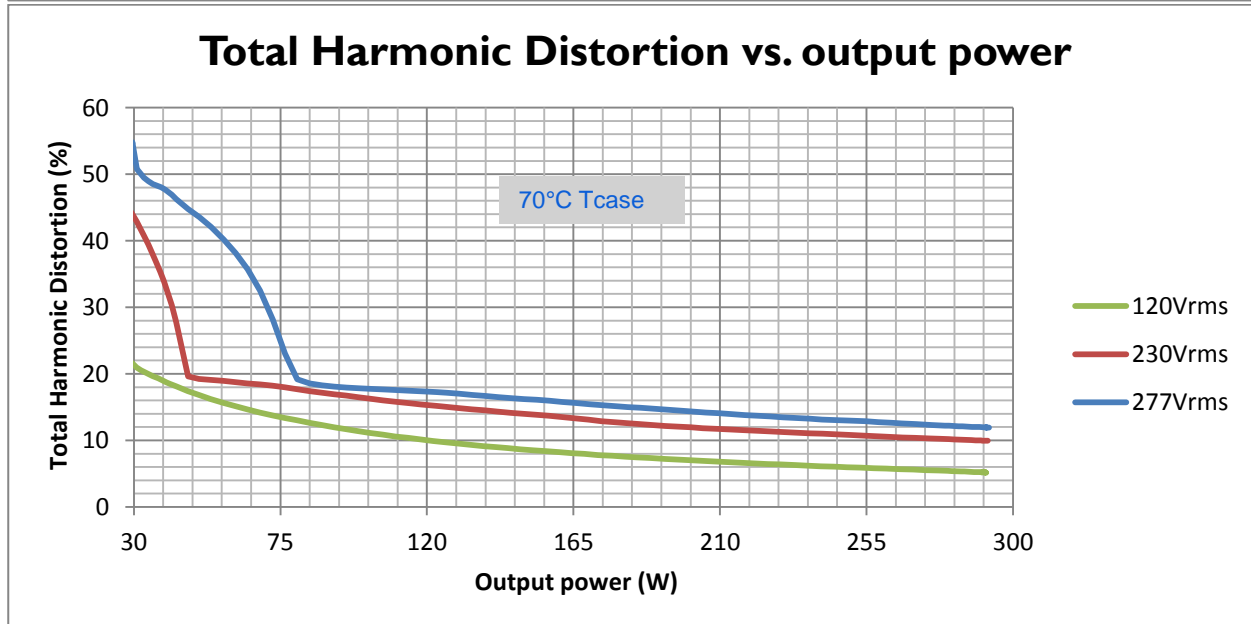
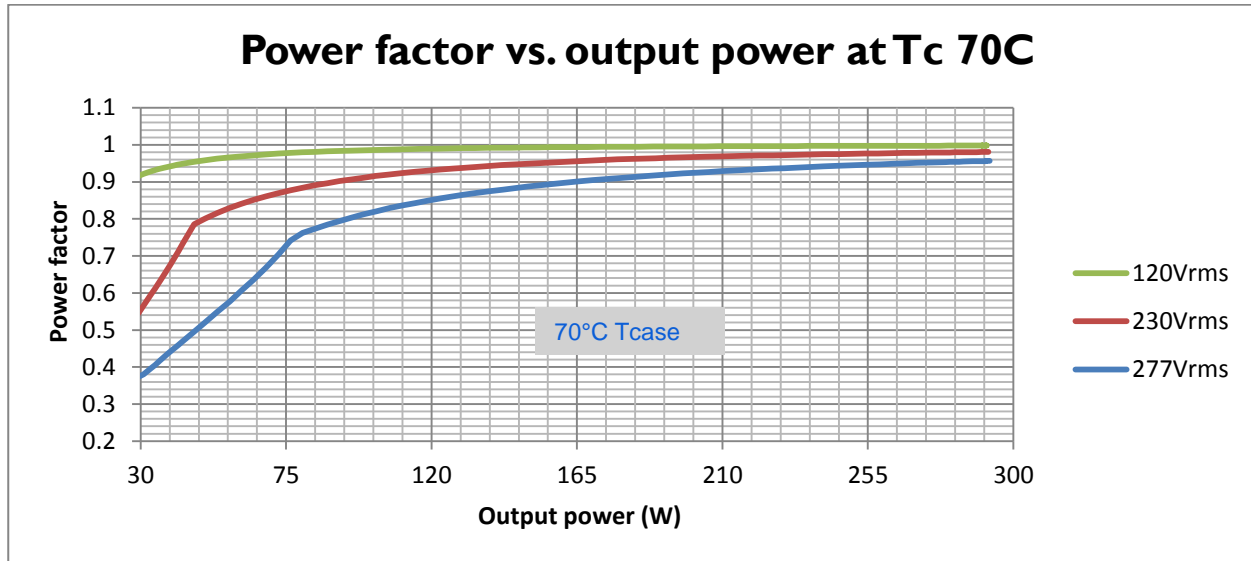




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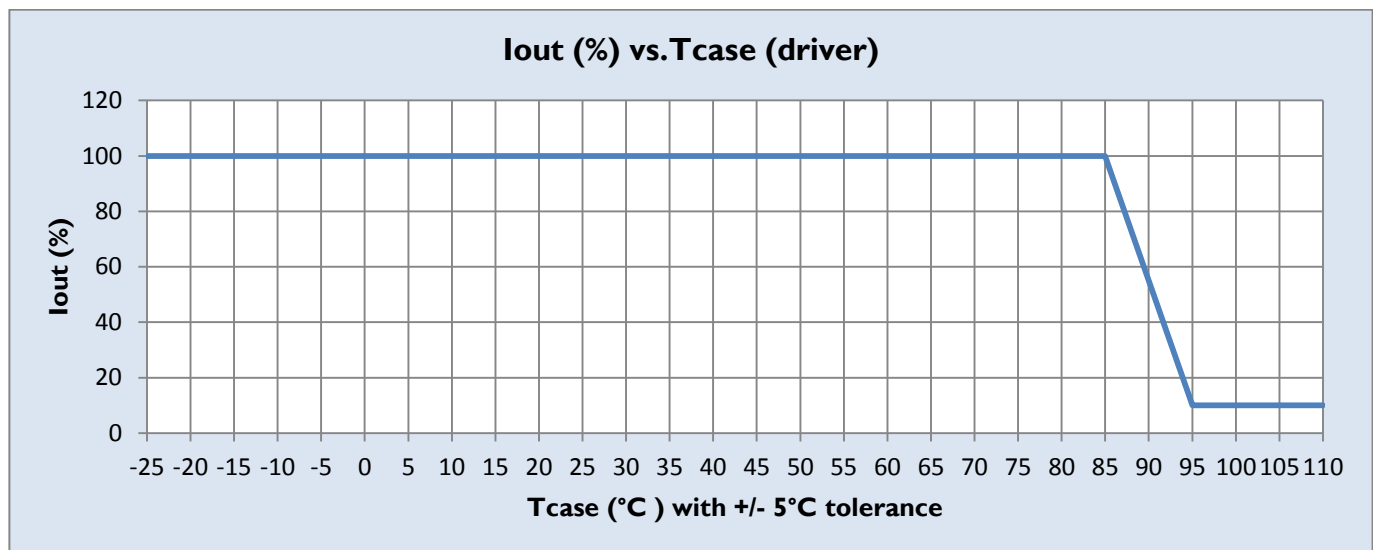
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### Electrical Specifications

**Programming Tool: Philips MultiOne**

For latest version please check [www.philips.com/multione](http://www.philips.com/multione)

**Iout vs. driver Tcase:**

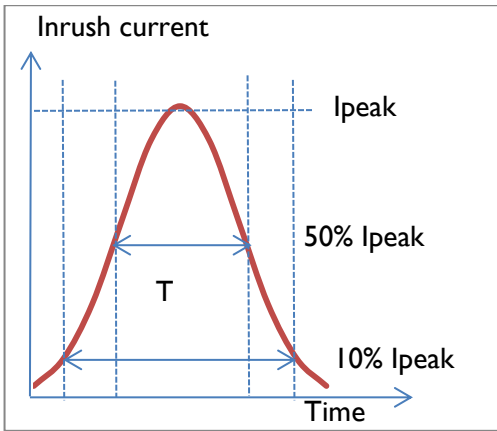


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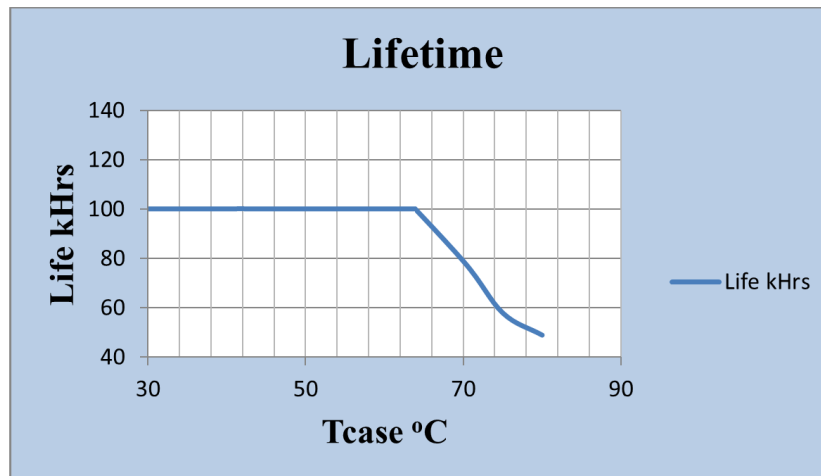
#### Inrush Current Info:



| $V_{in}$ | $I_{peak}$ | $T$ (@ $I_{peak}$ ) |
|----------|------------|---------------------|
| 120 VAC* | 77A        | 440 $\mu$ s/10%     |
| 230 VAC  | 170A       | 220 $\mu$ s/50%     |
| 277 VAC* | 166A       | 530 $\mu$ s/10%     |

\*: According NEMA

#### Lifetime vs. Tcase of Driver:



#### Failure rate info based upon MTBF modeling:

- 90% survival at end of life @  $\leq T_{case}$  65 $^{\circ}C$



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### Electrical Specifications

#### IEC Insulation

Basic Insulation: 2U+1000V

Double Insulation: 4U+2750V

| Insulation      | Mains input | LED +NTC output | DALI input | I-10V input | Enclosure |
|-----------------|-------------|-----------------|------------|-------------|-----------|
| Mains input     | NA          | Basic           | Basic      | Basic       | Double    |
| LED +NTC output | Basic       | NA              | Basic      | Basic       | Basic     |
| DALI input      | Basic       | Basic           | NA         | NA          | Double    |
| I-10V input     | Basic       | Basic           | NA         | NA          | Double    |
| Enclosure       | Double      | Basic           | Double     | Double      | NA        |

#### UL Insulation

| Insulation              | Mains input | LED +NTC output | DALI input (Class I&2) | I-10V input (Class I&2) | Enclosure |
|-------------------------|-------------|-----------------|------------------------|-------------------------|-----------|
| Mains input             | NA          | 2xU+1kV         | 2.5kVac                | 2.5kVac                 | 2xU+1kV   |
| LED +NTC output         | 2xU+1kV     | NA              | 2.5kVac                | 2.5kVac                 | 2xU+1kV   |
| DALI input (Class I&2)  | 2.5kVac     | 2.5kVac         | NA                     | NA                      | 2.5kVac   |
| I-10V input (Class I&2) | 2.5kVac     | 2.5kVac         | NA                     | NA                      | 2.5kVac   |
| Enclosure               | 2xU+1kV     | 2xU+1kV         | 2.5kVac                | 2.5kVac                 | NA        |