Features

LED Driver

- 3W Class II AC-DC LED Power Supply
- 350mA to 700mA CC/CV Output
- ENEC, RCM and EAC Certified
- UL1310/8750, EN61347 Certified
- Universal Input Voltage Range
- Fused Input and Protected Output
- 3kVAC Isolation
- IP66
- Low Cost

Description

A compact universal AC input 3W constant current switching power module suitable for driving 1 - 6 high power LEDs. The output (dual constant voltage / constant current mode) current limit is fixed at 350mA, 500mA or 700mA. At lower output currents, the output is constant voltage. Connections are via 215mm long flying leads.

Selection Guide

<table>
<thead>
<tr>
<th>Part Number</th>
<th>CV Mode (VDC)</th>
<th>CC Mode (VDC)</th>
<th>Efficiency typ. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RACD03-350</td>
<td>15</td>
<td>2.5-15</td>
<td>350</td>
</tr>
<tr>
<td>RACD03-500</td>
<td>11</td>
<td>2.5-11</td>
<td>500</td>
</tr>
<tr>
<td>RACD03-700</td>
<td>6</td>
<td>2.5-6</td>
<td>700</td>
</tr>
</tbody>
</table>

Specifications (typical at 25°C and after warm up time unless otherwise specified)

- Input Voltage Range: 90-264VAC or 120-370VDC
- Rated Power: 3W nom. / 5.5W max.
- Input Frequency Range: 47-63 Hz
- Output Voltage Range: 2.5 - 15VDC max.
- Inrush Current (<2mS): 230VAC 10A max.
- Leakage Current: 240VAC/50Hz 0.2mA typ.
- Input Fuse: Built-in T1A
- Input Current: 130mA max.
- Output Current Accuracy: ±10%
- Minimum Load: Open Circuit Protected 1 LED
- Output Ripple: 0.1Ap-p max.
- Hold Up Time: 18ms min.
- Operating Frequency: 66kHz typ.
- AC RMS Isolation Voltage: 3.75kV / 1 minute
- Temperature Coefficient: ±0.02%/°C typ.
- Overload Protection: 120% typ.
- Short Circuit Protection: Continuous Current Limit
- Output Overvoltage Protection: Zener Diode Clamp
- Overtemperature Protection: Shutdown, Automatic restart after cooling down
- Operating Temperature Range (free air convection, according to CE/UL): Ambient Temperature -20°C to +50°C, Case Temperature 75°C max.
- Operating Temperature Range (free air convection, according to ENEC): Ambient Temperature -20°C to +40°C, Case Temperature 75°C max.
- Storage Temperature Range: -25°C to +85°C
- Humidity: 95% RH max.
- IP Rating: IP66
- PCB Material: Plastic Resin with Fibreglass (UL94V-0)
- Case Material: Plastic
- Weight: 45g

continued on next page
LIGHTLINE
AC/DC-Converter

Specifications (typical at 25°C and after warm up time unless otherwise specified)

Packing Quantity 10pc

Certifications
- Standard for Class 2 Power Units UL1310, 6th Edition 2011
- Extra Low Voltage Class 2 Outputs CSA C22.2 No. 223-M91
- Power Supply or Charger for lighting purposes electronic type (RCM) AS/NZS 61347.1:2002 + IEC61347-2-13, 1st Edition
- Lamp Controlgear Particular Requirements (ENEC) EN 61347-2-13:2014
- Safety of Low-Voltage Equipment (EAC) TP TC 004/020, 2011

EMC
- Equipment for general Lighting Purpose EMC Immunity Requirements EN61547:2009
- ESD Electrostatic discharge immunity test IEC61000-4-2: 2008, Criteria B
- Radiated, radio-frequency, electromagnetic field immunity test IEC61000-4-3:2006+A1:2007, Criteria A
- Voltage Dips and Interruptions IEC61000-4-11:2004, Criteria B
- Voltage Dips: >95% IEC61000-4-11:2004, Criteria C
- Limits of Harmonic Current Emissions EN61000-3-2:2014
- Voltage Fluctuations and Flicker in Public Low-Voltage Systems <=16A per phase EN61000-3-3:2013
- Telecommunication Part 18 - Industrial, Scientific and Medical Equipment FCC47 CFR Part 18, Class A

Design Lifetime 25°C ambient >20 x 10³ hours in operation

Connections (please refer to “Package Style and Pinning”)
- AC Input Live Brown Wire, AWG18, 215mm + 6mm stripped and tinned
- AC Input Neutral Blue Wire, AWG18, 215mm + 6mm stripped and tinned
- LED + Red Wire, AWG18, 215mm + 10mm stripped and tinned
- LED - Black Wire, AWG18, 215mm + 10mm stripped and tinned

Note:
All LED Drivers may not be used without a load. They must be switched on the primary side only. Noncompliance may damage the LED or reduce its lifetime.

Characteristics

Constant Current (CC) and Constant Voltage (CV) Graph

Maximum Number of LED drivers per circuit breakers

<table>
<thead>
<tr>
<th>Condition</th>
<th>Circuit Breaker</th>
<th>Circuit Breaker Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typ</td>
<td>10A</td>
<td>16A</td>
</tr>
<tr>
<td>115VAC, 1Ohm 90° phase angle</td>
<td>C</td>
<td>221</td>
</tr>
<tr>
<td>230VAC, 1Ohm 90° phase angle</td>
<td>B</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>265</td>
</tr>
</tbody>
</table>

Package Style and Pinning

2 Mounting screws are included

Tc = Case Temperature Measuring Point

Wire Connections

<table>
<thead>
<tr>
<th>Wire</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) blue</td>
<td>VAC in (N)</td>
</tr>
<tr>
<td>(2) brown</td>
<td>VAC in (L)</td>
</tr>
<tr>
<td>(3) black</td>
<td>LED-</td>
</tr>
<tr>
<td>(4) red</td>
<td>LED+</td>
</tr>
</tbody>
</table>

Tolerance

XX = +1mm/-0.5mm
XX.X = +/- 0.25mm

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