

## Features

### LED DRIVER

- 20W Class II AC-DC LED Power Supply
- 350mA , 500mA, 700mA or 1050mA Outputs
- Drives 2 - 15 high brightness LEDs
- Universal AC Input
- Active Power Factor Correction >0.95
- Fused Input, Protected Output
- 3kVAC Isolation
- cUL/UL8750 Certified, CE Marked
- Output Connector to avoid miswiring
- Low Cost
- Long 5 Year Warranty

### Description

A compact 20W constant current switching power module suitable for driving high power LEDs ( $V_f = 3.6V$ ). The output current is fixed at 350mA, 500mA, 700mA or 1050mA. Active power factor correction is standard.

This series features both screw terminal and socket output connections. The socket connector avoids the possibility of miswiring and damaging the LED load if the LEDs are preassembled into a wiring harness or lamp fitting.

### Selection Guide

| Part Number | Input Voltage Range (VAC) | Input Current at full load (mA) | Nom. Output Voltage Range (VDC) | Output Current (mA) | Max # LEDs       |
|-------------|---------------------------|---------------------------------|---------------------------------|---------------------|------------------|
| RACD20-350  | universal                 | 260                             | 6-56                            | 350                 | 15 x 1W          |
| RACD20-500  | universal                 | 260                             | 6-40                            | 500                 | 11 x 2W          |
| RACD20-700  | universal                 | 260                             | 6-29                            | 700                 | 8 x 2W, 8+8 x 1W |
| RACD20-1050 | universal                 | 260                             | 5-17                            | 1050                | 6 x 3W, 5+5 x 2W |

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

|   |   |                          |
|---|---|--------------------------|
| Input Voltage Range                     | Standard  | 90-264VAC                |
| Rated Power                             |   | 20 Watts max.            |
| Input Frequency Range                   |   | 47-63 Hz                 |
| Power Factor                            | Full Load, 115VAC/230VAC                                  | 0.95                     |
| Open Circuit Voltage (Zener Clamp)      | 350mA Version   | 57VDC                    |
|   | 500mA Version   | 43VDC                    |
|   | 700mA Version   | 32VDC                    |
|   | 1050mA Version  | 19VDC                    |
| Inrush Current (<2mS)                   | 115VAC/230VAC   | 10A max.                 |
| Input Current                           | 230VAC, Full Load   | 260mA typ.               |
| Leakage Current                         | 115VAC/240VAC - 60/50Hz                                   | 0.5mA typ.               |
| Input Fuse                              | Standard  | T1A                      |
| Output Current Accuracy                 | (combined Tolerance, load Regulation and Line Regulation) | ±10%                     |
| Minimum Load                            | Open Circuit Protected                                    | 2 LEDs                   |
| Output Ripple                           |   | 150mA max.               |
| Hold Up Time                            |   | 18ms min.                |
| Operating Frequency                     |   | 40 - 100 kHz typ.        |
| Efficiency at Full Load                 |   | 83%                      |
| RMS Isolation Voltage (input to output) |   | 3kVAC / 1 minute         |
| Temperature Coefficient                 |   | ±0.02%/°C typ.           |
| Overload Protection                     |   | 120% typ.                |
| Short Circuit Protection                |   | Continuous Current Limit |
| Output Overvoltage Protection           |   | Zener Diode Clamp        |

continued on next page

## LIGHTLINE

AC/DC-Converter  
with 5 year Warranty

RECOM

## 20 Watt PFC Single Output



E340696



UL 8750 Certified  
cUL 8750 Certified\*  
EN 61347 Certified

# RACD20

\* RACD20-700 and -1050 only has cUL

Please Read Application Notes

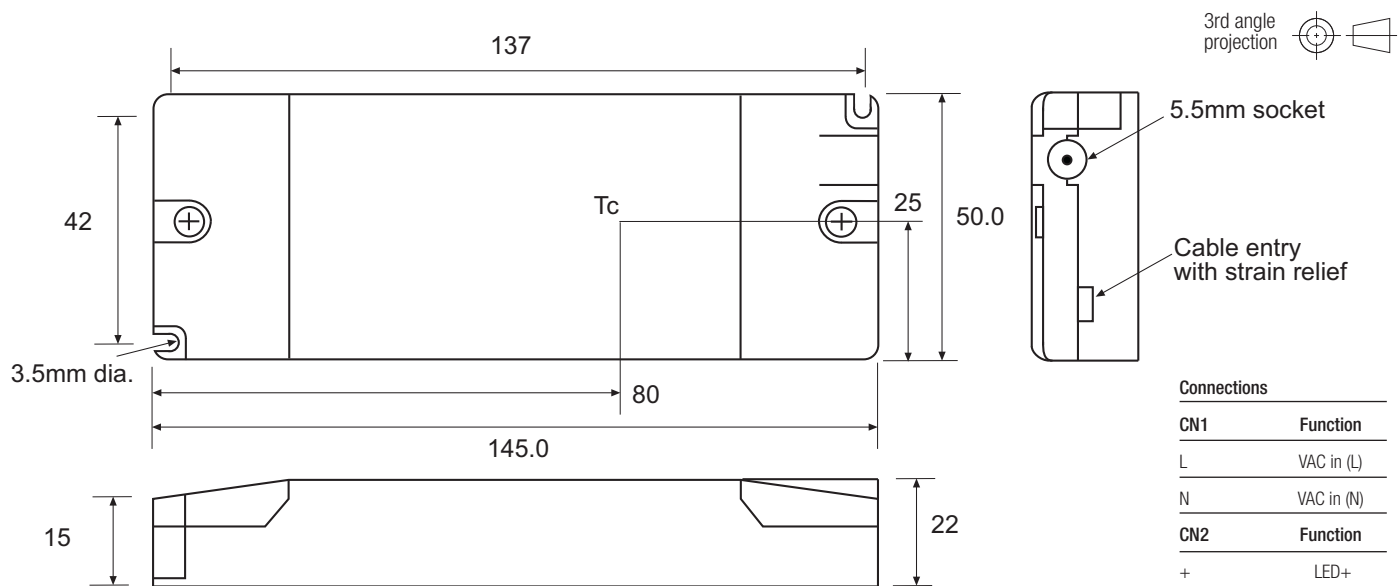
www.recom-electronic.com

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

|  |   |  |
|--|---|--|
| Overtemperature Protection                           | Shutdown, Automatic restart after cooling down  |  |
| Operating Temperature Range<br>(free air convection) | Ambient Temperature   | -20°C to +50°C   |
|  | Case Temp.  | 85°C max. (350mA version: 90°C max.)   |
| Weight   | 140g  |  |
| Packing Quantity                                     | 1pc   |  |
| Storage Temperature Range                            | -40°C to +100°C   |  |
| Humidity   | 95% RH max.   |  |
| IP Rating  | IP20, Indoor Use Only   |  |
| PCB Material   | Plastic Resin with Fibreglass (UL94V-0)   |  |
| Case Material  | Plastic   |  |
| Designed to meet Standards                           | Electrical Lighting, EMC Emissions<br>Limits for Harmonics Emissions<br>EMC Compatibility: Flicker and Voltage Variations<br>Electrical Lighting: EMC Immunity<br>Class II Power Supply Safety<br>FCC | EN55015:2006 + A1: 2007 + A2:2009<br>EN 61000-3-2:2006<br>EN 61000-3-3:2006<br>EN 61547:1995 + A1:2000<br>complies with UL1310<br>complies with FCC18A |
| THD  | <20%  |  |
| Certifications                                       | LED Lighting Safety<br>LED Lighting Safety (Canada)<br>SEMKO CE Certification, General Safety<br>SEMKO CE Certification, Safety of AC supplied Control Gear for LED Modules                           | UL8750<br>cUL8750 (RACD20-700 only)<br>EN 61347-1: 2008<br>EN 61347-2-13: 2006   |
| Design Lifetime                                      | 25°C ambient  | >70 x 10 <sup>3</sup> hours in operation   |
| Connections  | AC Input<br>LED Output<br>LED Output  | Screw terminal<br>Screw Terminal<br>5.5mm Socket with 2mm Pin (Suitable matching plug Switchcraft S760 or similar)*                                    |

\* Do not connect or disconnect the LED load while the converter is on. This may damage the LED or reduce its life.

### Package Style and Pinning



2 Mounting screws are included

Tc=Case Temperature Measuring Point

#### Connections

| CN1           | Function   |
|---------------|------------|
| L             | VAC in (L) |
| N             | VAC in (N) |
| CN2           | Function   |
| +             | LED+       |
| -             | LED-       |
| 5.5mm Socket* | Function   |
| Pin           | LED+       |
| Shell         | LED-       |

Tolerance

XX = +/-1mm

XX.X = +/-0.5mm