

Features

LED DRIVER

- 20W Class II AC-DC LED Power Supply
- 2x Independent Constant Current Outputs or Single High Current Output (Jumper selectable)
- 1-10V or Rheostat Dimmable (15%~100%)
- 3kVAC Isolation
- Active Power Factor Correction >0.95
- Fused Input, Protected Outputs
- CE Marked
- Long 5 Year Warranty

Description

A compact 20W constant current switching power module suitable for driving either two independent strings of LEDs or a single string high power LEDs (mode selection is via a jumper under the output cover plate). When used in dual output mode, the two outputs are independently regulated and can be used with asymmetric LED loads. The output current can be dimmed using either an external 150kOhm rheostat or via a 1-10V external voltage. Active power factor correction is standard. Connections are via screw terminals and the AC input feature loop-through connections to allow daisy-chaining of the converters.

Selection Guide

| Part Number | Input Voltage Range (Nominal VAC) | Input Current at full load (mA) | Output Voltage Range (VDC) | Output Current (mA) | Max # LEDs |
|--|-----------------------------------|---------------------------------|----------------------------|------------------------|-------------------------|
| RACD20-350D (700mA single output mode) | 230VAC | 260 | 2x (3-34) 3-34 | 2x (50~350) 100~700 | 2x (10 x 1W) 10 x 2W |
| RACD20-350D-US (700mA single output mode) | 110VAC | 510 | 2x (3-34) 3-34 | 2x (50~350) 100~700 | 2x (10 x 1W) 10 x 2W |

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

| | | |
|---|---|------------------------------|
| Input Voltage Range | 230VAC 110VAC | 200-264VAC 90-130VAC |
| Rated Power | | 20 Watts max. |
| Input Frequency Range | | 47-63 Hz |
| Power Factor | Full Load, 115VAC/230VAC | 0.95 |
| Output Voltage Range | 350mA Dual Output Mode 700mA Single Output Mode | 3-34VDC + 3-34VDC 3-34VDC |
| 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 | 115VAC/230VAC | T2A/T1A |
| Output Current Accuracy | (combined Tolerance, load Regulation and Line Regulation) | ±10% |
| Minimum Load | Open Circuit Protected | 1 LED |
| Output Ripple | | 150mA max. |
| Hold Up Time | | 18ms min. |
| Operating Frequency | | 40 - 100 kHz typ. |
| Efficiency at Full Load | 230VAC | >80% |
| 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 |

continued on next page

LIGHTLINE

AC/DC-Converter

with 5 year Warranty

RECOM

20 Watt PFC Single/Dual Dimmable



EN 61347 Compliant

RACD20-D

Refer to Application Notes

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

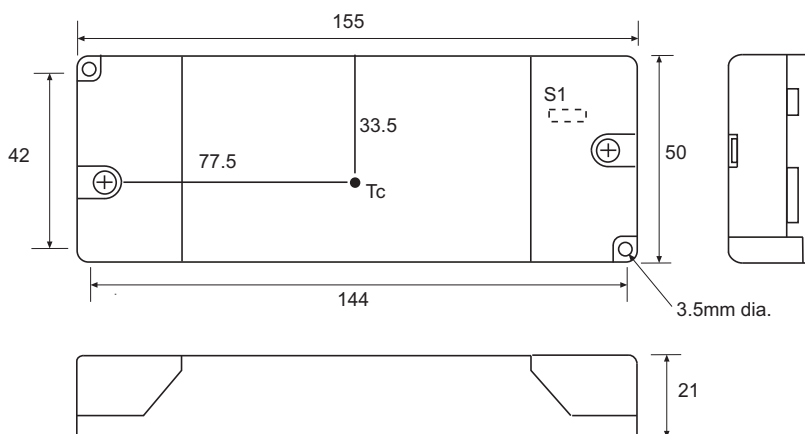
| | | | | |
|--|---|-----------|-----------------------------|--|
| Dimming Control | Rheostat (15%~100%) | 0-150kOhm | External Voltage (15%-100%) | 1-10VDC |
| Overtemperature Protection | | | | Shutdown, Automatic restart after cooling down |
| Operating Temperature Range (free air convection) | | | | Ambient Temperature -20°C to +40°C Case Temp. 85°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 Limits for Harmonics Emissions EMC Compatibility: Flicker and Voltage Variations Electrical Lighting: EMC Immunity Class II Power Supply Safety FCC | | | EN55015:2006 + A1: 2007 + A2:2009 EN 61000-3-2:2006 EN 61000-3-3:2006 EN 61547:1995 + A1:2000 UL1310 FCC18A |
| THD | | | | <20% |
| Certifications | LED Lighting Safety Certification, General Safety | | | designed to meet UL8750 designed to meet EN 61347-1: 2008 |
| Design Lifetime | 25°C ambient | | | >70 x 10 ³ hours in operation |
| Connections | AC Input AC Output (loop through) LED Outputs | | | Screw terminal Screw terminal Screw Terminal |

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.

RACD20-D

Package Style and Pinning



2 Mounting screws are included

Tc=Case Temperature Measurement Point

Connections

| CN1 | Function |
|------------------|---------------|
| L (loophthrough) | VAC out (L) |
| N (loophthrough) | VAC out (N) |
| CN2 | Function |
| L | VAC in (L) |
| N | VAC in (N) |
| S1 | Function |
| 1+2 | Dual Mode |
| 2+3 | Single Mode |
| CN3 | Function |
| - | common |
| + | 1-10V or 150k |
| CN4 | Function |
| Ch1 - | LED+ |
| Ch1 + | LED- |
| CN5 | Function |
| Ch2 + | LED+ |
| Ch2 - | LED- |
| Tolerance | |
| XX = | +/-1mm |
| XX.X = | +/-0.5mm |

| | | | |
|----|-----|---------|-----|
| S1 | | | |
| | 350 | Ch1 350 | 700 |