

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
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 Case Temp.	-20°C to +40°C +85°C max.
Weight		140g

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)

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:

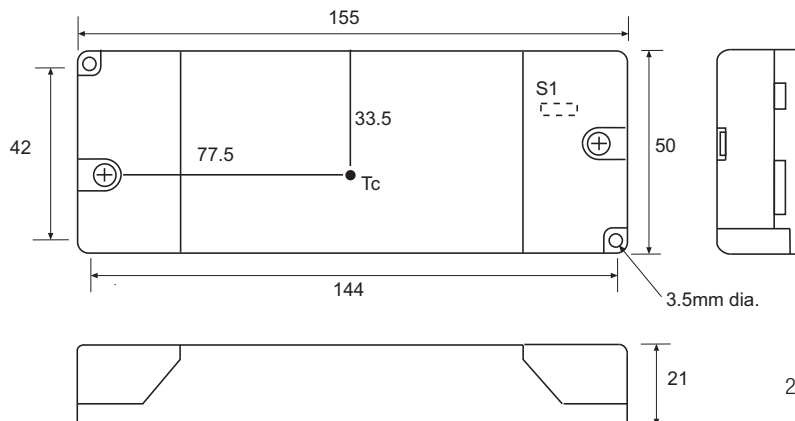
All LED Drivers may not be used without a load. They must be switched on the primary side only. Noncompliance may damage the LED or reduce its lifetime.

Characteristic

Maximum Number of LED drivers per circuit breakers

Condition	Circuit Breaker	Circuit Breaker Current			
		10A	16A	20A	25A
115VAC, 10hm 90° phase angle	Typ				
	C	47	68	84	105
230VAC, 10hm 90° phase angle	B	36	57	69	85
	C	57	87	109	134
277VAC, 10hm 90° phase angle	B	41	65	80	98
	C	65	99	125	154

Package Style and Pinning



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

2 Mounting screws are included

Tc=Case Temperature Measurement Point

Connections

CN4	Function
Ch1 -	LED+
Ch1 +	LED-
CN5	Function
Ch2 +	LED+
Ch2 -	LED-

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

S1			
350	Ch1	350	
	Ch2	350	700