

Features

LED DRIVER

- 20W Class II AC-DC LED Power Supply
- ENEC, UL, RCM and CB Certified
- 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
THD	Full Load, 115VAC/230VAC	12% max.
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
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
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	78.6°C max.
Operating Temperature Range (free air convection, according to ENEC)	Ambient Temperature	-20°C to +50°C
	Case Temperature	85°C max.
Storage Temperature Range		-40°C to +100°C
Weight		160g
Packing Quantity		1pc

continued on next page

LIGHTLINE

AC/DC-Converter
with 5 year Warranty

RECOM

20 Watt PFC Single Output



UL 8750 Certified
cUL 8750 Certified*
ENEC 61347 Certified

RACD20

* RACD20-700 and -1050
only has cUL

Refer to Application Notes

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

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	EN55015:2006 + A1: 2007 + A2:2009
	Limits for Harmonics Emissions	EN 61000-3-2:2006
	EMC Compatability: Flicker and Voltage Variations	EN 61000-3-3:2006
	Electrical Lighting: EMC Immunity	EN 61547:1995 + A1:2000
	Class II Power Supply Safety	complies with UL1310
	FCC	complies with FCC18A
THD	<20%	
Certifications	LED Lighting Safety (E340696)	UL8750
	LED Lighting Safety (Canada)	cUL8750 (RACD20-700, RACD20-1050 only)
	RCM (U21380)	AS/NZS 61347.1:2002, IEC 61347-2-13
	ENEC CE Certification, General Safety	EN 61347-1: 2008
	ENEC CE Certification, Safety of AC supplied Control Gear for LED Modules	EN 61347-2-13: 2006
PSE	J61347-1(H20), J61347-2-13(H21), J55015(H20)	
Design Lifetime	25°C ambient	>70 x 10 ³ hours in operation
Connections	AC Input	Screw terminal
	LED Output	Screw Terminal
	LED Output	5.5mm Socket with 2mm Pin (Suitable matching plug Switchcraft S760 or similar)

Note:

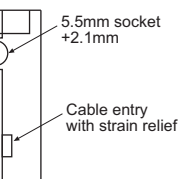
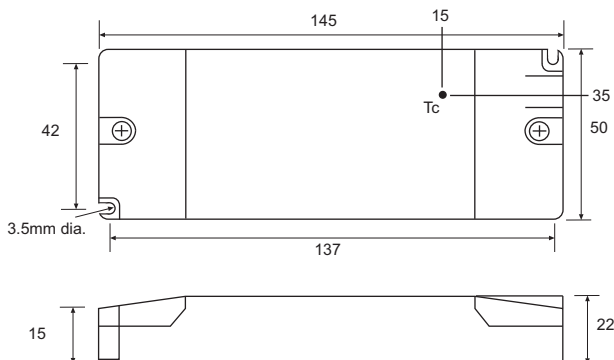
All LED Drivers may not be used without a load. They must be switched on the primary side only. Noncompliance may damage the LED or reduce its lifetime.

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



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

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