Features

LED DRIVER

- 20W Class II AC-DC LED Power Supply
- 2x 350mA Independant Constant Current Outputs
- Or 1x 700mA Output (Jumper selectable)
- 1-10V or Rheostat Dimmable (10%~100%)
- Universal AC Input
- Active Power Factor Correction >0.95
- Fused Input, Protected Outputs
- 3kVAC Isolation
- CE Marked, UL Pending
- Low Cost
- Long 5 Year Warranty

Description

A compact 20W constant current switching power module suitable for driving either two independent strings of 1~10 high power 350mA LEDs or a single string of 1~10 high power 700mA LEDs (mode selction is via a jumper under the output cover plate). When used in 350mA 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	230VAC	260	2x (3-34)	2x (35~350)	2x (10 x 1W)
(700mA single output mode)			3-34	70~700	10 x 3W
RACD20-350D-US	110VAC	510	2x (3-34)	2x (35~350)	2x (10 x 1W)
(700mA single output mode)			3-34	70~700	10 x 3W

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

Input Voltage Range	230VAC	220-264VAC
	110VAC	100-130VAC
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	3-34VDC + 3-34VDC
	700mA Single Output Mode	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 (10%~100%)	0-150kOhm
	External Voltage (10%-100%)	1-10VDC

continued on next page

LIGHTLINE
DC/DC-Converter
with 5 year Warranty

RECOM

20 Watt PFC Single/Dual Dimmable

RoHS 2002/95/EC 6/6

CE

UL-8750 Pending
EN 61347 Certified

RACD20-D

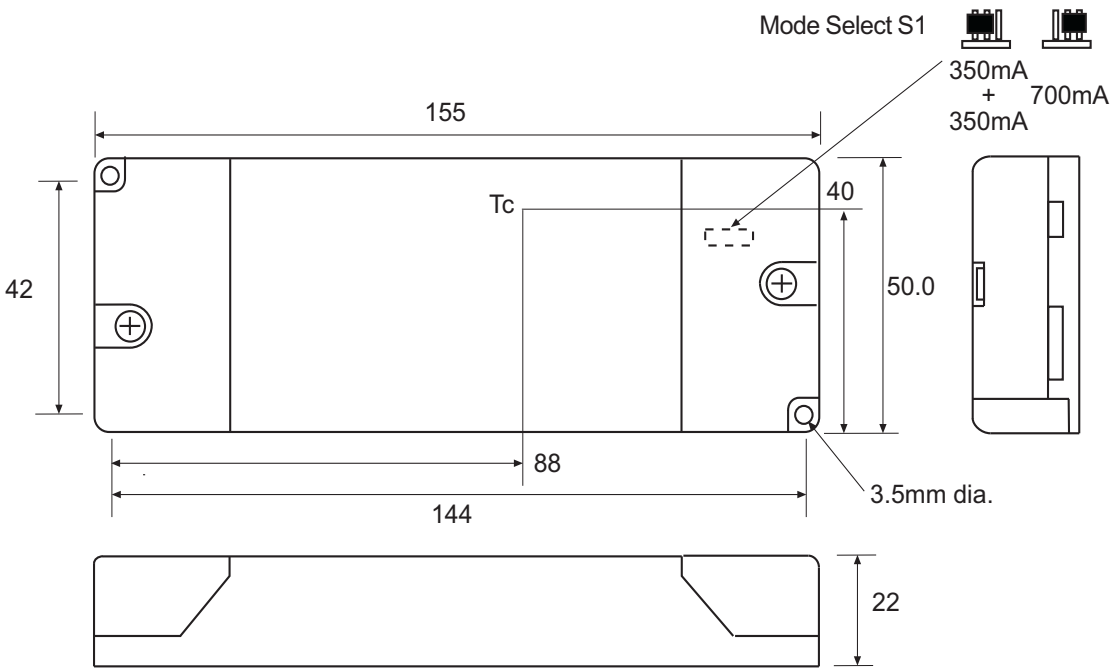
Please Read Application Notes

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 (free air convection)	Ambient Temperature Case Temp.	-20°C to +40°C 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 Compatibilty: 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 SEMKO CE Certification, General Safety SEMKO CE Certification, Safety of AC supplied Control Gear for LED Modules	designed to meet UL8750 EN 61347-1: 2008 EN 61347-2-13: 2006
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*

* 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 Measurement Point

Connections	
CN1	**Function**
L (loopthrough)	VAC out (L)
N (loopthrough)	VAC out (N)
CN2	**Function**
L	VAC in (L)
N	VAC in (N)
S1	**Function**
1+2	350mA Mode
2+3	700mA Mode
CN3	**Function**
-	common
+	1-10V or 150k
CN4	**Function**
Ch1 -	350mA LED+
Ch1 +	350mA LED-
CN5	**Function**
Ch2 +	350mA/700mA LED+
Ch2 -	350mA/700mA LED-

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