# **LED** DRIVER

- Features 20W Class II AC-DC LED Power Supply
  - 2x 350mA Independent 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.

<b>~</b>	4.0	_	100
C D	lection	121	מאוו
			ш.т.

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 m	node)		3-34	70~700	10 x 2W
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 2W	

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

	000140	000 00440
nput Voltage Range	230VAC	200-264VAC
	110VAC	90-130VAC
Rated Power		20 Watts max.
nput 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
nrush Current (<2mS)	115VAC/230VAC	10A max.
nput Current	230VAC, Full Load	260mA typ.
_eakage Current	115VAC/240VAC - 60/50Hz	0.5mA typ.
nput Fuse	115VAC/230VAC	T2A/T1A
Output Current Accuracy	(combined Tolerance, load Regulation and Line F	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	1	Continuous Current Limit
Dimming Control	Rheostat (10%~100%)	0-150k0hm
	External Voltage (10%-100%)	1-10VDC

continued on next page

# LIGHTLINE

AC/DC-Converter with 5 year Warranty



# 20 Watt PFC Single/Dual **Dimmable**



**UL-8750 Pending** EN 61347 Certified

RACD20-D

**Please Read Application Notes** 



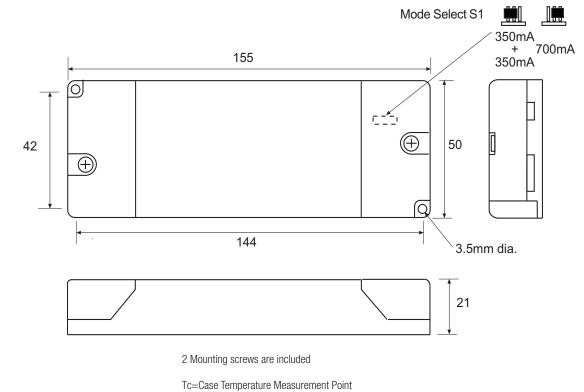
# RACD20

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

Overtemperature Protection Shutdown, Automa		own, Automatic restart after cooling down
Operating Temperature Range	Ambie	ent Temperature -20°C to +40°C
(free air convection)		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	EN55015:2006 + A1: 2007 + A2:2009
	Limits for Harmonics Emissions	EN 61000-3-2:2006
	EMC Compatibility: Flicker and Voltage Variations	EN 61000-3-3:2006
	Electrical Lighting: EMC Immunity	EN 61547:1995 + A1:2000
	Class II Power Supply Safety	UL1310
	FCC	FCC18A
THD		<20%
Certifications	LED Lighting Safety	designed to meet UL8750
	SEMKO CE Certification, General Safety	EN 61347-1: 2008
	SEMKO CE Certification, Safety of AC supplied Control Gear for LED M	odules EN 61347-2-13: 2006
Design Lifetime	25°C ambient	>70 x 10 <sup>3</sup> hours in operation
Connections	AC Input	Screw terminal
	AC Output (loop through)	Screw terminal
	LED Outputs	Screw Terminal*

<sup>\*</sup> 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



3rd angle projection



Connections		
CN1	Function	
L (loopthrough	n) VAC out (L)	
N (loopthroug	h) 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 + 3	50mA/700mA LED+	
Ch2 - 3	50mA/700mA LED-	