

Features

LED Driver

- 3W Class II AC-DC LED power supply
- 350mA, 500mA and 700mA CC/CV output
- Fused input and SCP, OVP, OLP, OTP
- 3kVAC isolation
- IP66 rated
- Low cost

Description

A compact universal AC input 3W constant current switching power module suitable for driving 1 - 6 high power LEDs. The output (dual constant voltage / constant current mode) current limit is fixed at 350mA, 500mA or 700mA. At lower output currents, the output is constant voltage. Connections are via 118mm long flying leads.

Selection Guide

Part Number	Input Voltage Range [VAC]	CC Mode [VDC] [mA]	CV ⁽¹⁾ Mode [VDC] [mA]	Efficiency typ. [%]	Rated Power nom./max. [W]
RACD03-350	90-264	3-12 350	15 0-300	72	3 / 4.2
RACD03-500	90-264	3-9.5 500	none	71	3 / 4.6
RACD03-700	90-264	3-4.5 700	6 0-600	62	3 / 3.1

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.

Model Numbering

RACD03- 
nom. Output Power nom. Output Current

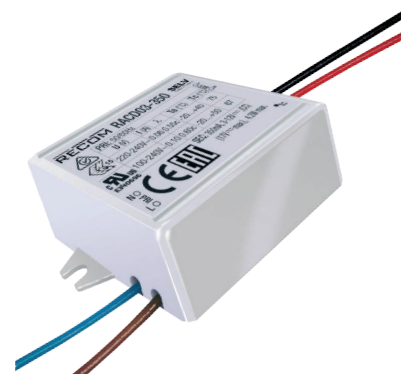
Specifications (measured @ Ta= 25°C, nom. Vin, rated load and after warm-up unless otherwise stated)

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range		90VAC	230VAC	264VAC
		120VDC		370VDC
Input Current	full load, 100VAC			110mA
Inrush Current	230VAC, <2ms			10A
Input Frequency Range		47Hz		63Hz
Power Factor	full load, 230VAC	0.55		
Hold-up Time		18ms		
Output Ripple Current				100mAp-p
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RECOM
AC/DC Converter

RACD03

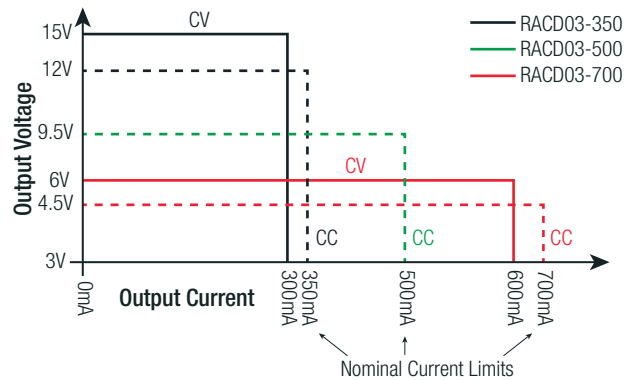
**3 Watt
CC/CV
Single Output**



UL8750 certified
UL1310 certified
CAN/CSA-C22.2 No. 223-M91 certified
IEC/EN61347 certified
IEC/EN61347-2-13 certified
ENEC certified
CB report

Specifications (measured @ Ta= 25°C, nom. Vin, rated load and after warm-up unless otherwise stated)

Constant Current (CC) and Constant Voltage (CV) ⁽¹⁾



Notes:

Note1: CV Mode is approved by Recom internal quality standard, but not certified

PROTECTION

Parameter	Condition		Value
Input Fuse ⁽²⁾			T1A, slow blow
Short Circuit Protection (SCP)			continuous, current limit
Overload Protection (OLP)			120% typ.
Output Over Voltage Protection (OVP)	zener diode clamp	RACD03-350 RACD03-500 RACD03-700	17VDC max. 14VDC max. 8VDC max.
Over Temperature Protection (OTP)			shutdown, automatic resatart after cooling down
Isolation Voltage	I/P to O/P		3.75kVAC/1 minute typ. / 3kVAC/1 minute min.
Leakage Current			0.2mA typ.

Notes:

Note2: Refer to local wiring regulations if input over-current protection is also required

Maximum loading of automatic circuit breakers*

* @ 115VAC, 10hm, 90° phase angle and max. load

Circuit Breaker	Circuit Breaker Current			
Typ	10A	16A	20A	25A
C	221	247	337	430

* @ 230VAC, 10hm, 90° phase angle and max. load

Circuit Breaker	Circuit Breaker Current			
Typ	10A	16A	20A	25A
B	80	157	200	254
C	265	317	437	550

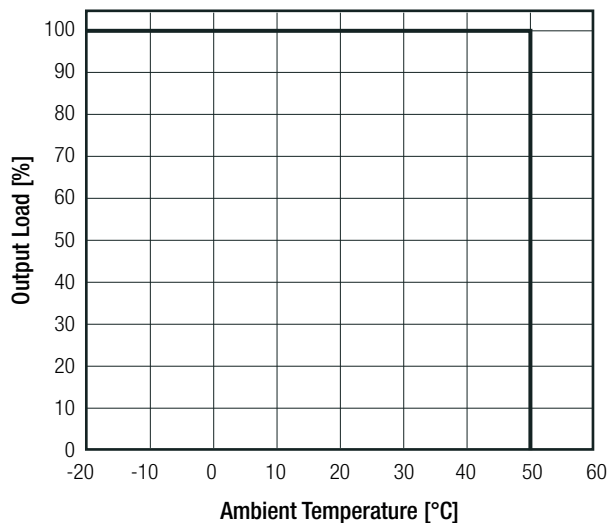
ENVIRONMENTAL

Parameter	Condition	Value
Operating Temperature Range	according to UL according to ENEC	-20°C to +50°C -20°C to +40°C
Max. Case Temperature	according to UL RACD03-350, RACD03-700 RACD03-500 according to ENEC	+67°C +65°C +75°C
IP Rating		IP66
Operating Humidity	non condensing	5% - 85% RH max.
Design Lifetime	+25°C ambient	20 x 10 ³ hours

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Specifications (measured @ Ta= 25°C, nom. Vin, rated load and after warm-up unless otherwise stated)

Derating Graph



SAFETY AND CERTIFICATIONS

Certificate Type (Safety)	Report Number	Standard
Standard for LED Equipment for use in Lighting Products	E340696-1-4	UL8750, 1st Edition, 2009
Standard for Class 2 Power Units		UL1310, 6th Edition, 2011
Extra Low Voltage Class 2 Outputs		CAN/CSA-C22.2 No. 223-M91, 2nd Edition, 2009
Lamp Controlgear Particular Requirements	SH12051509-001	IEC/EN61347-2-13,2006
Lamp Controlgear General Requirements for Safety		IEC61347-1, 2nd edition, 2010 EN61347-1, 2nd edition, 2011
Safety of control gear for LED modules (CB Scheme)		IEC/EN61347-2-13,2006
Safety requirements for lamp controlgear (CB Scheme)	12CA61285-1	IEC61347-1, 2nd Edition, 2010 EN61347-1, 2nd Edition, 2011
Lamp Controlgear General Requirements for Safety (ENEC License)		EN61347-1
Lamp Controlgear Particular Requirements (ENEC License)	ENEC-00611	EN61347-2-13
D.C. or A.C. Controlgears for LED Performance Requirements (ENEC License)		EN62348, 2006
RoHS		RoHS 6/6, 2011/65/EU
EAC	RU Д- АТ.А Г03. В.67369	TP TC 004/020, 2011

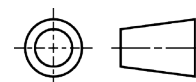
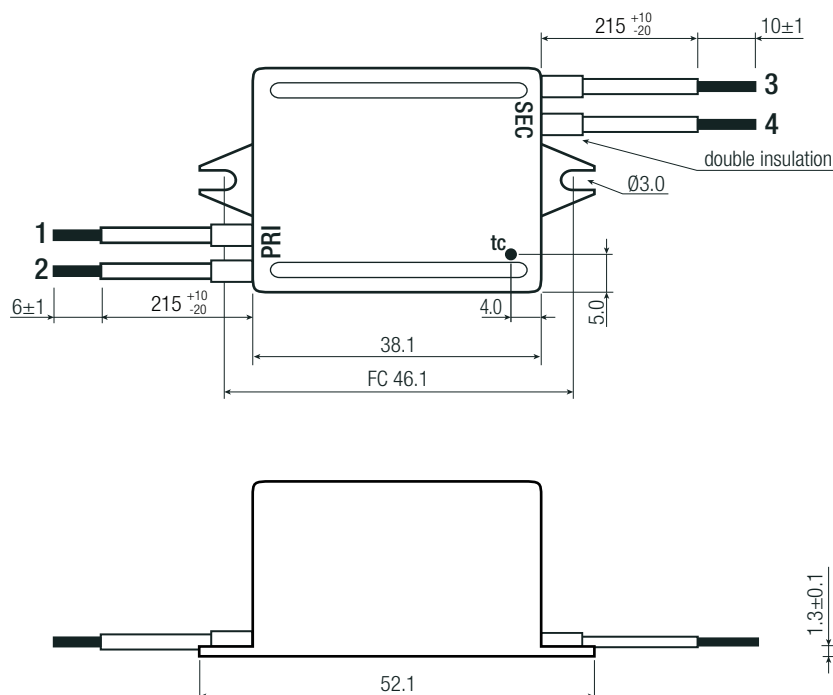
EMC Compliance	Condition	Standard / Criterion
EMC for industrial, scientific and medical equipment (design to meet)		FCC18, Class A
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment (design to meet)		EN55015, Class A
		CISPR15, 7th Edition, 2009
Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission (design to meet)		EN55014-1
Limits of harmonic current emissions		IEC61000-3-2, 3rd Edition, 2009
Voltage Fluctuations and Flicker in Public Low-Voltage Systems <=16A per phase		IEC61000-3-3, 2nd Edition, 2008

Specifications (measured @ Ta= 25°C, nom. Vin, rated load and after warm-up unless otherwise stated)

DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	case PCB potting	plastic (UL94V-2) plastic resin with fibreglass (UL94V-0) silicone (UL94V-0)
Dimension (LxWxH)		52.1 x 29.6 x 23.1mm
Weight		45g

Dimensions Drawing (mm)



Wired Connection

#	Function	Wire Color	Type
1	VAC in (N)	blue	UL-1007, AWG18
2	VAC in (L)	brown	UL-1007, AWG18
3	LED-	black	UL-1007, AWG18
4	LED+	red	UL-1007, AWG18

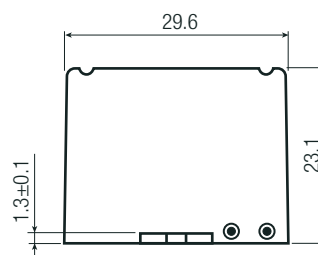
tc= case temperature measuring point

FC= fixing centers

Tolerance: xx.x= ±0.5mm

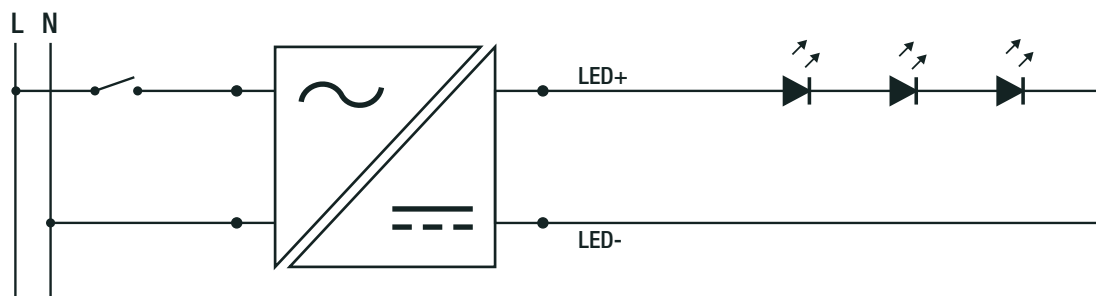
xx.xx= $\pm 0.35\text{mm}$

2 Mounting screws are included



INSTALLATION and APPLICATION

Connection



PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard Box	265.0 x 80.0 x 115.0mm
Packaging Quantity		10pcs
Storage Temperature Range		-30°C to +80°C
Storage Humidity	non-condensing	5%-85% RH

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