

## 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 <sup>(1)</sup> 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

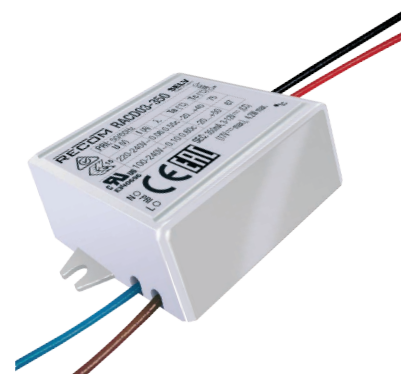
## Specifications (measured @ Ta= 25°C, nom. Vin, rated load and after warm-up unless otherwise stated)

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

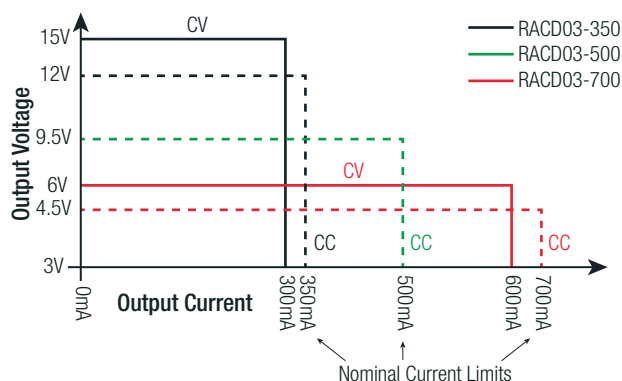
**3 Watt  
CC/CV  
Single Output**



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) <sup>(1)</sup>**



**Notes:**

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

### PROTECTION

Parameter	Condition		Value
Input Fuse <sup>(2)</sup>			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

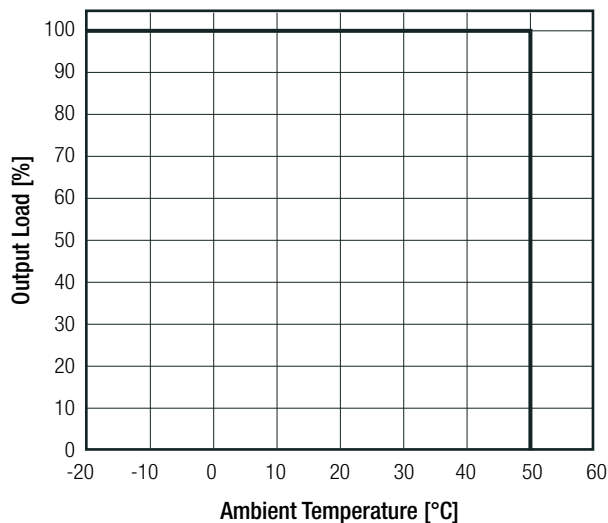
### ENVIRONMENTAL

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 <sup>3</sup> hours

continued on next page

**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

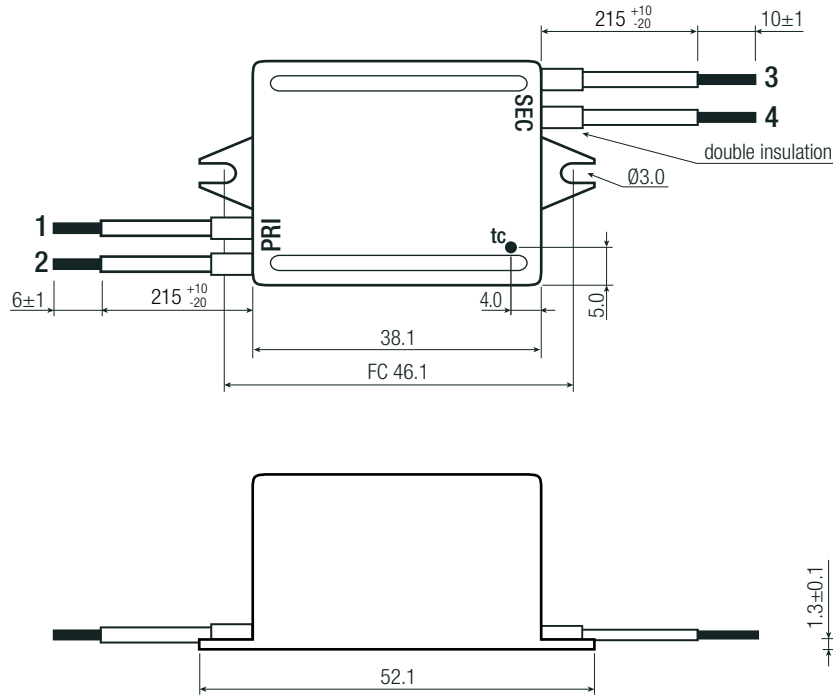
EMC Compliance	Condition	Standard / Criterion
EMC for industrial, scientific and medical equipment (design to meet)		FCC18, Class A
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment (design to meet)		EN55015, Class A
		CISPR15, 7th Edition, 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	plastic (UL94V-2)
	PCB	plastic resin with fibreglass (UL94V-0)
	potting	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

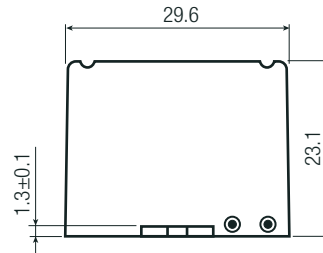
tc= case temperature measuring point

FC= fixing centers

Tolerance: xx.x= ±0.5mm

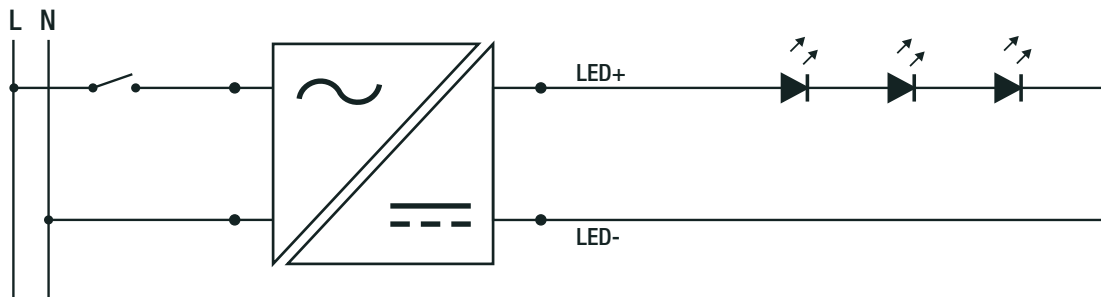
xx.xx= ±0.35mm

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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