

# Features

# LED Driver

- 6W Class II AC-DC LED power supply
- 350mA, 500mA and 700mA CC/CV output
- Fused input and SCP, OVP, OLP, OTP
- 3kVAC isolation
- Universal input voltage range
- Low cost

# RECOM AC/DC Converter

## RACD06

6 Watt  
CC/CV  
Single Output



### Description

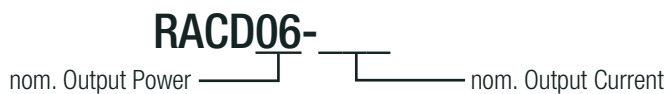
A compact universal input 6W constant current switching power module suitable for driving up to 12 high power LEDs. The output (dual constant voltage / constant current mode) current limit is fixed at 350mA, 500mA or 700mA. At lower output currents, the output is constant voltage.

### Selection Guide

Part Number	Input Voltage Range [VAC]	CC Mode		CV Mode <sup>(1)</sup>		Efficiency typ. [%]	Rated Power nom./max. [W]
		[VDC]	[mA]	[VDC]	[mA]		
RACD06-350	90-264	3-22	350	24	0-300	79	6 / 7.2
RACD06-500	90-264	3-12	500	none		70	6
RACD06-700	90-264	3-8.4	700	12	0-600	72	6 / 7.2

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



### 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			200mA
Inrush Current	115VAC/230VAC, <2ms			10A
Open Circuit Voltage	no load	350mA		26VDC
		500mA		17VDC
		700mA		14VDC
Input Frequency Range		47Hz		63Hz
Power Factor	full load	115VAC	0.40	
		230VAC	0.55	
Hold-up Time		18ms		
Output Ripple Current				200mAp-p

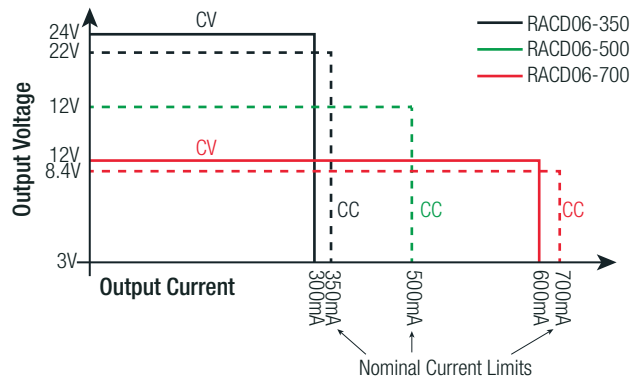
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UL8750 certified  
 UL1310 certified  
 CAN/CSA-C22.2 No. 223-M91 certified  
 IEC/EN61347 certified  
 IEC/EN61347-2-13 certified  
 ENEC certified  
 PSE certified  
 CB Report

**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		T2A, slow blow
Short Circuit Protection (SCP)		continuous, current limit
Overload Protection (OLP)		120% typ.
Over Temperature Protection (OTP)		shutdown, automatic resatart after cooling down
Isolation Voltage	I/P to O/P	3.75kVAC / 1 minute

**Notes:**

Note2: Refer to local safety 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	

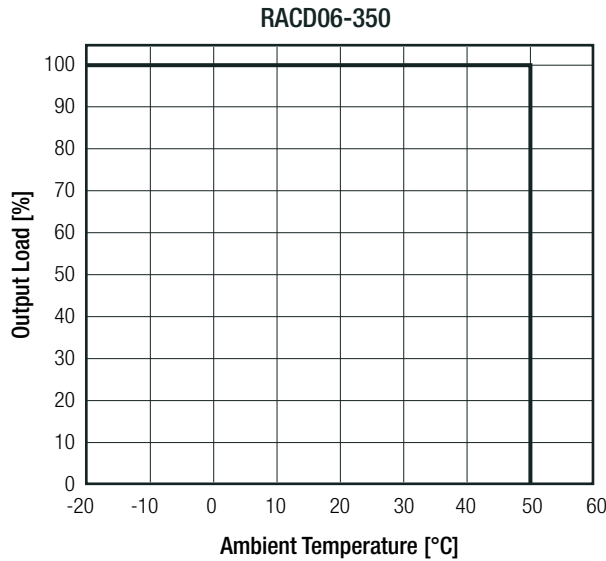
**ENVIRONMENTAL**

Parameter	Condition	Value
Operating Temperature Range	according to UL RACD06-350	-20°C to +50°C
	RACD06-500, RACD06-700	-20°C to +40°C
	according to ENEC all	-20°C to +50°C
Max. Case Temperature	according to UL RACD06-350	+75°C max.
	RACD06-500, RACD06-700	+70°C max.
	according to ENEC all	+70°C max.
IP Rating		IP20
Operating Humidity	non condensing	5%-85% RH
Design Lifetime	+25°C ambient	20 x 10 <sup>3</sup> 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	E340696-1-3	UL8750, 1st Edition, 2009
Standard for Class 2 Power Units		UL1310, 5th Edition, 2010
Extra Low Voltage Class 2 Outputs		CAN/CSA-C22.2 No. 223-M91, 2nd Edition, 2009
Equipment for general Lighting Purpose EMC Immunity Requirements (CB scheme)	SH12051509-002	IEC61547, 2nd Edition, 2009
Lamp Controlgear Particular Requirements (CB scheme)	12CA61275-1	IEC/EN61347-2-13, 2006
Lamp Controlgear Particular Requirements	SH12051508-002	EN61347-2-13, 2006
Lamp Controlgear General Requirements for Safety (CB scheme)	12CA61275-1	IEC61347-1, 2nd Edition, 2010 EN61347-1, 2nd Edition, 2011
Lamp Controlgear General Requirements for Safety	SH12051508-002	EN61347-1, 2nd Edition, 2008
Luminaires General Requirements and Tests	SH12051508-003	EN60598-1, 2009
Luminaires with built-in transformers for filament lamps		EN60598-2-6, 1997
D.C. or A.C. Controlgears for LED Performance Requirements (CB scheme)	12CA61275-2	IEC/EN62384, 2009
Lamp Controlgear General Requirements for Safety (ENEC License)	ENEC-00610	EN61347-1
Lamp Controlgear Particular Requirements (ENEC License)		EN61347-2-13
Lamp Controlgear General Requirements for Safety (PSE)		J61347-1
Lamp Controlgear Particular Requirements (PSE)		J63147-2-13
RoHS		RoHS 6/6, 2011/65/EU
EAC	RU Д- АТ.А Г03. В.67369	TP TC 004/020, 2011

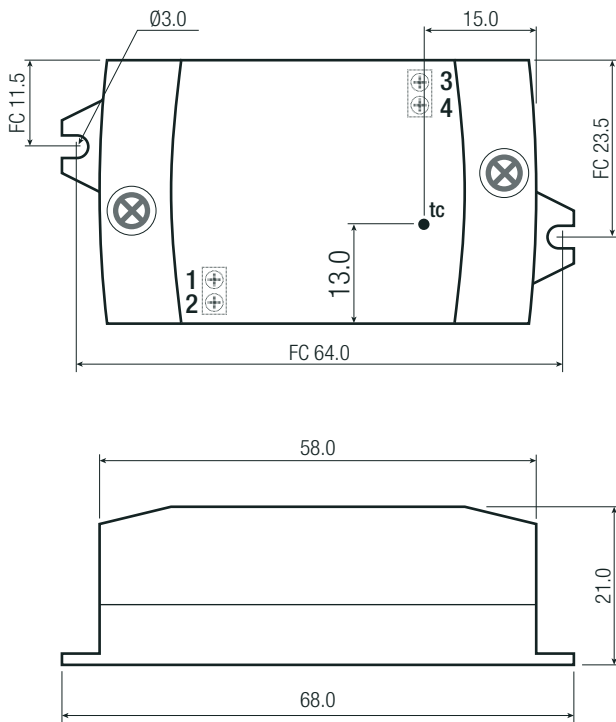
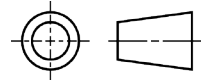
EMC Compliance	Condition	Standard / Criterion
EMC for industrial, scientific and medical equipment (design to meet)		FCC18, Class A
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment (design to meet)		EN55015, Class A CISPR15, 7th Edition, 2009
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment (PSE)		J55015
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-0)
Dimension (LxWxH)		68.0 x 35.0 x 21.0mm
Weight		34g

**Dimensions Drawing (mm)**



**Connection via Screw Terminal**

#	Function	Solid Wire	Stranded Wire <sup>(3)</sup>	AWG
1	VAC in (N)	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	18-16
2	VAC in (L)	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	18-16
3	LED+	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	18-16
4	LED-	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	18-16

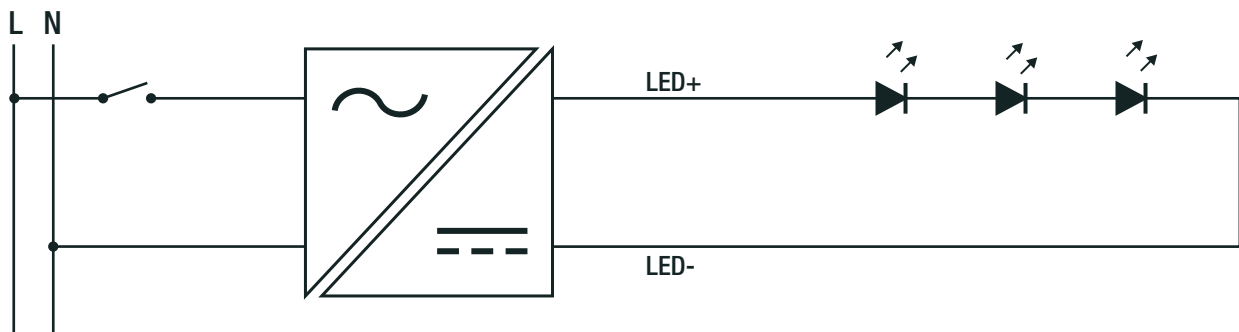
wire stripping length: 5mm  
recommended tightening torque: 0.22Nm  
tc= case temperature measuring point  
FC= fixing centers  
Tolerance: xx.x= ±0.5mm  
          xx.xx= ±0.35mm  
2 Mounting screws are included

**Notes:**

Note3: The use of sleeve or ferrule terminations is recommended

**INSTALLATION and APPLICATION**

**Connection**



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

PACKAGING INFORMATION		
Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard Box	215.0 x 80.0 x 70.0mm
Packaging Quantity		10pcs
Storage Temperature Range		-30° to +80°C
Storage Humidity	non-condensing	5%-85% RH

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