

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

RECOM
AC/DC Converter

RACD03

**3 Watt
CC/CV
Single Output**



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.

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 |

Model Numbering

RACD03-
nom. Output Power ————— nom. Output Current



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

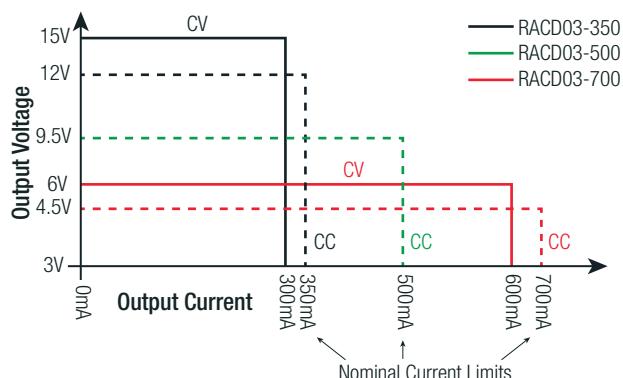
Specifications (measured @ Ta= 25°C, nom. Vin, rated load and after warm-up unless otherwise stated)

| 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 | | | | 100mA p-p |

continued on next page

Specifications (measured @ $T_a = 25^\circ\text{C}$, 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 |

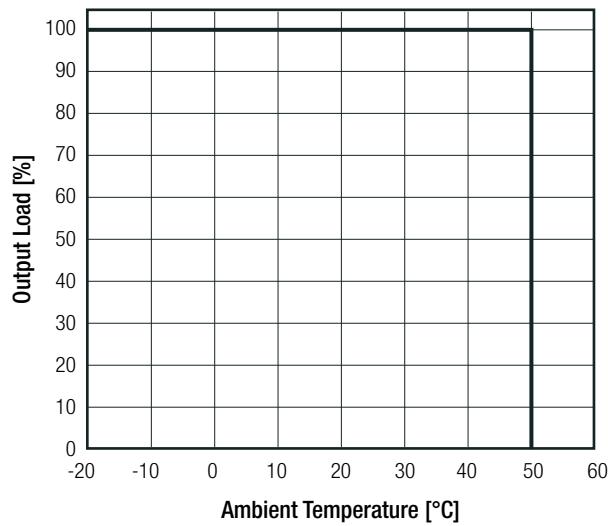
ENVIRONMENTAL

| 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 |

continued on next page

Specifications (measured @ $T_a = 25^\circ\text{C}$, nom. V_{in} , rated load and after warm-up unless otherwise stated)

Derating Graph

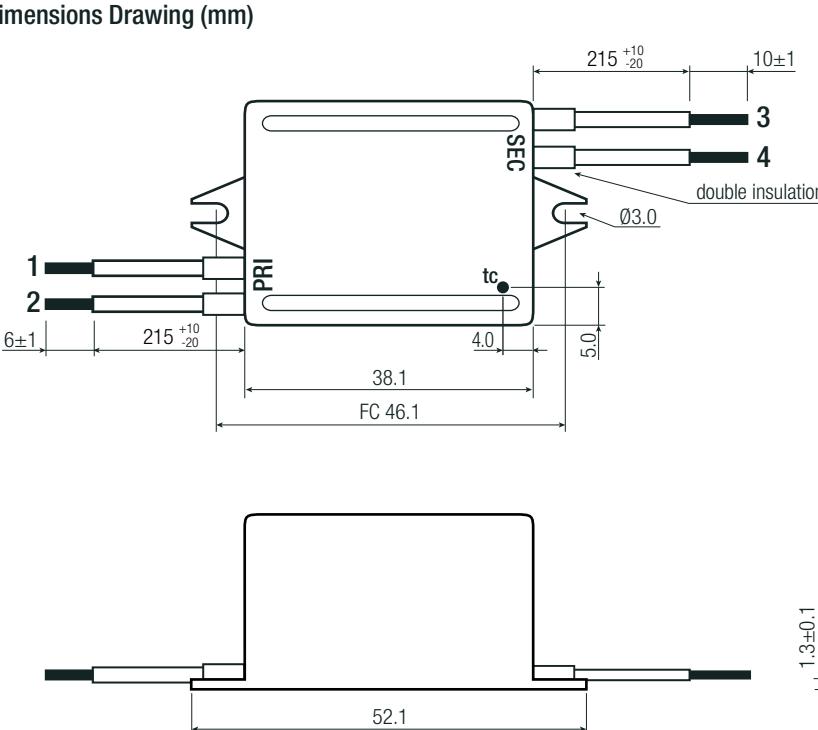
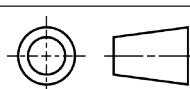
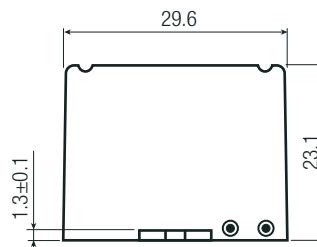


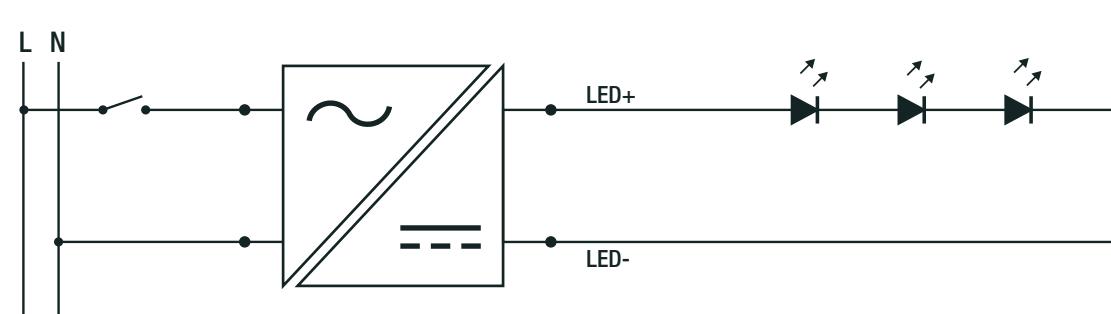
SAFETY AND CERTIFICATIONS

| 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) | 12CA61285-1 | IEC/EN61347-2-13,2006 |
| Safety requirements for lamp controlgear (CB Scheme) | | IEC61347-1, 2nd Edition, 2010 EN61347-1, 2nd Edition, 2011 |
| Lamp Controlgear General Requirements for Safety (ENEC License) | ENEC-00611 | EN61347-1 |
| Lamp Controlgear Particular Requirements (ENEC License) | | 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 |
| Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission (design to meet) | | CISPR15, 7th Edition, 2009 |
| Limits of harmonic current emissions | | EN55014-1 |
| Voltage Fluctuations and Flicker in Public Low-Voltage Systems $\leq 16\text{A}$ per phase | | IEC61000-3-2, 3rd Edition, 2009 IEC61000-3-3, 2nd Edition, 2008 |

Specifications (measured @ $T_a = 25^\circ\text{C}$, nom. V_{in} , 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= ±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 |

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant shall indemnify and hold harmless RECOM, its affiliated companies and its representatives against any damage claims in connection with the unauthorized use of RECOM products in such safety-critical applications.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

RECOM:

[RACD03-350](#) [RACD03-700](#) [RACD03-500](#)