

# Features

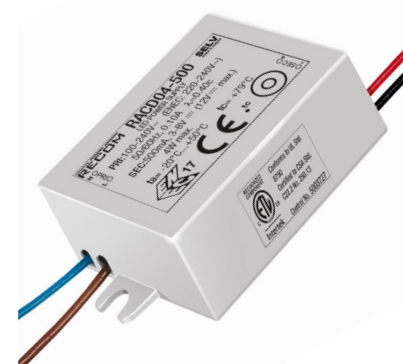
## LED Driver

- 4W AC-DC Class II LED Power Supply
- 350mA to 700mA Constant Current Outputs
- Fully Protected (OLP, SCP, OCP, OTP)
- low Standby Power, ErP conform
- IP65 (suitable for dry and damp locations)
- low cost
- CE, CB, ENEC, CSA and UL8750 certified.
- Wired connections for independent or built-in use

**RECOM**  
AC/DC Converter

## RACD04

## 4 Watt Constant Current Single Output



RECOGNIZED  
COMPONENT



Intertek

UL8750 Certified  
CSA C22.2 No. 250.13 Certified  
IEC62384 Certified  
EN55015 Compliant  
CB Report

## Description

These constant current LED drivers have been designed for cost-sensitive applications. The SELV outputs are suitable for built-in power-supply LED luminaires. Their low profile design allows them to be invisibly built into furniture, discreetly mounted under shelves or integrated in space-restricted applications such as coving lighting, strip lighting or troffer lighting systems. The power supplies are short circuit and overload protected and come with a full 3-year warranty.

## Selection Guide

| Part Number | nom. Input Voltage [VAC] | Input Current [mA] | Output Voltage Range [VDC] | Output Current [mA] | Efficiency typ. [%] | Output Power max. [W] |
|-------------|--------------------------|--------------------|----------------------------|---------------------|---------------------|-----------------------|
| RACD04-350  | 115/230                  | 100                | 3-12                       | 350                 | 77                  | 4.2                   |
| RACD04-500  | 115/230                  | 100                | 3-8                        | 500                 | 75                  | 4                     |
| RACD04-700  | 115/230                  | 100                | 3-6                        | 700                 | 72                  | 4.2                   |

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.

## Specifications (measured @ ta= 25°C, 240VAC and rated load)

| BASIC CHARACTERISTICS   |                         |       |        |  |
|---|-------------------------|-------|--------|--|
| Parameter   | Condition               | Min.  | Typ.   | Max.                                       |
| Input Voltage Range   |                         | 90VAC | 230VAC | 264VAC                                     |
| Inrush Current  |                         |       |        | 10A  |
| Open Circuit Voltage  | 350mA<br>500mA<br>700mA |       |        | 16VDC<br>12VDC<br>9VDC                     |
| Start-up Time   |                         |       |        | 500ms                                      |
| Input Frequency Range   |                         | 47Hz  |        | 63Hz                                       |
| No Load Power Consumption   |                         |       |        | 0.5W                                       |
| Power Factor  | full load, 230VAC       |       |        | 0.40                                       |
| Internal Operating Frequency  | full load               |       | 64kHz  |  |
| Output Ripple Current <sup>(1)</sup>  | 350mA<br>500mA; 700mA   |       |        | 80mA <sub>p-p</sub><br>90mA <sub>p-p</sub> |
| <b>Notes:</b><br>Note1: Measured at 20MHz BW using 0.1µF & 47µF parallel capacitor. |                         |       |        |  |

## REGULATIONS

| Parameter               | Condition | Value    |
|-------------------------|-----------|----------|
| Output Current Accuracy |           | ±5% max. |
| Line Regulation         |           | 5% max.  |
| Load Regulation         |           | 5% max.  |

## PROTECTION

| Parameter                     | Condition | Value  |
|-------------------------------|-----------|--|
| Input Overcurrent Protection  | internal  | 0.22Ω fusible resistor                         |
| Open Circuit Protection (OCP) |           | auto recovery after fault condition is removed |

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**Specifications** (measured @  $t_a = 25^\circ\text{C}$ , 240VAC and rated load)

|                                   |             |  |
|-----------------------------------|-------------|--|
| Over Load Protection (OLP)        |             | auto recovery after fault condition is removed |
| Over Voltage Protection (OVP)     |             | auto recovery after fault condition is removed |
| Over Temperature Protection (OTP) | 110°C Tcase | auto recovery after fault condition is removed |
| Isolation Voltage                 | I/P to O/P  | 3.75kVAC / 1 minute                            |
| Isolation Resistance              |             | 100M $\Omega$                                  |

**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               | 54                      | 118 | 148 | 184 |

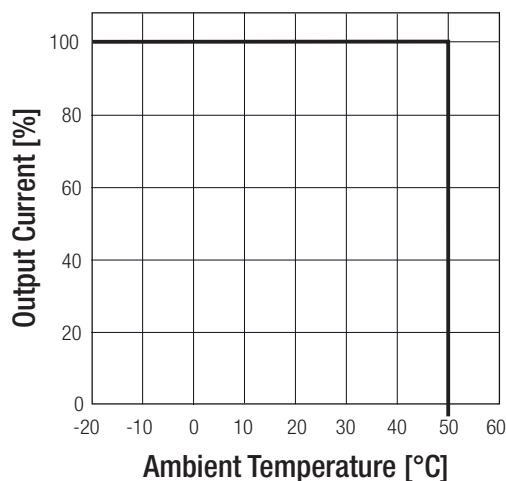
@ 230VAC, 10hm, 90° phase angle and max. load

| Circuit Breaker | Circuit Breaker Current |     |     |     |
|-----------------|-------------------------|-----|-----|-----|
| Typ             | 10A                     | 16A | 20A | 25A |
| B               | 17                      | 28  | 35  | 44  |
| C               | 27                      | 59  | 74  | 92  |

**ENVIRONMENTAL**

| Parameter                   | Condition | Value                        |
|-----------------------------|-----------|------------------------------|
| Operating Temperature Range |           | -20°C to +50°C, Ambient      |
| Maximum Case Temperature    |           | +79°C                        |
| Operating Altitude          |           | 2000m                        |
| Operating Humidity          |           | 5% to 85% RH, non condensing |
| IP Rating                   |           | IP65                         |
| Pollution Degree            |           | PD2                          |
| Design Lifetime             |           | 30 x 10 <sup>3</sup> hours   |

**Derating Graph**



**SAFETY AND CERTIFICATIONS**

| Certificate Type  | Report Number       | Standard  |
|---|---------------------|---|
| ETL Standard for LED Equipment for use in Lighting Products       | 160428123GZU-001    | UL8750, 2nd Edition, 2015                                     |
| LED Equipment for Lighting Applications                           |                     | CSA C22.2 No. 250.13, 2014                                    |
| Lamp Controlgear General Requirements for Safety (CB Scheme)      | 307649 + 307650     | IEC61347-1, 2nd Edition, 2012<br>EN61347-1, 2nd Edition, 2013 |
| Lamp Controlgear Particular Requirements (CB Scheme)              |                     | IEC/EN61347-2-13, 2nd Edition, 2014                           |
| D.C. or A.C. Controlgears for LED Performance Requirements (ENEC) | 307649-1 + 307650-1 | IEC/EN62384, 1st Edition, 2009                                |
| RoHS 2.1  | LCS1606201548R      | RoHS-2011/65/EU + AM-2015/863                                 |

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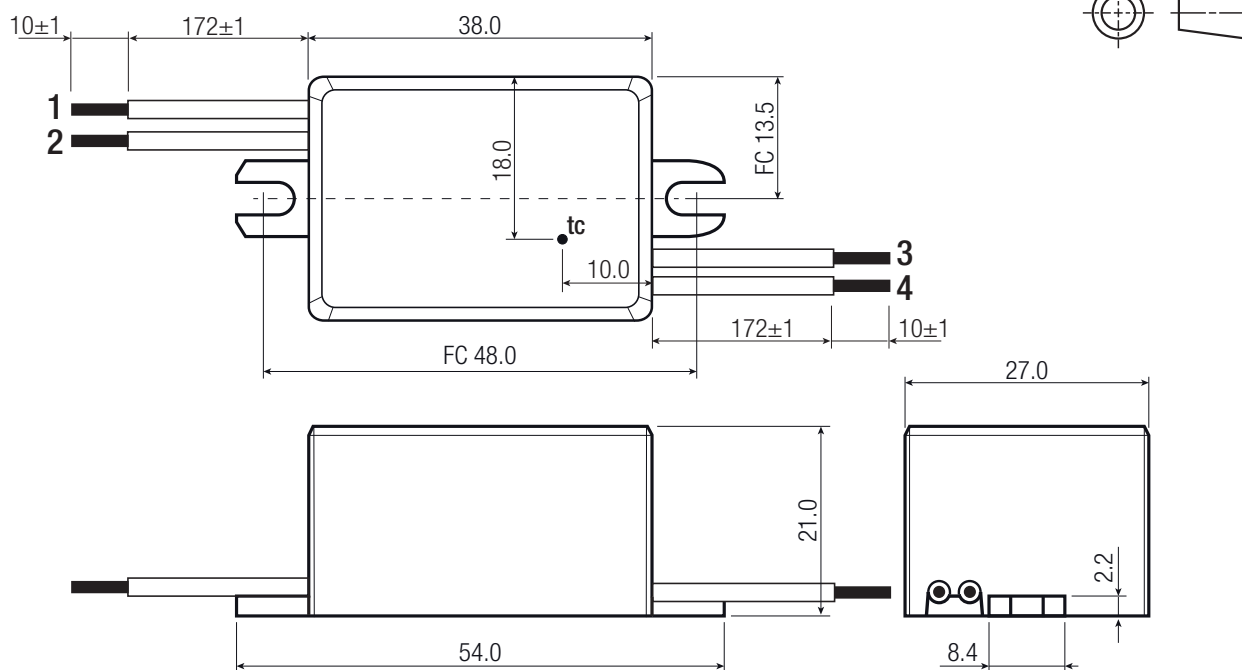
### Specifications (measured @ $t_a = 25^\circ\text{C}$ , 240VAC and rated load)

| EMI Compliance  |   | Standard / Criterion   |
|---|---|--|
| Equipment for general Lighting Purpose EMC Immunity Requirements  | 307650  | EN61547, 2009  |
| Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment |   | EN55015  |
| Assessment of lighting equipment related to human exposure to electromagnetic fields                                |   | EN62493, 2015  |
| ESD Electrostatic discharge immunity test   | ±8kV Air Discharge,<br>±4kV Contact Discharge | EN61000-4-2, 2009, Criteria B                                    |
| Radiated, radio-frequency, electromagnetic field immunity test  | 3V/m  | EN61000-4-3, 2010, Criteria A                                    |
| Fast Transient and Burst Immunity   | ±0.5kV (DC Output)<br>±1kV (AC Input)         | EN61000-4-4, 2012, Criteria B                                    |
| Surge Immunity  | ±0.5kV (AC Input)                             | EN61000-4-5, 2014, Criteria C                                    |
| Immunity to conducted disturbances, induced by radio-frequency fields   | 3V  | EN61000-4-6, 2014, Criteria A                                    |
| Voltage Dips and Interruptions  | 100% reduction, 10ms<br>30% reduction, 200ms  | EN61000-4-11, 2014, Criteria B<br>EN61000-4-11, 2014, Criteria C |
| Limits of Harmonic Current Emissions  |   | EN61000-3-2, Class C, 2014                                       |
| Voltage Fluctuations and Flicker in Public Low-Voltage Systems <=16A per phase                                      |   | EN61000-3-3, 2013  |

## DIMENSION and PHYSICAL CHARACTERISTICS

| Parameter                 | Type    | Value                |
|---------------------------|---------|----------------------|
| Material                  | Case    | Plastic (UL94 V-2)   |
|                           | Potting | Silicone (UL94 V-0)  |
| Package Dimension (LxWxH) |         | 38.0 x 27.0 x 21.0mm |
| Package Weight            |         | 40g                  |

## Mechanical Dimensions



## Wired Connection

| # | Function   | Wire Color | Type           | Strands |
|---|------------|------------|----------------|---------|
| 1 | VAC in (N) | blue       | UL-1007, AWG18 | 41/0.16 |
| 2 | VAC in (L) | brown      | UL-1007, AWG18 | 41/0.16 |
| 3 | LED+       | red        | UL-1007, AWG18 | 41/0.16 |
| 4 | LED-       | black      | UL-1007, AWG18 | 41/0.16 |

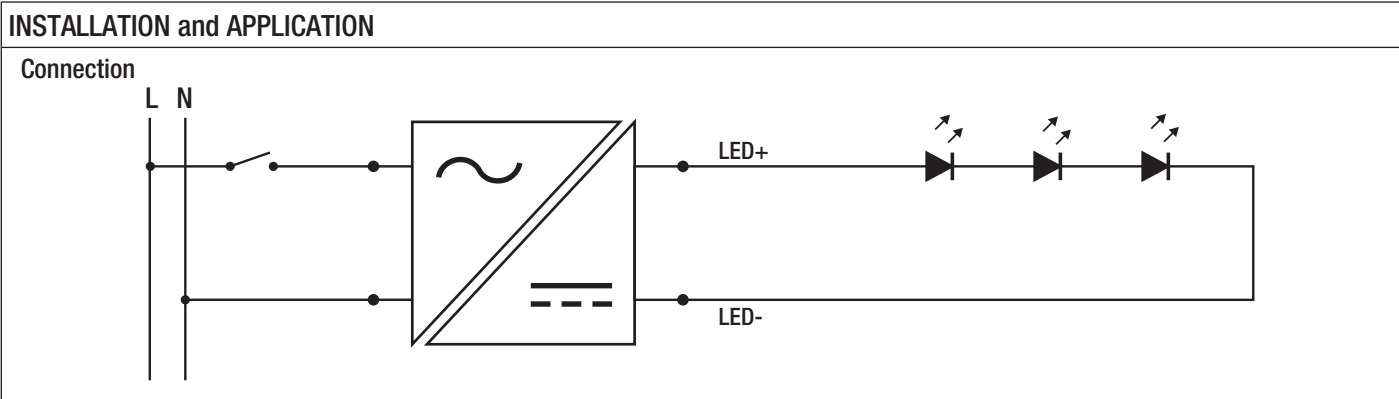
tc= case temperature measuring point

FC= fixing centers

Tolerance: xx.x= ±0.5mm

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

Specifications (measured @ ta= 25°C, 240VAC and rated load)



| PACKAGING INFORMATION       |               |                       |
|-----------------------------|---------------|-----------------------|
| Parameter                   | Type          | Value                 |
| Packaging Dimension (LxWxH) | Cardboard Box | 290.0 x 86.0 x 76.0mm |
| Packaging Quantity          |               | 10pcs                 |
| Storage Temperature Range   |               | -20°C to +70°C        |
| Storage Humidity            |               | 5% - 85% RH           |

# Mouser Electronics

Authorized Distributor

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