

Features

LED DRIVER

- High Output Voltage
- Universal AC Input
- Constant Current Operation
- Active Power Factor Correction
- IP67 Design for Indoor and Outdoor Use
- Compact Size
- Digital PWM and Analogue Voltage Dimming

Description

The new RACD150A LED drivers offer constant output currents of 1400mA, 1050mA or 700mA, with voltages from 60V up to 210V. The series supports dimming via PWM or 1-10V signals and is fully IP67 sealed for outdoor as well as indoor applications. With their wide input voltage range of 90 to 305VAC, the new drivers can be used worldwide on 115Vac, 230Vac and 277Vac supplies. The converters operate with full load efficiencies of more than 93%, feature low THD (15%) and active PFC with power factors exceeding 0.98, and are fully protected against short circuit, overload and over-temperature conditions. Applications include high-power area lighting as well as car parks, warehouse or security lighting. The LED drivers are UL8750 and EN61347 certified, comply with FCC and European EMC standards and come with a full 5 year warranty.

Selection Guide

| Part Number | Input Voltage Range (VAC) | Rated Power (W) | Output Voltage Range (VDC) | Rated Output Current (mA) | Efficiency (%) |
|---------------|---------------------------|-----------------|----------------------------|---------------------------|----------------|
| RACD150-700A | 90-305 | 147 | 60-210 | 700 | 92 |
| RACD150-1050A | 90-305 | 150 | 60-143 | 1050 | 92 |
| RACD150-1400A | 90-305 | 150 | 60-107 | 1400 | 91 |

Specifications (measured at 230VAC and 25°C ambient temperature)

| | | |
|---|--|---------------------|
| Input Voltage Range | 90-305 VAC or 127-430VDC | |
| Input Frequency Range | 47-63Hz. | |
| Power Factor | Full Load, 120VAC | >0.98 |
| | Full Load, 240VAC | >0.94 |
| | 75% Load, 240VAC | >0.90 |
| DC Dimming | Open = 100% | DC 1-10V |
| PWM Dimming | Open = 100% | Duty 10% - 100% |
| | Freq. | 500Hz - 3000Hz |
| | Voltage | Hi=10V, Low=0V |
| THD (@ 230VAC/50Hz) | 700A | ±10% |
| | 1050A, 1400A | ±11% |
| Input Current | 115VAC | 2A max. |
| | 240VAC | 1A max. |
| Input/Output Isolation | 3.75kVAC / 1min | |
| Input/Case Isolation | 1.8kVAC / 1min | |
| Output/Case Isolation | 0.5kVAC / 1min | |
| Leakage Current | 230VAC | <0.75mA |
| Inrush Current | 240VAC | cold start 65A max. |
| Voltage Tolerance | ±10% | |
| Current Tolerance | ±5% | |
| Ripple & Noise (@20MHz bandwidth) ⁽¹⁾ | 2000mV max. | |
| Over Voltage Protection | 105 - 130% Rated Voltage | Shutdown Mode |
| Short Circuit Protection | Constant current limit and recovers after fault condition is removed | |
| Over Temperature Protection | Shutdown Mode | |
| Operating Temperature Range (Refer to Output Load Derating Curve) | Ambient | -40°C to +55°C |
| (free air convection) | Case Temperature | 100°C max. |
| Operation Humidity | 20%-90% RH Non-Condensing | |
| Storage Temperature | -40°C to +80°C | |
| Storage Humidity | 10%-95% RH | |
| Vibration | 2G 10min/1Cycle, Period for 60 min | 10-500Hz |

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LIGHTLINE
AC/DC-Converter
with 5 year Warranty

RECOM

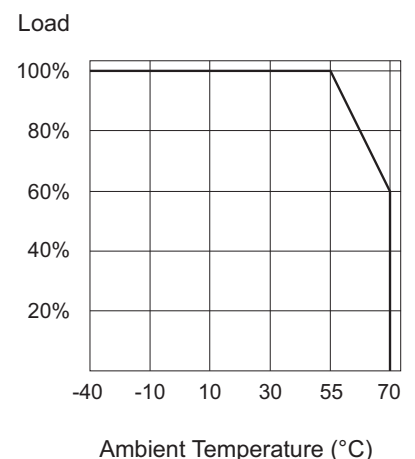
**150 Watt
Single
Output**



**UL 8750 Certified
EN 61347 Certified**

RACD150-A

Derating-Graph (Ambient Temperature)



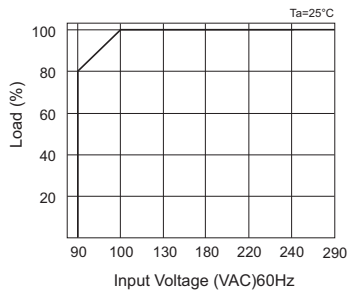
Refer to Application Notes

Specifications (measured at 115VAC / 230VAC and 25°C ambient temperature)

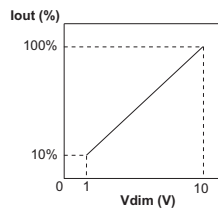
| | | | |
|----------------------|----------------------------|-----------------------------|---------------|
| Isolation Resistance | 100MΩ / 500VDC at 25°C | | |
| IP Rating | IP67 | | |
| Safety Standards | UL/cUL LED Lighting Safety | Report: E340696 | UL8750 |
| | CE LVD Directive, Safety | Report: 12CA61289-1 | EN61347-2-13 |
| | CB | Report: 11036253 001 | IEC61347-2-13 |
| Standards | EMC Compatibility | EN55015 | |
| | | FCC, Part 15 | |
| | Harmonic Current | EN61000-3-2 Class C | |
| | | EN61000-3-3 | |
| | EMC Immunity | EN61000-4-2, 3, 4, 5, 6, 11 | |
| | | EN61547 | |
| Dimension | 226*68*39mm | | |
| Weight | 1.1kg | | |
| MTBF | using MIL-HDBK-217F (25°C) | 200 x 10 ³ hours | |

Notes:

- Note1: Ripple and Noise are measured at 20MHZ bandwidth by using a 12" twisted pair-wire terminated with 0.1uf & 47uf parallel application
- Note2: 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.

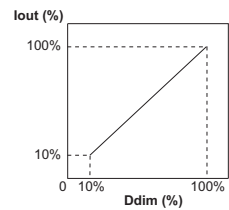


DC Voltage Dimming Curve



Note: Resistor dimming is only possible with a digital potentiometer (current sink), like the RECOM REPOT

PWM Dimming Curve

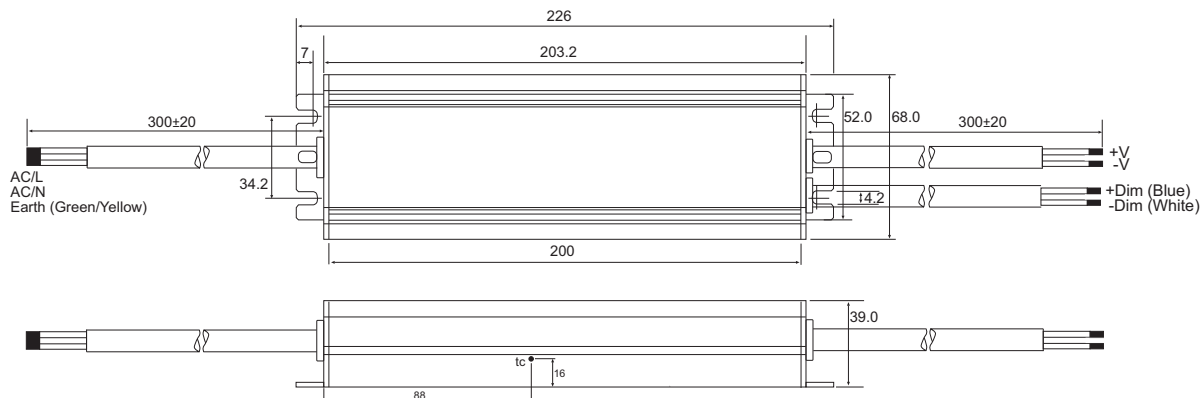


Pulse: Hi = 10V, Low = 0V
Frequency: 500 - 3KHz

Maximum Number of LED drivers per circuit breakers

| Condition | Circuit Breaker | Circuit Breaker Current | | | |
|---------------------------------|-----------------|-------------------------|-----|-----|-----|
| | | 10A | 16A | 20A | 25A |
| 115VAC, 10hm 90° phase angle | Typ | 5 | 8 | 9 | 12 |
| | C | 5 | 8 | 9 | 12 |
| 230VAC, 10hm 90° phase angle | B | 4 | 7 | 8 | 9 |
| | C | 5 | 13 | 16 | 19 |
| 277VAC, 10hm 90° phase angle | B | 5 | 8 | 9 | 11 |
| | C | 9 | 15 | 18 | 21 |

Package Style and Pinning



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