

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

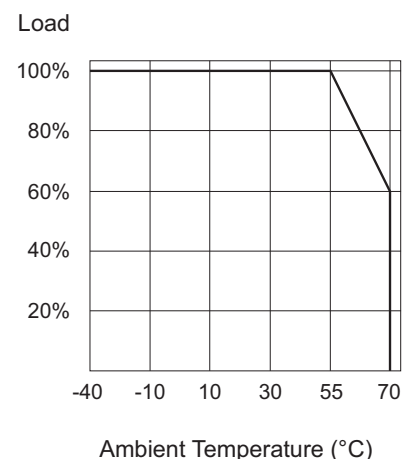
**150 Watt  
Single  
Output**



**UL 8750 Certified  
EN 61347 Certified**

**RACD150-A**

## Derating-Graph (Ambient Temperature)



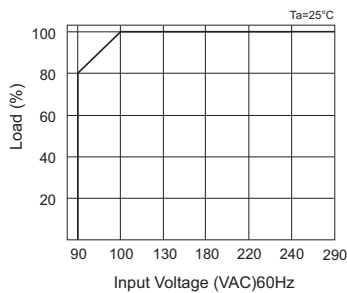
Refer to Application Notes

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

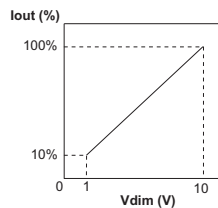
Isolation Resistance	100MΩ / 500VDC at 25°C		
IP Rating	IP67		
Safety Standards	UL/cUL LED Lighting Safety	Report: E340696	UL8750
	CE LVD Directive, Safety	Report: 12CA61289-1	EN61347-2-13
	CB	Report: 11036253 001	IEC61347-2-13
Standards	EMC Compatibility	EN55015	
		FCC, Part 15	
	Harmonic Current	EN61000-3-2 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 <sup>3</sup> 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.

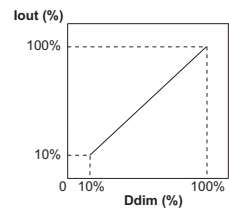


DC Voltage Dimming Curve



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

PWM Dimming Curve

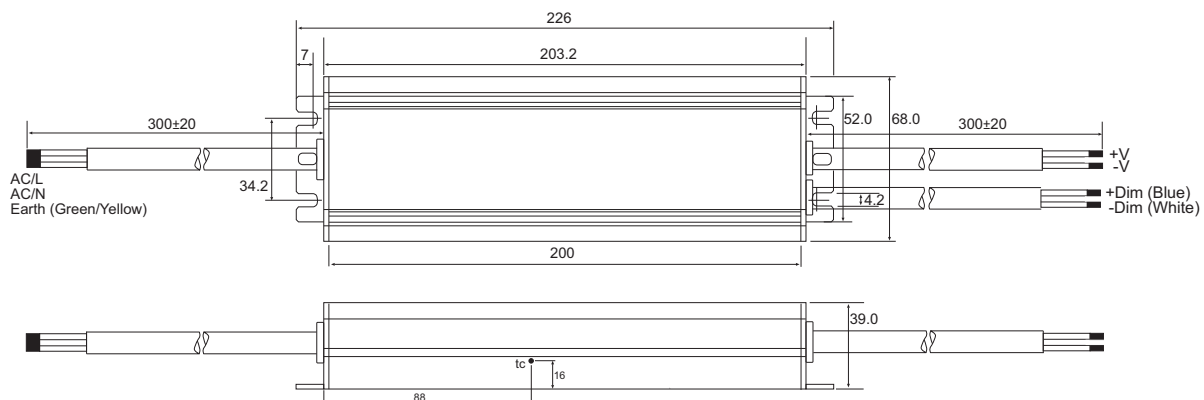


Pulse: Hi = 10V, Low = 0V  
Frequency: 500 - 3KHz

### 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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