

## Features

### LED DRIVER

- Universal AC Input
- Constant Current Operation
- Suitable for High Brightness LED Products
- Built-In Active PFC Function
- Overvoltage-, Short Circuit- and Over-temperature Protection
- Built-In 3 in 1 Dimming
- IP67 Rated
- Class 2 Power Unit UL1310

#### Selection Guide

Part Number	Output Voltage (VDC)	Rated Power (W)	Rated Current (mA)	Output Voltage Range (V)	Efficiency (typ.)
RACD60-1050A	57	60	105 - 1050	40 - 57	88%
RACD60-1200A	48	58	120 - 1200	33 - 48	88%
RACD60-1650A	36	60	165 - 1650	24 - 36	87%
RACD60-2500A	24	60	250 - 2500	15 - 24	86%
RACD60-4200A	12	50	420 - 4200	9 - 12	86%

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

Input Voltage Range	90-305 VAC	
Input Frequency Range	47-63Hz	
Power Factor (Full Load)	120VAC	>0.98
	240VAC	>0.94
	277VAC	>0.92
THD	Full Load, 115VAC	12% max.
	Full Load, 230VAC	18% max.
DC Dimming	DC 1-10V	
PWM Dimming	Puls: Hi=10V Low=0V, Duty: 10% - 100%, Fsw 0.5 - 3KHz	
Resistance Dimming	10K - 100K $\Omega$	
Current Accuracy	$\pm 5\%$	
AC Input Current	100-240VAC	0.8A
	277VAC	0.4A
Inrush Current (Cold Start)	240VAC	70A
Leakage Current	<0.5mA / 240VAC	
Start-up Time (at Full Load)	<2sec	
Isolation Voltage	3.75kVAC / 1 minute	
Short Circuit Protection	Hiccup	
Over Voltage Protection	12V	13.2 - 15.6V
	24V	26.4 - 31.2V
	36V	39.6 - 46.8V
	48V	52.8 - 62.4V
	57V	62.7 - 70V
Over Temperature Protection	105 $\pm$ 10°C, Latch Mode	
Vibration	10-500Hz, 2G, 60 Min. along X, Y and Z	
Storage Humidity	10% - 90% RH	
Operating Humidity	20% - 90% RH Non-Condensing	
Weight	420g	
Operating Temperature	-30°C to +50°C	
Storage Temperature	-40°C to +60°C	
Ripple & Noise	12V, 24V	200mV
	(at 20MHz bandwidth using 0.1uF & 47uF capacitor)	36V, 48V, 57V
IP Rating	IP67	
Isolation Resistance	100M $\Omega$ / 500VDC at 25°C	
Dimension (L*W*H)	179*45.1*32.5mm	
Design Lifetime	70 x 10 <sup>3</sup> hours max.	
MTBF (+25°C)	using MIL-HDBK 217F	200 x 10 <sup>3</sup> hours min.

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**LIGHTLINE**  
AC/DC-Converter  
with 5 year Warranty

**RECOM**

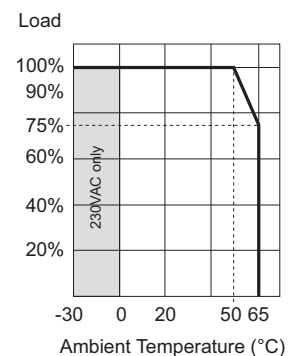
## 60 Watt PFC Single Output



**EN 61347-1 Certified**  
**EN 61347-2-13 Certified**  
**UL8750 Certified**

**RACD60-A**

## Derating-Graph (Ambient Temperature)



Note:

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.

**Refer to Application Notes**

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

Safety Standards LED Lighting Safety  
LED Lighting Safety (Canada)  
Class 2 Power Supply Safety  
Extra Low-Voltage Class 2 Output  
LED equipment for lighting application

Report: E340696  
Report: E340696  
Report: E340696  
Report: E340696  
Report: E340696

UL8750  
cUL8750  
UL1310  
CSA C22.2 No. 223-M91  
CSA C22.2 No. 250.13-12  
EN61347-1  
EN61347-2-13  
EN61000-3-2 Class C  
EN61000-3-3  
EN61000-4-2,3,4,5,6,8,11  
EN61547  
EN55015 FCC15

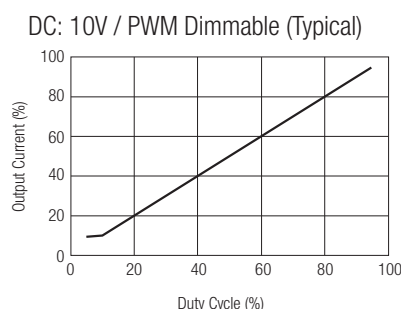
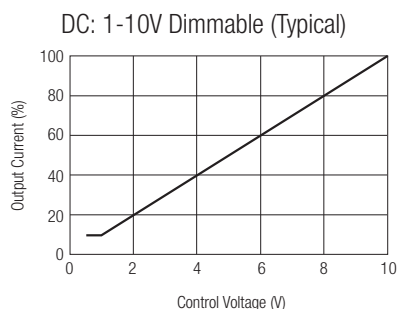
## 3 in 1 Dimming Control (DC / PWM / Resistance)

10K-100K Resistor Dimmable (Typical):

Resistor	Single-Driver	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K
	Multi-Driver	10K/N	20K/N	30K/N	40K/N	50K/N	60K/N	70K/N	80K/N	90K/N	100K/N
I <sub>out</sub> (%)		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

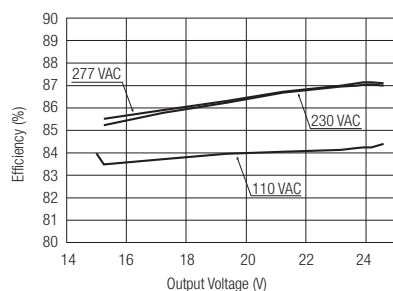
The length of extended wire for DIM+/- shall not exceed 20 meters. (wire ≤ 20m)

N = The number of dimmer drivers should not exceed 15. (N ≤ 15mS)



## Typical Characteristics

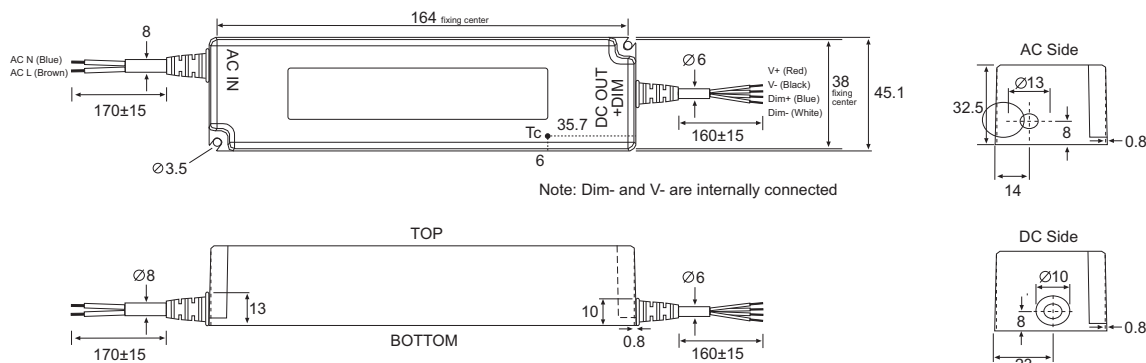
Efficiency vs Load over Vin  
RACD60-2500A



Maximum Number of LED drivers per circuit breakers

Condition	Circuit Breaker	Circuit Breaker Current			
	Typ	10A	16A	20A	25A
115VAC, 10hm 90° phase angle	C	12	20	24	31
230VAC, 10hm 90° phase angle	B	13	21	25	32
	C	21	35	41	51
277VAC, 10hm 90° phase angle	B	15	24	29	37
	C	24	40	47	58

## Package Style & Pinning



The product information and specifications are subject to change without prior notice. RECOM products are not authorized for use in safety-critical applications (such as life support) without RECOM's explicit written consent. A safety-critical application is defined as an application where a failure of a RECOM product may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The buyer 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.