

# 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 Ω	
Current Accuracy	±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 ± 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	250mV
IP Rating	IP67	
Isolation Resistance	100MΩ / 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**

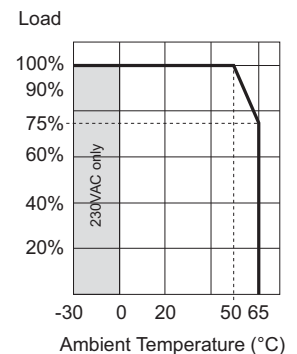
**60 Watt PFC  
Single  
Output**



**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	Report: E340696	UL8750
	LED Lighting Safety (Canada)	Report: E340696	cUL8750
	Class 2 Power Supply Safety	Report: E340696	UL1310
	Extra Low-Voltage Class 2 Output	Report: E340696	CSA C22.2 No. 223-M91
	LED equipment for lighting application	Report: E340696	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

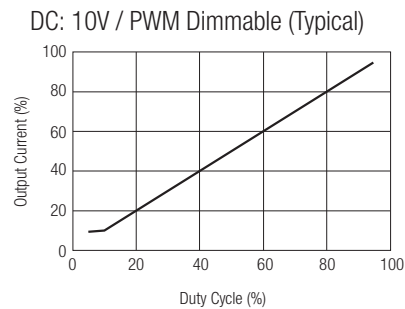
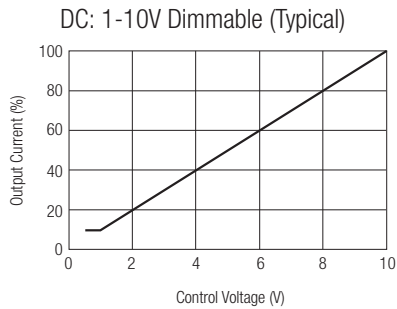
**3 in 1 Dimming Control (DC / PWM / Resistance)**

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
	out (%)	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

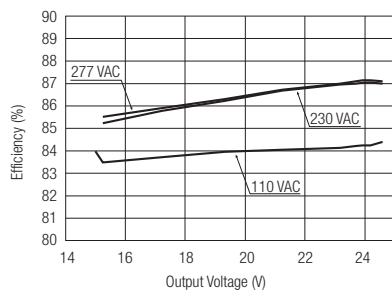
The length of extended wire for DIM+/- shall not exceed 20 meters. (wire ≤ 20m)

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



**Typical Characteristics**

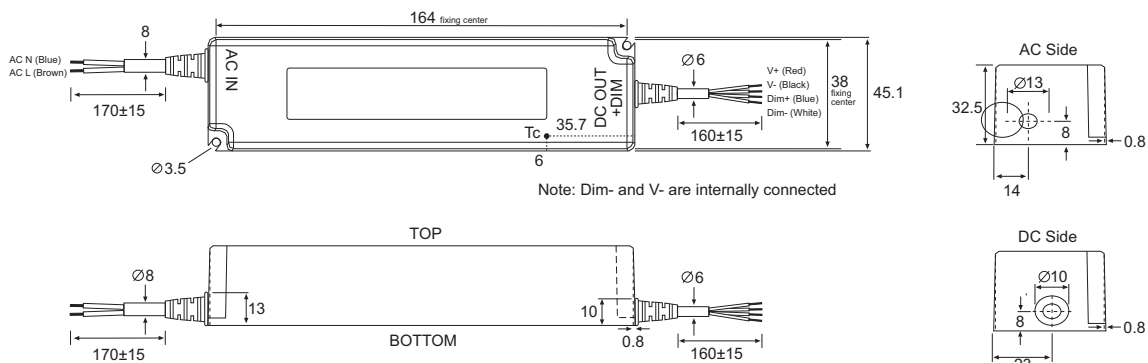
Efficiency vs Load over Vin  
RACD60-2500A



Maximum Number of LED drivers per circuit breakers

Condition	Circuit Breaker	Circuit Breaker Current			
		10A	16A	20A	25A
115VAC, 10hm 90° phase angle	Typ				
	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**



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