

Features

LED DRIVER

- 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.) |
|--------------|----------------------|-----------------|--------------------|--------------------------|-------------------|
| RACD45-700A | 57 | 40 | 70 - 700 | 40 - 57 | 87% |
| RACD45-1050A | 48 | 48 | 105 - 1050 | 33 - 48 | 87% |
| RACD45-1250A | 36 | 45 | 125 - 1250 | 24 - 36 | 86% |
| RACD45-1850A | 24 | 45 | 185 - 1850 | 15 - 24 | 85% |

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 | >0.93 |
| | 277VAC | >0.90 |
| THD | Full Load, 115VAC | 13% max. |
| | Full Load, 230VAC | 19% max. |
| DC Dimming | Open = 100% | DC 1-10V |
| PWM Dimming | Open = 100% | Duty 10% - 100% |
| | Freq. | 500Hz - 3000Hz |
| | Voltage | Hi=10V, Low=0V |
| Resistance Dimming | 10K - 100K Ω | |
| Current Accuracy | ±5% | |
| AC Input Current | 100-240VAC | 0.6A |
| | 277VAC | 0.25A |
| 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 | 24V | 26.4 - 31.2V |
| | 36V | 39.6 - 46.8V |
| | 48V | 52.8 - 62.4 V |
| | 57V | 62.7 - 70V |
| Over Temperature Protection | Latch Mode | 105 ± 10°C |
| Vibration | 10-500Hz, 2G, 60Min. 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 (at 20MHz bandwidth using 0.1uF & 47uF capacitor) | 24V | 200mV |
| | all others | 250mV |
| IP Rating | IP67 | |
| Isolation Resistance | 100MΩ / 500VDC at 25°C | |
| Dimension (L*W*H) | 179*45.1*32.5mm | |

continued on next page

LIGHTLINE
AC/DC-Converter
with 5 year Warranty

RECOM

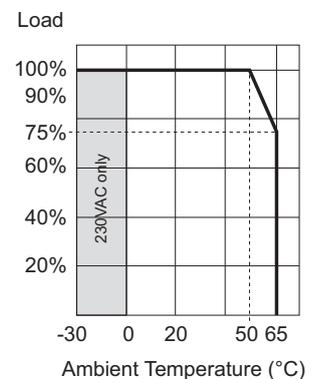
45 Watt PFC Single Output



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

RACD45-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 |
| Design Lifetime | | | 70 x 10 ³ hours max. |
| MTBF (+25°C) | using MIL-HDBK 217F | | 200 x 10 ³ hours min. |

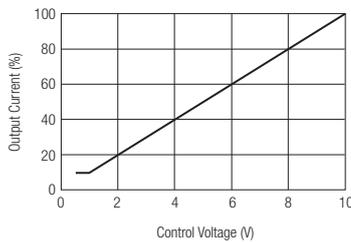
3 in 1 Dimming Control (DC / PWM / Resistance)

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)

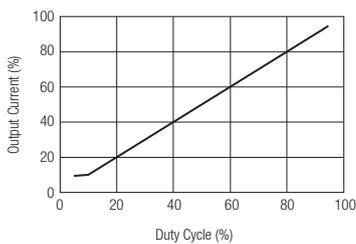
DC: 1-10V Dimmable (Typical)



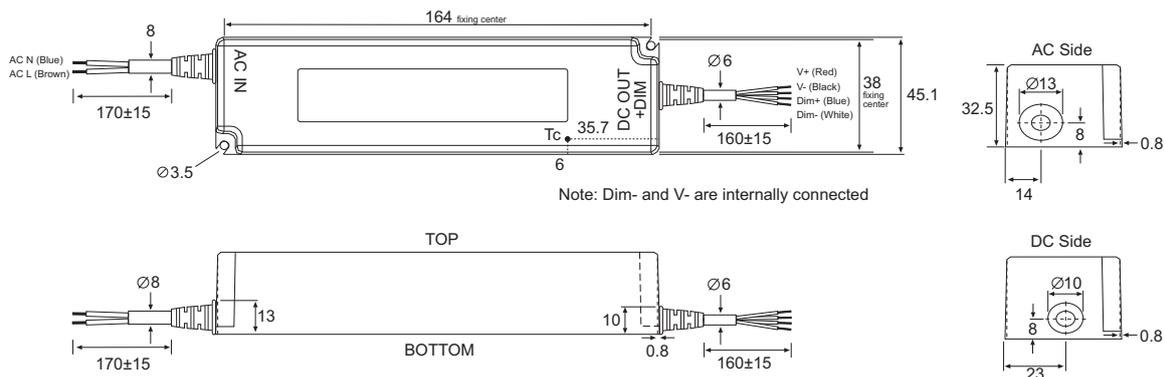
Maximum Number of LED drivers per circuit breakers

| Condition | Circuit Breaker | Circuit Breaker Current | | | |
|---------------------------------|-----------------|-------------------------|-----|-----|-----|
| | | 10A | 16A | 20A | 25A |
| 115VAC, 10hm 90° phase angle | Typ | | | | |
| | C | 16 | 28 | 31 | 43 |
| 230VAC, 10hm 90° phase angle | B | 17 | 28 | 33 | 41 |
| | C | 24 | 39 | 47 | 57 |
| 277VAC, 10hm 90° phase angle | B | 20 | 32 | 38 | 47 |
| | C | 28 | 44 | 54 | 66 |

DC: 10V / PWM Dimmable (Typical)



Package Style & Pinning



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