

# Features

## LED DRIVER

- Universal AC Input
- Constant Voltage / Constant Current Operation
- CE and UL Certified Class I LED Driver
- Active Power Factor Correction
- IP67 Design for Indoor and Outdoor Use
- Cooling by Free Air Convection

### Selection Guide

| Part Number | CV Mode              |                   | CC Mode              |                      | Efficiency (230VAC) (%) |
|-------------|----------------------|-------------------|----------------------|----------------------|-------------------------|
|             | Constant Voltage (V) | Current Range (A) | DC Voltage Range (V) | Constant Current (A) |                         |
| RACD100-12  | 12                   | 0-8.3             | 9-12                 | 8.3                  | 88                      |
| RACD100-24  | 24                   | 0-4.2             | 14-24                | 4.2                  | 90                      |
| RACD100-36  | 36                   | 0-2.8             | 26-36                | 2.8                  | 90                      |
| RACD100-48  | 48                   | 0-2.1             | 34-48                | 2.1                  | 91                      |

### Specifications

|   |  |                                 |
|---|--|---------------------------------|
| Input Voltage Range   | 90-305 VAC or 127-430VDC               |                                 |
| Input Frequency Range   | 47-63Hz.                               |                                 |
| Power Factor  | Full Load, 115VAC                      | >0.98                           |
|   | Full Load, 230VAC                      | >0.95                           |
|   | Full Load, 277VAC                      | >0.94                           |
| THD   | Full Load, 115VAC                      | 8% max.                         |
| AC Current  | 115VAC                                 | 1.4A max.                       |
|   | 230VAC                                 | 0.7A max.                       |
| Input/Output Isolation  | 3.75kVAC / 1minute                     |                                 |
| Input/Case Isolation  | 1.8kVAC / 1minute                      |                                 |
| Output/Case Isolation   | 0.5kVAC / 1minute                      |                                 |
| Leakage Current   | 240VAC                                 | <0.75mA                         |
| Voltage Tolerance   | -1% to 5%                              |                                 |
| Start-up Time (@ Full Load)   | 115VAC                                 | 1.5s                            |
|   | 230VAC / 277VAC                        | 0.7s                            |
| Ripple & Noise  | 48V Version                            | 200mV max.                      |
|   | others                                 | 150mV max.                      |
| Over Current Protection   | 95%-105% rated current                 | Auto-Recovery                   |
| Short Circuit Protection  | Hiccup Mode                            |                                 |
| Over Voltage Protection   | 12V                                    | 15V typ.                        |
| Latch Mode  | 24V                                    | 31V typ.                        |
| (Power off to recover)  | 36V                                    | 45V typ.                        |
|   | 48V                                    | 58V typ.                        |
| Over Temperature Protection   | Tcase 95°C ±10°C                       |                                 |
| Operating Temperature Range (free air convection, according to CE/UL) | without derating                       | -20°C to +50°C (see graph)      |
|   | Case Temperature                       | 90°C max.                       |
| Operation Humidity  | 20%-90% RH Non-Condensing              |                                 |
| Storage Temperature   | -40°C to +80°C                         |                                 |
| Storage Humidity  | 10%-90% RH                             |                                 |
| Vibration   | 10-500Hz, 2G, 60 Min. along X, Y and Z |                                 |
| IP Rating   | IP67                                   |                                 |
| Safety Standards  | UL/cUL LED Lighting Safety (E340696)   | UL8750                          |
|   | CE LVD Directive, Safety               | EN61347-2-13                    |
|   | CB Report: 12CA61289-1                 | IEC61347-2-13                   |
| EMC Standards   | EMC Compatibility                      | EN55015                         |
|   |  | FCC, Part 15                    |
|   | Harmonic Current                       | EN61000-3-2 Class C (≥75% load) |
|   |  | EN61000-3-3                     |
|   | EMC Immunity                           | EN61000-4-2, 3, 4, 5, 6, 11     |

continued on next page

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

**RECOM**

**100 Watt  
Single  
Output**



**UL 8750 Certified  
EN 61347 Certified**

**RACD100**

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.

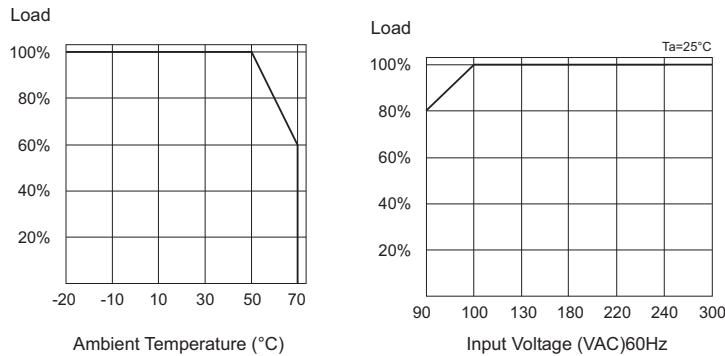
**Refer to Application Notes**

## Specifications

|                 |                            |                             |                            |
|-----------------|----------------------------|-----------------------------|----------------------------|
| Dimension       | 222*68*39mm                |                             |                            |
| Weight          | 1020g                      |                             |                            |
| MTBF            | using MIL-HDBK-217F (25°C) | 250 x 10 <sup>3</sup> hours |                            |
| Design Lifetime |                            |                             | 70 x 10 <sup>3</sup> hours |

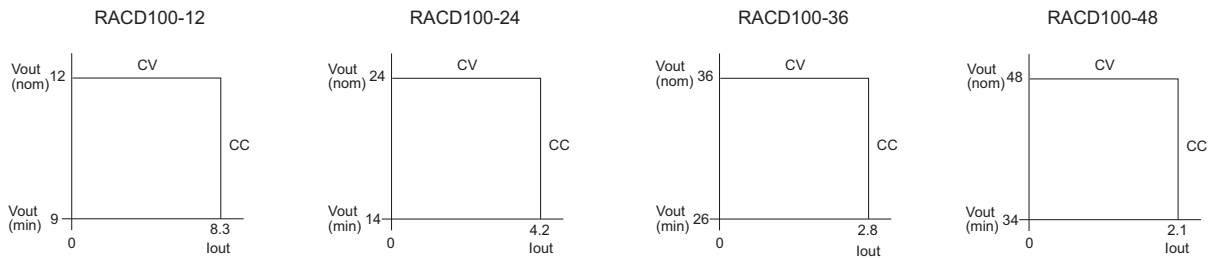
The use of a circuit breaker with C-characteristic is recommended.

## Derating Curves



## Typical Characteristics

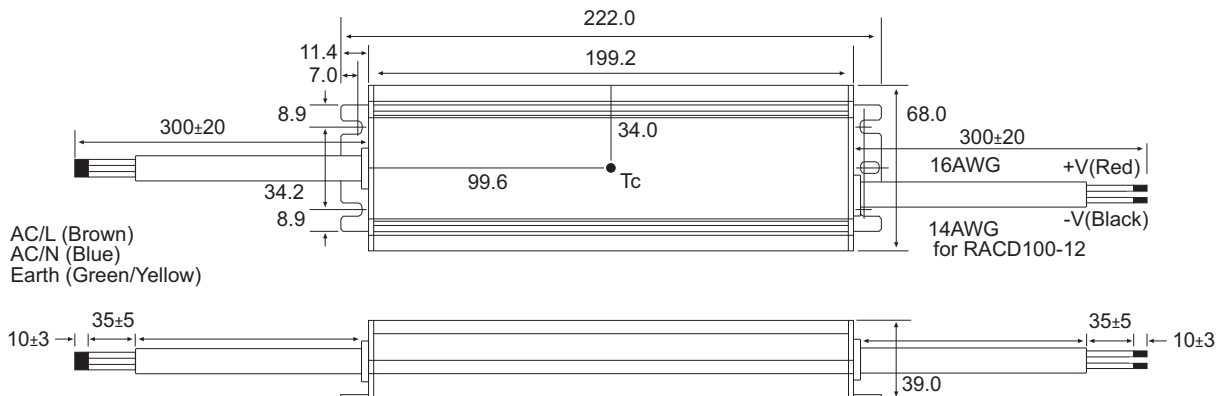
### Constant Voltage / Constant Current Curve



### Maximum Number of LED drivers per circuit breakers

| Condition                       | Circuit Breaker | Circuit Breaker Current |     |     |     |
|---------------------------------|-----------------|-------------------------|-----|-----|-----|
|                                 |                 | 10A                     | 16A | 20A | 25A |
| 115VAC, 10hm<br>90° phase angle | Typ             | 7                       | 12  | 14  | 18  |
|                                 | C               | 7                       | 12  | 14  | 18  |
| 230VAC, 10hm<br>90° phase angle | B               | 6                       | 10  | 12  | 14  |
|                                 | C               | 13                      | 22  | 24  | 31  |
| 277VAC, 10hm<br>90° phase angle | B               | 7                       | 11  | 14  | 17  |
|                                 | C               | 15                      | 25  | 29  | 36  |

## Package Style and Pinning



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