

Features LED DRIVER

- 20W Dimmable AC-DC LED Power Supply
- 350mA, 500mA, 700mA or 1050mA Outputs
- ENEC, UL, RCM and CB Certified
- Deep Dimming to 0% *
- Active Power Factor Correction >0.95
- 3.75kVAC Isolation
- Output Connector to avoid miswiring
- 5 Year Warranty

Description

The RACT20 series is a constant current dimmable AC/DC source for driving high power LED applications. The phase angle dimming function works with leading or trailing edge dimmers. This driver is suitable for indoor LED lighting systems and powers 5-15 high power LEDs or single LED arrays from 350mA up to 1A.

Selection Guide

| Part Number | Input Voltage (VAC) | Output Current (mA) | Output Voltage (VDC) | Dimming Control | Efficiency typ. (%) | Max. # LEDs |
|----------------|---------------------|---------------------|----------------------|-----------------|---------------------|------------------|
| RACT20-350 | 230 | 350 | 30-56 | Triac | 82 | 15 x 1W |
| RACT20-500 | 230 | 500 | 21-39 | Triac | 82 | 12 x 1W |
| RACT20-700 | 230 | 700 | 15-28 | Triac | 81 | 8 x 2W, 8+8 x 1W |
| RACT20-1050 | 230 | 1050 | 12-18 | Triac | 81 | 5 x 3W, 5+5 x 2W |
| RACT20-350-US | 115 | 350 | 30-56 | Triac | 82 | 15 x 1W |
| RACT20-500-US | 115 | 500 | 21-39 | Triac | 82 | 12 x 1W |
| RACT20-700-US | 115 | 700 | 15-28 | Triac | 81 | 8 x 2W, 8+8 x 1W |
| RACT20-1050-US | 115 | 1050 | 12-18 | Triac | 81 | 5 x 3W, 5+5 x 2W |

Specifications (typical at 25°C, nominal input voltage, rated output current unless otherwise specified)

| | | |
|---|---|---|
| Input Voltage Range | RACT20-xxxx | 180-264VAC |
| | RACT20-xxxx-US | 90-135VAC |
| Rated Power | | 20W max. |
| Output Current Accuracy | | ±5% max. |
| Input Current | 115VAC | 0.4A max. |
| | 230VAC | 0.2A max. |
| Input Frequency Range | | 47-63Hz |
| Power Factor | Full Load | >0.95 |
| THD | Full Load, 115VAC | 8% max. |
| | Full Load, 230VAC | 11% max. |
| Leakage Current | | <0.75mA |
| Open Circuit Voltage | 350mA | 60VDC max. |
| (No Load V _{out}) | 500mA | 44VDC max. |
| | 700mA | 33VDC max. |
| | 1050mA | 22VDC max. |
| Output Ripple and Noise | 350mA, 500mA | 4.5Vp-p max. |
| | 700mA, 1050mA | 4.0Vp-p max. |
| Short Circuit Protection | | Hiccup mode, Auto recovery |
| Overtemperature Protection | | 95°C ±10°C (RT1) Hiccup mode, Auto recovery |
| Isolation Voltage | | 3.75kVAC / 1 minute |
| Efficiency at Full Load | | see selection guide |
| Dimming | AC phase-cut dimming, work with leading/trailing edge dimmers | |
| Operating Temperature Range | Ambient Temperature | -30°C to +50°C |
| (free air convection, according to CE/UL) | Case Temperature | 85°C max. |
| Operating Temperature Range | Ambient Temperature | -30°C to +50°C |
| (free air convection, according to ENEC) | Case Temperature | 80°C max. |

continued on next page

LIGHTLINE
AC/DC-Converter
with 5 year Warranty

RECOM

20W Triac Dimmable LED Driver

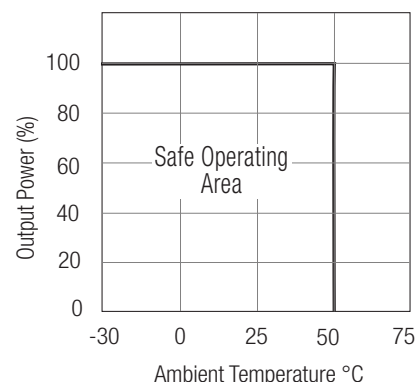


UL-8750 certified
UL-60950-1 certified
European Version only:
ENEC 61347 certified

RACT20

* only US-Versions

Derating-Graph (Ambient Temperature)



Refer to Application Notes

Specifications (typical at 25°C, nominal input voltage, rated output current unless otherwise specified)

| | | |
|---------------------|---|--|
| Storage Temperature | -40°C to +85°C | |
| Relative Humidity | 95% RH | |
| EMC | design refer to EN55022 | Class B |
| IP Rating | IP Rating suitable for indoor LED lighting system | IP20 |
| Design Lifetime | 25°C ambient | >70 x 10 ³ hours in operation |
| Package Weight | 145g | |
| Packing Quantity | 1 pc. | |
| PCB Material | Plastic Resin with Fibreglass (UL94V-0) | |
| Case Material | Plastic | |
| Connections | AC Input | Screw Terminal |
| | LED Output | Screw Terminal |
| | LED Output | 5.5mm Socket with 2mm Pin (suiteable matching plug Switchcraft S760 or similar) |
| Standards | ENEC Lamp Controlgear | EN61347-2-13:2006 EN61347-1:2008 |
| | Electrical Lighting, EMC Emissions | EN55015:2006 + A2:2009 |
| | Limits for Harmonics Emissions | EN 61000-3-2:2006 + A2:2009 |
| | EMC Compatability: Flicker and Voltage Variations | EN 61000-3-3:2006 |
| | Electrical Lighting: EMC Immunity | EN 61547:2009 |
| | RCM (21377) | AS/NZS 61347.1:2002, IEC 61347-2-13 |
| | FCC | FCC15B |
| Certifications | LED Lighting Safety (E340696) | UL8750 |
| | Information Technology Equipment - Safety | UL60950-1 |
| | | CAN/CSA C22.2 No. 60950-1-07 |
| | PSE | J61347-1(H20), J61347-2-13(H21), J55015(H20) |

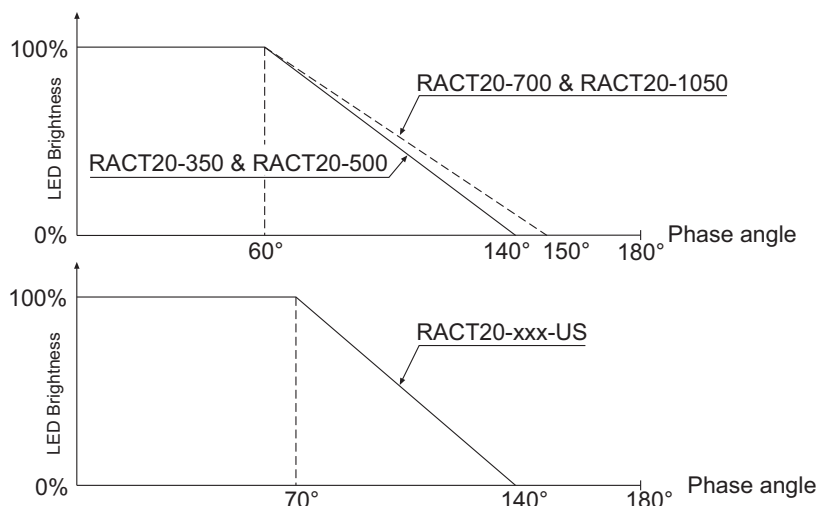
*The triac dimmer must be capable of dimming down to zero

Note:

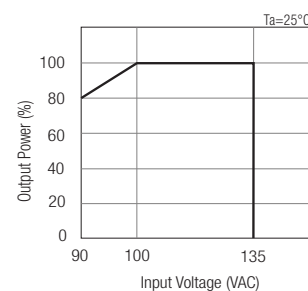
All LED Drivers may not be used without a load. They must be switched on the primary side only. Noncompliance may damage the LED or reduce its lifetime.

Characteristics

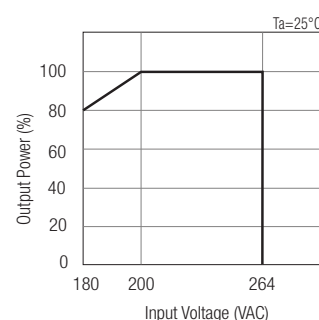
Dimming Response



115VAC - Version



230VAC - Version

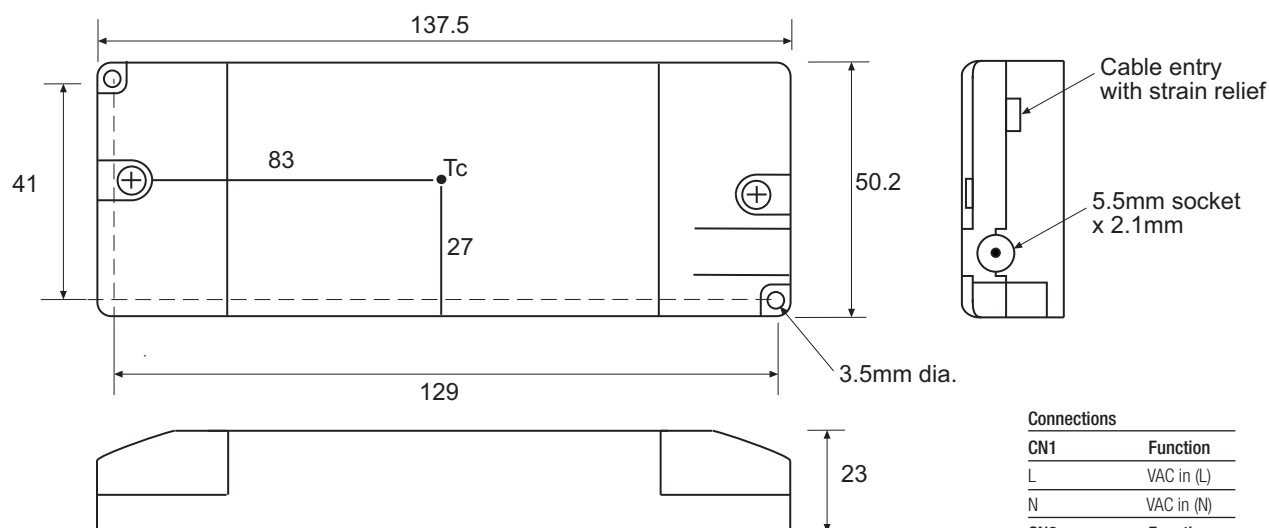


Characteristics

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 | 47 | 68 | 84 | 105 |
| 230VAC, 10hm 90° phase angle | B | 36 | 57 | 69 | 85 |
| | C | 57 | 87 | 109 | 134 |
| 277VAC, 10hm 90° phase angle | B | 41 | 65 | 80 | 98 |
| | C | 65 | 99 | 125 | 154 |

Package Style and Pinning



| Connections | |
|-----------------|------------|
| CN1 | Function |
| L | VAC in (L) |
| N | VAC in (N) |
| CN2 | Function |
| + | LED+ |
| - | LED- |
| 5.5mm Socket* | Function |
| Pin | LED+ |
| Shell | LED- |
| Tolerance | |
| XX = +/-1mm | |
| XX.X = +/-0.5mm | |

AMEYA360

Components Supply Platform

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