

# Features

## TRIAC Dimmable LED Driver

- Triac –dimmable with leading or trailing edge dimmers
- Class II with SELV output (no earth required)
- Extra-large screw terminals and integrated cable clamps for easy installation
- Power factor corrected >0.95
- Dimming range 1..100%
- Compatible with a wide range of dimmers

## RACT12

**12 Watt TRIAC Dimmable Single Output**



### Description

The RACT12-xxx series are low cost, triac-dimmable, constant current 12W LED drivers available with either 300mA, 350mA, 500mA or 700mA full-range outputs. The drivers are Class II (double insulated) meaning no earth connection is required. The phase angle dimming works with leading or trailing edge dimmers. The RACT12 is suitable for indoor locations up to 50°C ambient temperature and is certified for building into furniture for applications such as dimmable shelf lighting, cove lighting or accent lighting. It is CE marked (LVD + EMC + RoHS), EAC and has IEC61347-1/IEC61347-2-13 CB report certification.

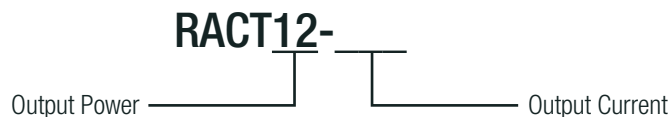
### Selection Guide

| Part Number | Input Voltage Range [VAC] | Output Voltage Range [VDC] | Output Current [mA] | Efficiency min. @rated load [%] | Output Power [W] |
|-------------|---------------------------|----------------------------|---------------------|---------------------------------|------------------|
| RACT12-300  | 198-264                   | 20-40                      | 300                 | 82                              | 12               |
| RACT12-350  | 198-264                   | 18-35                      | 350                 | 81                              | 12               |
| RACT12-500  | 198-264                   | 12-24                      | 500                 | 81                              | 12               |
| RACT12-700  | 198-264                   | 9-18                       | 700                 | 81                              | 12               |

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.



### Model Numbering



### Specifications (measured @ Ta= 25°C, 240VAC, rated load unless otherwise specified)

| BASIC CHARACTERISTICS     |           |        |        |        |
|---------------------------|-----------|--------|--------|--------|
| Parameter                 | Condition | Min.   | Typ.   | Max.   |
| Input Voltage Range       |           | 198VAC | 230VAC | 264VAC |
| Input Current             |           |        |        | 80mA   |
| Inrush Current            | full load |        |        | 5A     |
| No Load Power Consumption |           |        |        | 1W     |
| Input Frequency Range     |           | 50Hz   |        | 60Hz   |
| Power Factor              | full load | 0.95   |        |        |

continued on next page

IEC/EN61347 certified  
 IEC/EN61347-2-13 certified  
 EN61547 certified  
 EN62493 certified  
 EN55015 compliant  
 CB report

### Specifications (measured @ Ta= 25°C, 240VAC, rated load unless otherwise specified)

| Parameter                            | Condition | Min. | Typ.  | Max.  |
|--------------------------------------|-----------|------|-------|-------|
| THD                                  | full load |      |       | 25%   |
| Start-up Time                        |           |      |       | 500ms |
| Internal Operating Frequency         |           |      | 60kHz |       |
| Output Ripple Current <sup>(1)</sup> |           |      |       | 200mA |

**Notes:**

Note1: Measured at 20MHz BW by using a 12" twisted pair-wie terminated with a 0.1µF and 47µF capacitor parallel across output

### REGULATIONS

| Parameter       | Condition | Value    |
|-----------------|-----------|----------|
| Output Accuracy |           | ±5% typ. |
| Load Regulation |           | 5% max.  |
| Line Regulation |           | 5% max.  |

### PROTECTION

| Parameter                         | Condition  | Value   |
|-----------------------------------|--|---|
| Input Fuse                        |  | fusible resistor  |
| Short Circuit Protection (SCP)    |  | Latch OFF, auto recovery after fault condition is removed   |
| Over Voltage Protection (OVP)     | RACT12-300<br>RACT12-350<br>RACT12-500<br>RACT12-700 | 50VDC max.<br>42VDC max.<br>30VDC max.<br>26VDC max.<br>Latch OFF, auto recovery after fault condition is removed |
| Over Load Protection (OLP)        |  | Latch OFF, auto recovery after fault condition is removed   |
| Over Temperature Protection (OTP) | 110°C  | Latch OFF, auto recovery after fault condition is removed   |
| Isolation Voltage                 | I/P to O/P tested for 1 minute                       | 3.75kVAC  |
| Leakage Current                   |  | 5mA max.  |

#### Maximum loading of automatic circuit breakers\*

\* @ 230VAC, 10hm, 90° phase angle and max. load

| Circuit Breaker | Circuit Breaker Current |     |     |     |
|-----------------|-------------------------|-----|-----|-----|
|                 | 10A                     | 16A | 20A | 25A |
| Typ             |                         |     |     |     |
| B               | 36                      | 57  | 69  | 85  |
| C               | 57                      | 87  | 109 | 134 |

### ENVIRONMENTAL

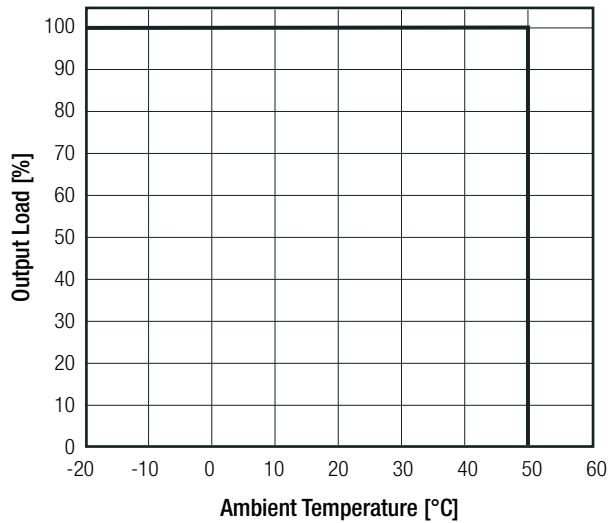
| Parameter                   | Condition  | Value  |
|-----------------------------|--|--|
| Operating Temperature Range | without derating @ natural convection 0.1m/s (see graph) | -20°C to +50°C   |
| Max. Case Temperature       | at tc point  | +80°C max.   |
| Operating Humidity          | non-condensing   | 5-85% RH   |
| IP Rating                   |  | IP20   |
| Pollution Degree            |  | PD2  |
| Design Lifetime             | +25°C ambient  | RACT12-300<br>all others<br>>40 x 10 <sup>3</sup> hours<br>>30 x 10 <sup>3</sup> hours |

continued on next page

**Specifications** (measured @ Ta= 25°C, 240VAC, rated load unless otherwise specified)

**Derating Graph**

(@ Chamber and natural convection 0.1 m/s)



**SAFETY AND CERTIFICATIONS**

| Certificate Type (Safety)  | Report Number  | Standard                              |
|--|----------------|---------------------------------------|
| Lamp controlgear Part 1: General and safety requirements (CB Scheme)   | 325797         | IEC61347-1:2007 2nd Edition + A2:2012 |
| Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (CB Scheme) | 325797         | IEC61347-2-13:2014 2nd Edition        |
| Lamp controlgear Part 1: General and safety requirements (LVD)   |                | EN61347-1:2015                        |
| Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (LVD)       |                | EN61347-2-13:2014 + A1:2017           |
| Lamp controlgear Part 1: General and safety requirements   | 325797         | EN61347-1:2008 + A2:2013              |
| Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules             | 325797         | EN61347-2-13:2014                     |
| EAC  | RU-AT.49.09571 | TP TC 004/2011                        |
| RoHS 2+  |                | RoHS 2011/65/EU + AM2015/863          |

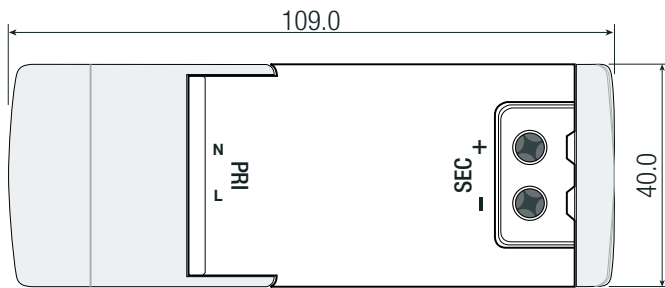
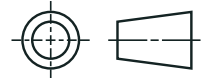
| EMC Compliance  | Condition                                    | Standard / Criterion                   |
|---|--|--|
| Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment | 305985                                       | EN55015:2013 + A1:2015                 |
| Equipment for general lighting purposes – EMC immunity requirements   |  | EN61547:2009                           |
| Assessment of lighting equipment related to human exposure to electromagnetic fields                                |  | EN62493:2015                           |
| ESD Electrostatic discharge immunity test   | Air ±8kV, Contact ±4kV                       | EN61000-4-2:2009, Criteria A           |
| Radiated, radio-frequency, electromagnetic field immunity test  | 3V/m   | EN61000-4-3:2006 + A2:2010, Criteria A |
| Fast Transient and Burst Immunity   | AC Power Port: ±1kV<br>DC Power Port: ±0.5kV | EN61000-4-4:2012, Criteria A           |
| Surge Immunity  | AC Power Port: ±0.5kV                        | EN61000-4-5:2014, Criteria A           |
| Immunity to conducted disturbances, induced by radio-frequency fields   | 3V/m   | EN61000-4-6:2014, Criteria A           |
| Voltage Dips and Interruptions  | Voltage Dips >95%                            | EN61000-4-11:2004, Criteria B          |
| Voltage Dips and Interruptions  | Voltage Dips 30%                             | EN61000-4-11:2004, Criteria B          |
| Limits of Harmonic Current Emissions  |  | EN61000-3-2:2014, Class C              |
| Limits of Voltage Fluctuations & Flicker  |  | EN61000-3-3:2013, Clause 5             |

**Specifications** (measured @ Ta= 25°C, 240VAC, rated load unless otherwise specified)

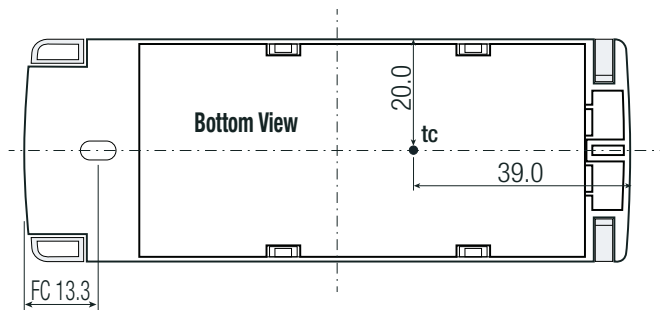
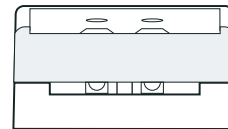
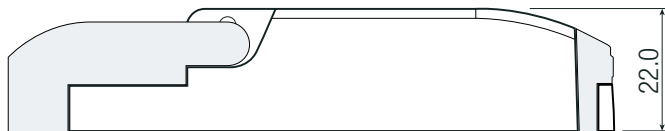
### DIMENSION and PHYSICAL CHARACTERISTICS

| Parameter                 | Type        | Value                              |
|---------------------------|-------------|------------------------------------|
| Material                  | case<br>PCB | plastic (UL94V-0)<br>FR4 (UL94V-0) |
| Package Dimension (LxWxH) |             | 109.0 x 40.0 x 22.0mm              |
| Package Weight            |             | 70g typ.                           |

#### Dimensions Drawing (mm)

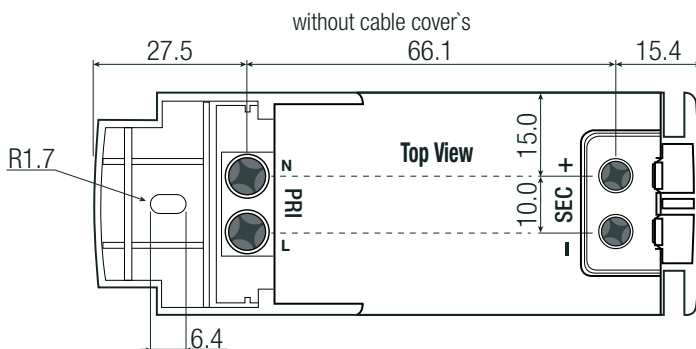


wire stripping length: 6-7mm  
 recommended tightening torque: 0.25Nm  
 tc= case temperature measuring point  
 FC= fixing centers  
 Tolerance: xx.x= ±1.0mm  
 xx.xx= ±0.5mm



#### Connection via Screw Terminal

| Function   | Solid Wire              | Stranded Wire <sup>(2)</sup> | AWG   |
|------------|-------------------------|------------------------------|-------|
| VAC in (N) | 0.75-2.5mm <sup>2</sup> | 0.75-2.5mm <sup>2</sup>      | 20-14 |
| VAC in (L) | 0.75-2.5mm <sup>2</sup> | 0.75-2.5mm <sup>2</sup>      | 20-14 |
| LED+       | 0.5-2.5mm <sup>2</sup>  | 0.5-2.5mm <sup>2</sup>       | 21-14 |
| LED-       | 0.5-2.5mm <sup>2</sup>  | 0.5-2.5mm <sup>2</sup>       | 21-14 |



#### Notes:

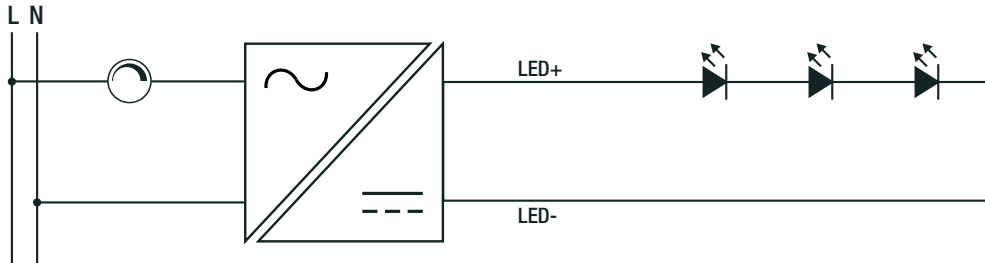
Note2: The use of sleeve or ferrule terminations is recommended

**Specifications** (measured @ Ta= 25°C, 240VAC, rated load unless otherwise specified)

**INSTALLATION and APPLICATION**

| Dimming Type | Value                                   |
|--------------|---|
| AC phase-cut | work with leading/trailing edge dimmers |

**Connection**



**PACKAGING INFORMATION**

| Parameter                   | Type           | Value                  |
|-----------------------------|----------------|------------------------|
| Packaging Dimension (LxWxH) | cardboard box  | 270.0 x 127.0 x 48.0mm |
| Packaging Quantity          |                | 10pcs                  |
| Storage Temperature Range   |                | -20°C to +70°C         |
| Storage Humidity            | non-condensing | 5-85% RH               |

The product information and specifications may be subject to changes even without prior written notice. The product has been designed for various applications; its suitability lies in the responsibility of each customer. The products are not authorized for use in safety-critical applications without RECOM's explicit written consent. A safety-critical application is an application where a failure may reasonably be expected to endanger or cause loss of life, inflict bodily harm or damage property. The applicant 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.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [LED Power Supplies](#) category:*

*Click to view products by [Recom Power](#) manufacturer:*

Other Similar products are found below :

[ESS015W-1000-12](#) [PDA-WIFI](#) [PIFC-K250F](#) [PITB-K222A](#) [ALD-514012PJ134](#) [LB240S24KH](#) [LMH020-SPLC-0000-0000001](#) [LMD600-0100-C1A7-7030000](#) [79534](#) [79535](#) [EUG-200S210DT](#) [ESS030W-1050-21](#) [ESS030W-0900-32](#) [BPOXL 4-12-035](#) [ESS010W-0350-24](#) [ESS010W-0200-42](#) [ESM060W-1400-42](#) [PDA080B-1A0G](#) [PDA150B-S1A5G](#) [SLM140W-1.05-130-ZA](#) [ESS015W-0700-18](#) [EUD-150S350DVA](#) [LWA320-C420-ARK-B](#) [HVG-240-48AB](#) [HVG-320-36AB](#) [HVG-320-54AB](#) [ELG-240-C1400AB](#) [EUK-150S105DV](#) [BXCS-12Z-N2P-B1-A](#) [BXPR-WN-01-A](#) [LN1224CV](#) [BXCS-12D-N2P-01-A](#) [BXCS-12W-N2P-01-A](#) [HBG-160-24AB](#) [980100001200394](#) [980060001200376](#) [LC 14W 250-350MA FLEXC R ADV2](#) [LC 24W 500-600MA FLEXC R ADV2](#) [LC 36W 850-900MA FLEXC R ADV2](#) [LC 50W 200-350ML 170V FLEXC LP SNC4](#) [LC 25W 200-350ML 70V FLEXC LP SNC4](#) [LC 35W 200-350ML 121V FLEXC LP SNC4](#) [LCBI 10W 350MA PHASE-CUT/1-10V LP](#) [LC 13W 300MA FIXC C SNC](#) [LC 10W 250MA FIXC SC SNC2](#) [LC 35W 800MA FIXC SR ADV2](#) [LC 38W 900MA FIXC SR ADV2](#) [LC 34W 800MA FIXC SC ADV2](#) [LC 44W 1050MA FIXC SC ADV2](#) [LC 38W 900MA 42V FIXC SRL ADV2](#)