

## Features

## LED Driver

- Low profile case (13mm height max.)
- 12V and 24V constant voltage outputs
- Terminal block input/output with cable clamps
- Fully protected (OLP, SCP, OCP, OTP)
- Low standby power, ErP conform
- Low cost

## Description

These low profile constant voltage LED drivers have been designed for cost-sensitive applications. The SELV outputs are suitable for both independently supplied or built-in power-supply LED luminaires. Their low profile design allows them to be invisibly built into furniture, discreetly mounted under shelves or integrated in space-restricted applications such as coving lighting, strip lighting or troffer lighting systems. The power supplies are short circuit and overload protected and come with a full 3-year warranty.

## Selection Guide

Part Number	Input Voltage Range [VAC]	Input Current [mA]	Output Voltage [VDC]	Output Current Range [mA]	Efficiency typ. [%]	Output Power max. [W]
RACV20-12-LP	198-264	210	12	0-1670	82	20W
RACV20-24-LP	198-264	210	24	0-830	84	20W

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.

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

### BASIC CHARACTERISTICS

Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range		198VAC	230VAC	264VAC
Inrush Current				8.0A
Start-up Time				50ms
Input Frequency Range		47Hz		63Hz
No Load Power Consumption				0.5W
Power Factor	full load, 230VAC			0.55
Internal Operating Frequency	full load	35kHz		140kHz
Output Ripple Voltage <sup>(1)</sup>	12Vout 24Vout			700mVp-p 500mVp-p

#### Notes:

Note1: Measured at 20MHz Bandwidth using 0.1µF & 47µF parallel capacitor

### REGULATIONS

Parameter	Condition	Value
Output Accuracy		±5% max.
Line Regulation		3% max.
Load Regulation		3% max.

**RECOM**  
AC/DC Converter

## RACV20-LP

**20 Watt  
Constant  
Voltage Single  
Output**



IEC/EN61347-1 certified  
IEC/EN61347-2-13 certified  
ENEC certified  
CB report  
EN55015 compliant

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

### PROTECTION

Parameter	Condition	Value
Input Fuse	external fuse is recommended	T1A
Open Circuit Protection (OCP)		auto recovery after fault condition is removed
Over Load Protection (OLP)		auto recovery after fault condition is removed
Over Voltage Protection (OVP)		auto recovery after fault condition is removed
Over Temperature Protection (OTP)	110°C Tcase	auto recovery after fault condition is removed
Isolation Voltage	I/P to O/P	3.75kVAC / 1 minute

### Maximum loading of automatic circuit breakers

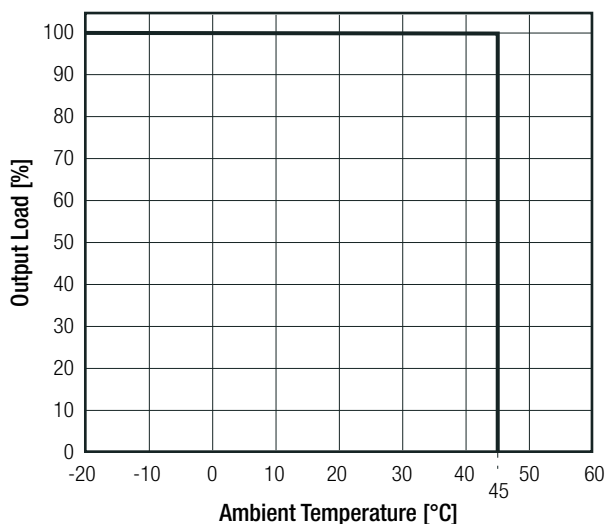
\* @ 230VAC, 10hm, 90° phase angle and max. load

Circuit Breaker	Circuit Breaker Current			
Typ	10A	16A	20A	25A
B	11	18	23	29
C	24	39	49	61

### ENVIRONMENTAL

Parameter	Condition	Value
Operating Temperature Range		-20°C to +45°C
Maximum Case Temperature		+85°C
Operating Altitude		2000m
Operating Humidity	non-condensing	5% to 85% RH
IP Rating		IP20
Pollution Degree		PD2
Design Lifetime		30 x 10 <sup>3</sup> hours

### Derating Graph



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

#### SAFETY AND CERTIFICATIONS

Certificate Type (Safety)	Report Number	Standard
Lamp controlgear Part 1: General and safety requirements (CB Scheme)	371338	IEC61347-1:2015+A1:2017, 3rd Edition
Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules (CB Scheme)		IEC61347-2-13:2014+A1:2016, 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	371338	EN61347-1:2008 + A2:2013
Lamp controlgear Part 2-13: Particular requirements for d.c. or a.c. supplied electronic controlgear for LED modules		EN61347-2-13:2014
DC or AC supplied electronic control gear for LED modules Performance requirements	371338	IEC62384:2006 1st Edition + A1:2009
DC or AC supplied electronic control gear for LED modules Performance requirements		EN62384:2006 + A1:2009
EAC	RU-AT.49.09571	TP TC 004/2011
RoHS 2		RoHS 2011/65/EU + AM2015/863

#### EMC Compliance

EMC Compliance	Condition	Standard / Criterion
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	371338	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	±8kV Air Discharge, ±4kV Contact Discharge	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	±0.5kV (DC Output) ±1kV (AC Input)	EN61000-4-4:2012, Criteria A
Surge Immunity	±0.5kV (AC Input)	EN61000-4-5:2014 + A1:2017, Criteria A
Immunity to conducted disturbances, induced by radio-frequency fields	AC Power Port 3V	EN61000-4-6:2014, Criteria A
Voltage Dips and Interruptions	Voltage Dips >95%	EN61000-4-11:2004 + A1:2017, Criteria B
Voltage Dips and Interruptions	Voltage Dips 30%	EN61000-4-11:2004 + A1:2017, Criteria B
Limits of Harmonic Current Emissions		EN61000-3-2:2014, Class C
Limits of Voltage Fluctuations & Flicker		EN61000-3-3:2013, Clause 5

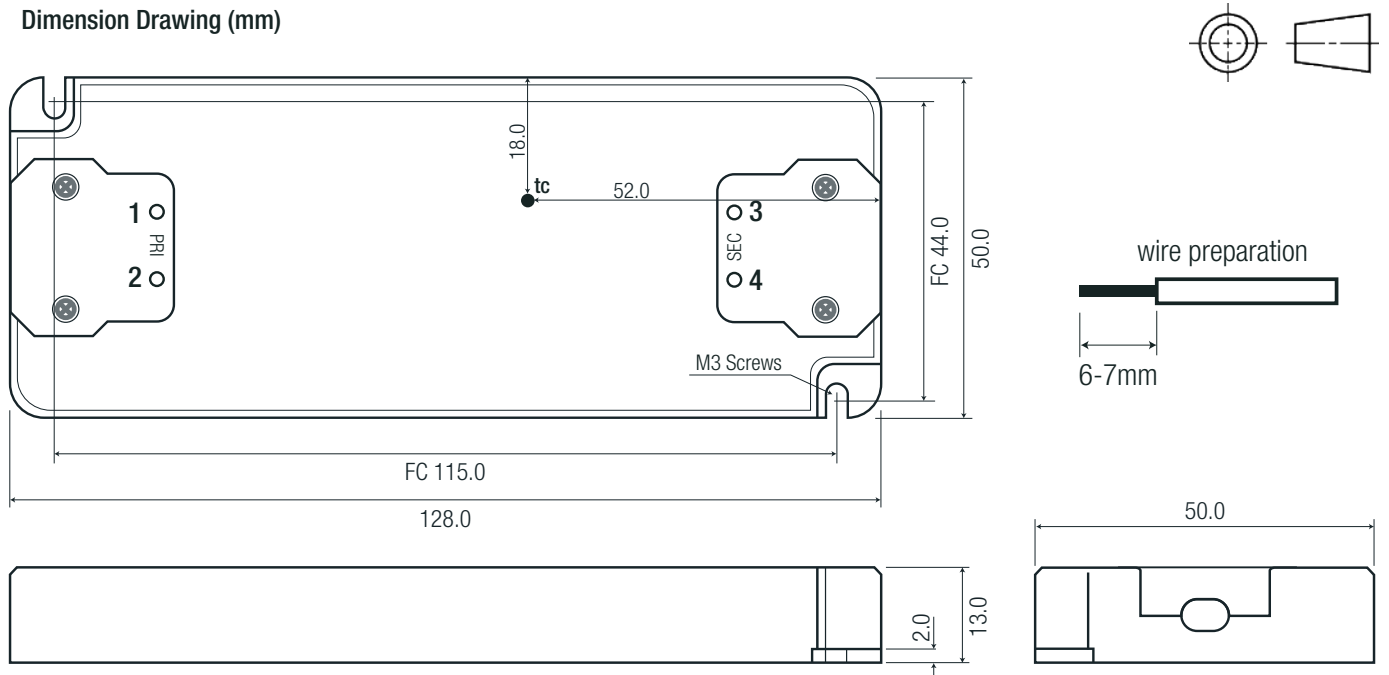
#### DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	case	plastic (UL94V-2)
Dimension (LxWxH)		128.0 x 50.0 x 13.0mm
Weight		75g

continued on next page

Specifications (measured @ Ta= 25°C, 240VAC and rated load)

Dimension Drawing (mm)



### Connection via Screw Terminal

#	Function	Solid Wire	Stranded Wire <sup>(2)</sup>	AWG
1	VAC in (N)	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	20-16
2	VAC in (L)	0.75-1.5mm <sup>2</sup>	0.75-1.5mm <sup>2</sup>	20-16
3	LED+	0.5-1.5mm <sup>2</sup>	0.5-1.5mm <sup>2</sup>	21-16
4	LED-	0.5-1.5mm <sup>2</sup>	0.5-1.5mm <sup>2</sup>	21-16

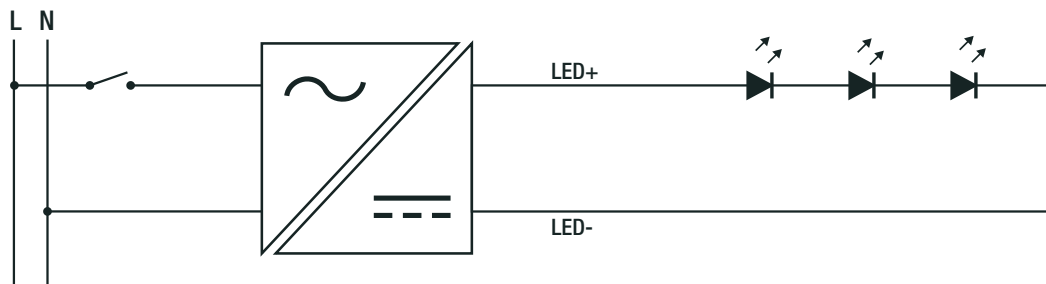
#### Notes:

Note2: The use of sleeve or ferrule terminations is recommended

wire stripping length: 6-7mm  
recommended tightening torque: 0.25Nm  
tc= case temperature measuring point  
FC= fixing centers  
Tolerance: xx.x= ±0.5mm  
xx.xx= ±0.35mm  
2 mounting screws are included

### INSTALLATION and APPLICATION

#### Connection



### PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	cardboard Box	265.0 x 139.0 x 62.0mm
Packaging Quantity		10pcs
Storage Temperature Range		-20°C to +70°C
Storage Humidity	non-condensing	5% - 85% RH

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