Features

LED Driver

- 4W AC-DC Class II LED Power Supply
- 12V and 24V Constant Voltage Output
- Fully Protected (OLP, SCP, OCP, OTP)
- low Standby Power, ErP conform
- IP65 (suitable for dry and damp locations)
- low cost
- CE, CB, ENEC, CSA and UL8750 certified.
- Wired connections for independent or built-in use

RECOM

AC/DC Converter

RACV04

4 Watt Constant Voltage Single Output

3 YEAR Warranty

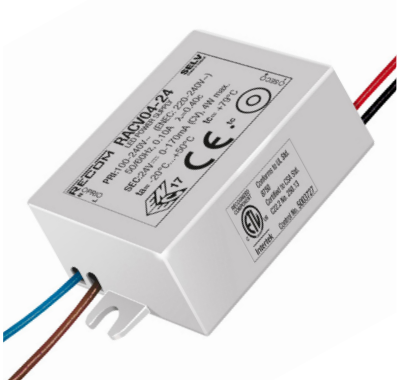
Description

These constant voltage LED drivers have been designed for cost-sensitive applications. The SELV outputs are suitable for 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	nom. Input Voltage [VAC]	Input Current [mA]	Output Voltage [VDC]	Output Current Range [mA]	Efficiency typ. [%]	Output Power max. [W]
RACV04-12	115/230	100	12	0-330	75	4
RACV04-24	115/230	100	24	0-170	75	4

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		90VAC	230VAC	264VAC
Inrush Current				11A
Start-up Time				500ms
Input Frequency Range		47Hz		63Hz
No Load Power Consumption				0.5W
Power Factor	full load, 230VAC			0.40
Internal Operating Frequency	full load		64kHz	
Output Ripple Voltage (1)	12VDC 24VDC			120mVp-p 240mVp-p

Notes:

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

REGULATIONS

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

PROTECTION

Parameter	Condition	Value
Input Fuse	external fuse is recommended	0.22Ω fusible resistor
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

continued on next page

RECOGNIZED COMPONENT

Intertek

UL8750 Certified
CSA C22.2 No. 250.13 Certified
IEC62384 Certified
EN55015 Compliant
CB Report

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

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
Isolation Resistance		100MΩ

Maximum loading of automatic circuit breakers

@ 115VAC, 10hm, 90° phase angle and max. load

Circuit Breaker	Circuit Breaker Current			
Typ	10A	16A	20A	25A
C	54	118	148	184

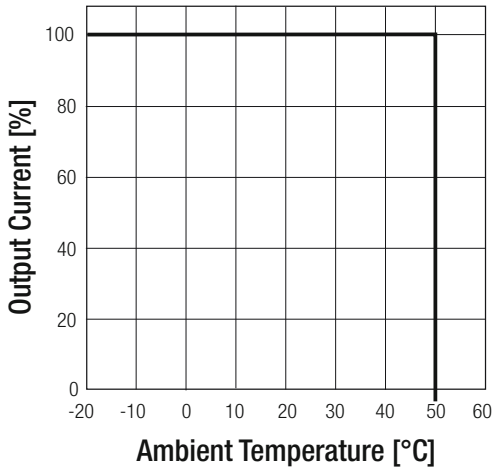
@ 230VAC, 10hm, 90° phase angle and max. load

Circuit Breaker	Circuit Breaker Current			
Typ	10A	16A	20A	25A
B	17	28	35	44
C	27	59	74	92

ENVIRONMENTAL

Parameter	Condition	Value
Operating Temperature Range		-20°C to +50°C, Ambient
Maximum Case Temperature		+79°C
Operating Altitude		2000m
Operating Humidity		5% to 85% RH, non condensing
IP Rating		IP65
Pollution Degree		PD2
Design Lifetime		30 x 10^3 hours

Derating Graph



SAFETY AND CERTIFICATIONS

Certificate Type	Report Number	Standard
ETL Standard for LED Equipment for use in Lighting Products	160428123GZU-001	UL8750, 2nd Edition, 2015
LED Equipment for Lighting Applications		CSA C22.2 No. 250.13, 2014
Lamp Controlgear General Requirments for Safety (CB Scheme)	307649 + 307650	IEC61347-1, 2nd Edition, 2012 EN61347-1, 2nd Edition, 2013
Lamp Controlgear Particular Requirements (CB Scheme)		IEC/EN61347-2-13, 2nd Edition, 2014
D.C. or A.C. Controlgears for LED Performance Requirements (ENEC)	307649-1 + 307650-1	IEC/EN62384, 1st Edition, 2009
RoHS 2.1	LCS1606201548R	RoHS-2011/65/EU + AM-2015/863

continued on next page

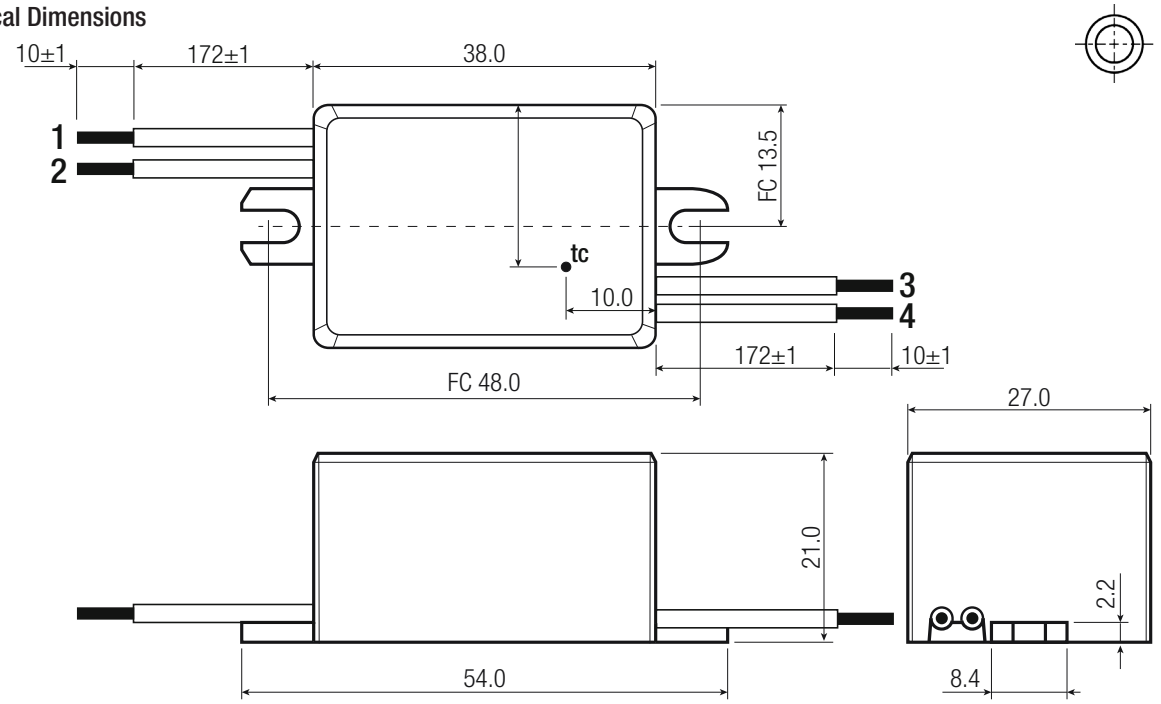
Specifications (measured @ ta= 25°C, 240VAC and rated load)

EMI Compliance		Standard / Criterion
Equipment for general Lighting Purpose EMC Immunity Requirements	307650	EN61547, 2009
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment		EN55015
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 B
Radiated, radio-frequency, electromagnetic field immunity test	3V/m	EN61000-4-3, 2010, Criteria A
Fast Transient and Burst Immunity	±0.5kV (DC Output) ±1kV (AC Input)	EN61000-4-4, 2012, Criteria B
Surge Immunity	±0.5kV (AC Input)	EN61000-4-5, 2014, Criteria C
Immunity to conducted disturbances, induced by radio-frequency fields	3V	EN61000-4-6, 2014, Criteria A
Voltage Dips and Interuptions	100% reduction, 10ms 30% reduction, 200ms	EN61000-4-11, 2014, Criteria B EN61000-4-11, 2014, Criteria C
Limits of Harmonic Current Emissions		EN61000-3-2, Class C, 2014
Voltage Fluctuations and Flicker in Public Low-Voltage Systems <=16A per phase		EN61000-3-3, 2013

DIMENSION and PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material	Case Potting	Plastic (UL94 V-2) Silicone (UL94 V-0)
Package Dimension (LxWxH)		38.0 x 27.0 x 21.0mm
Package Weight		40g

Mechanical Dimensions



Wired Connection

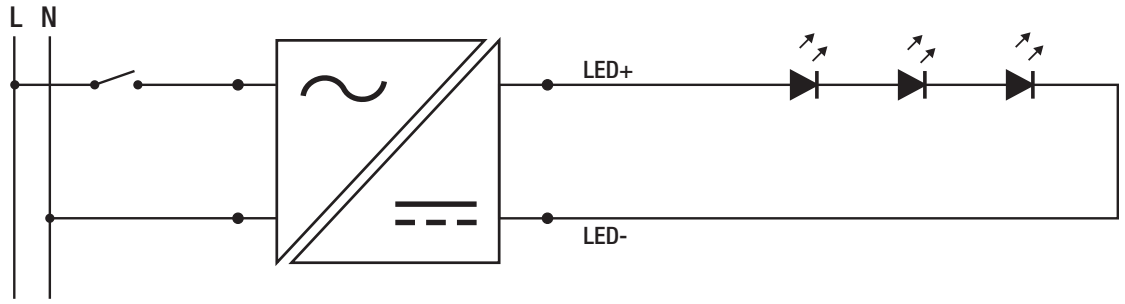
#	Function	Wire Color	Type	Strands
1	VAC in (N)	blue	UL-1007, AWG18	41/0.16
2	VAC in (L)	brown	UL-1007, AWG18	41/0.16
3	LED+	red	UL-1007, AWG18	41/0.16
4	LED-	black	UL-1007, AWG18	41/0.16

tc= case temperature measuring point
FC= fixing centers
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.35mm

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

INSTALLATION and APPLICATION

Connection



PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	Cardboard Box	290.0 x 86.0 x 76.0mm
Packaging Quantity		10pcs
Storage Temperature Range		-20°C to +70°C
Storage Humidity		5% - 85% RH