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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



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	Input Voltage Range [VAC]	Input Current [mA]	Output Voltage [VDC]	Output Current Range [mA]	Efficiency typ. [%]	Output Power max. [W]
RACV04-12	90-264	100	12	0-330	75	4
RACV04-24	90-264	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.

Model Numbering

RACV04-

nom. Output Power — Output Current

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.

UL8750 Certified
CSA C22.2 No. 250.13 Certified
IEC/EN61347-1 Certified
IEC/EN61347-2-13 Certified
IEC62384 Certified
EN55015 Compliant
ENEC
CB Report

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RACV04 Series

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

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
Over Temperature Protection (OTP)	110°C Tcase	auto recovery after fault condition is removed
Isolation Voltage (2)	I/P to O/P	3.75kVAC / 1 minute
Isolation Resistance		100MΩ

Notes:

Note2: For repeat Hi-Pot testing, reduce the time and/or the test voltage

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

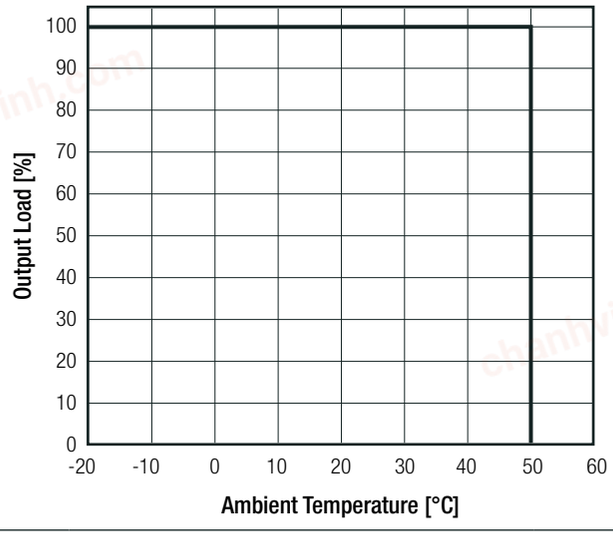
@ 230VAC, 10hm, 90° phase angle and max. load

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
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 10³ hours

Derating Graph



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RACV04 Series

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

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, 2014-07-01
Lamp Controlgear: General Requirments for Safety (LVD)	366911	EN61347-1:2015
Lamp Controlgear: Particular Requirements for d.c. or a.c. (LVD)		EN61347-2-13:2014 +A1 2017
Lamp Controlgear: General Requirments for Safety (CB Scheme)		IEC61347-1:2015, 3rd Edition + A1:2017
Lamp Controlgear: Particular Requirements for d.c. or a.c. (CB Scheme)		IEC61347-2-13:2014 2nd Edition +A1:2016
Lamp Controlgear: General Requirments for Safety		AS/NZS61347.1:2016
Lamp Controlgear: Particular Requirements for d.c. or a.c.		AS/NZS61347.2.13:2013
Lamp Controlgear General Requirments for Safety (ENEC)	366911-1	IEC61347-1:2015
Lamp Controlgear Particular Requirements for d.c. or a.c. (ENEC)		EN61347-2-13:2014 + A1:2017
D.C. or A.C. Controlgears for LED Performance Requirements (ENEC)		EN62384:2006 + A1:2009
D.C. or A.C. Controlgears for LED Performance Requirements		IEC62384:2006, 1st Edition +A1:2009
EAC	RU-AT.49.09571	TP TC 004/2011
RoHS2	LCS1606201548R	RoHS-2011/65/EU + AM-2015/863

EMI Compliance		Standard / Criterion
Equipment for general Lighting Purpose EMC Immunity Requirements	366910	EN61547: 2009
Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment		EN55015:2013 + A1:2015
Assessment of lighting equipment related to human exposure to electromagnetic fields		EN62493: 2015
ESD Electrostatic discharge immunity test	Air: ±8, 4, 2kV Contact: ±4, 2kV	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 Port: ±1kV DC Port: ±0.5kV	EN61000-4-4: 2012, Criteria A
Surge Immunity	AC Port: ±0.5kV	EN61000-4-5: 2014, Criteria A
Immunity to conducted disturbances, induced by radio-frequency fields	3V	EN61000-4-6: 2014, Criteria A
Voltage Dips and Interuptions	>95% reduction, 10ms 30% reduction, 200ms	EN61000-4-11, 2004, Criteria B EN61000-4-11, 2004, Criteria B
Voltage Fluctuations and Flicker in Public Low-Voltage Systems <=16A per phase		EN61000-3-3: 2013 Clause 5

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

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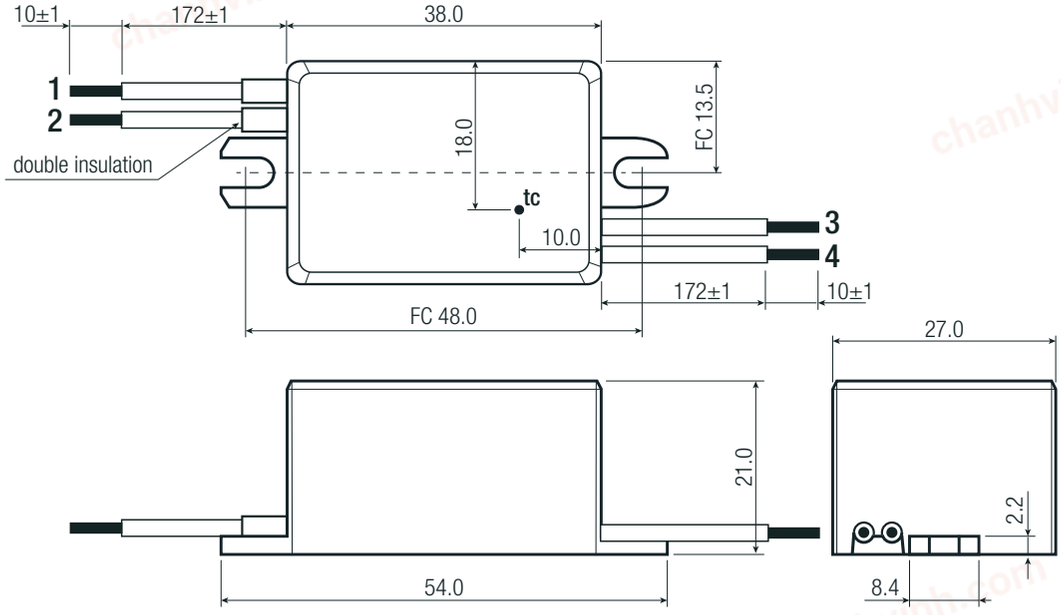
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Specifications (measured @ Ta= 25°C, 240VAC and rated Iout)

Mechanical Dimensions



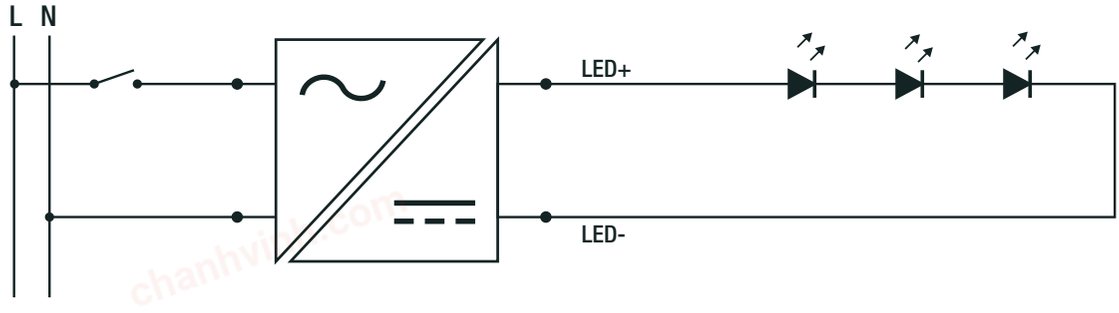
Wire/cable information

#	Function	Wire color	Type	AWG
1	VAC in (N)	blue	UL-1007	18
2	VAC in (N)	brown	UL-1007	18
3	LED+	red	UL-1007	18
4	LED-	black	UL-1007	18

tc= case temperature measuring point
FX= fixing centers
Tolerance: xx.x= ±0.5mm
xx.xx= ±0.25mm

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

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.