

Features

LED Driver

- Low Cost 230VAC LED Power Supply
- 350mA to 1050mA Output, 25-44VDC
- Active Power Factor Correction >0.95
- Designed to drive 15W-46W COB LEDs
- Terminal Block Input/Output with Cable Clamps
- Fully Protected (OLP, SCP, OCP, OTP)
- Suitable for Class I and Class II Luminaires

Description

These COB LED drivers are available with eleven preset output currents between 350mA and 1050mA. They are designed to drive COB (Chip On Board) high power LEDs with a forward voltage between 25V and 44VDC from a 230VAC supply (198-264VAC). They operate with efficiencies of up to 90%, feature active PFC and are fully protected against short circuit, output overvoltage, open-circuit and over-temperature conditions. The LED drivers are suitable for both independent and built-in installations and for installations inside furniture.

Selection Guide

Part Number	Input Voltage Range [VAC]	Output Voltage Range [VDC]	Output Current [mA]	Efficiency typ. [%]	Rated Power [W]
RCOB-350	198-264	25-44	350	87	15
RCOB-400	198-264	25-44	400	87	17
RCOB-450	198-264	25-44	450	88	20
RCOB-500	198-264	25-44	500	88	22
RCOB-550	198-264	25-44	550	88	24
RCOB-600	198-264	25-44	600	89	26
RCOB-650	198-264	25-44	650	89	28
RCOB-700	198-264	25-44	700	89	31
RCOB-800	198-264	25-44	800	90	35
RCOB-900	198-264	25-44	900	90	40
RCOB-1050	198-264	25-44	1050	90	46

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, 230VAC and rated load)

BASIC CHARACTERISTICS				
Parameter	Condition	Min.	Typ.	Max.
Input Voltage Range		198VAC		264VAC
Output Voltage Range	full load	25VDC		44VDC
absolute max. Output Voltage	full load			56VDC
Inrush Current	at 230VAC		8A / 10µs	
Start-up Time	at 230VAC			1 second
Input Frequency Range		47Hz		63Hz
Power Factor	full load, 230VAC		0.95	

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RECOM
AC/DC Converter

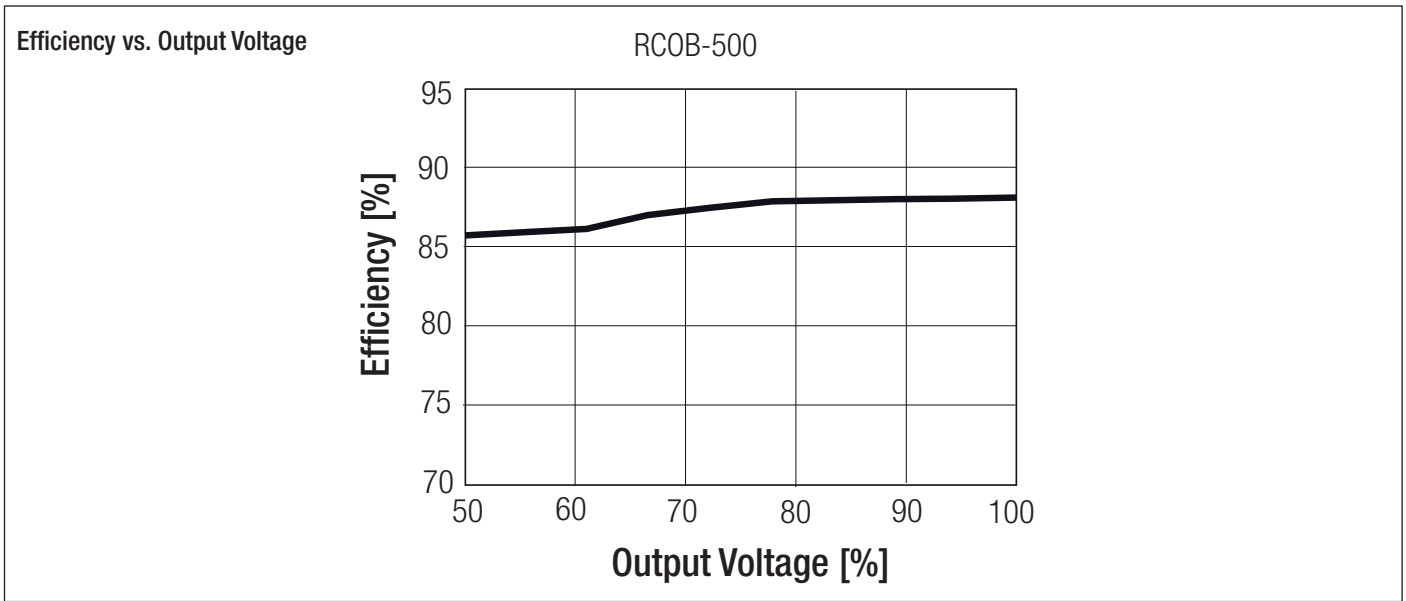
RCOB

Constant Current
Active PFC
Single Output



EN-61347-1 Compliant
EN-61347-2-13 Compliant
EN-55015 Compliant
EN-61547 Compliant
EN-61000-3-2 Compliant
EN-61000-3-3 Compliant

Specifications (measured @ $t_a = 25^\circ\text{C}$, 230VAC and rated load)



REGULATIONS

Parameter	Condition	Value
Output Current Accuracy	includes: line, load and tolerance	$\pm 8\%$ typ.

PROTECTION

Parameter	Condition	Value
Input Fuse	Standard	T1A
Short Circuit Protection (SCP)	230VAC / 50Hz	constant current limit at $I_{nominal}$ and recovers after fault condition is removed
Over Load Protection (OLP)	230VAC / 50Hz	power limiting if forward voltage of LED's is higher than 44VDC
Output Over Voltage Protection (OVP)	230VAC / 50Hz	56V max.
Output Over Current Protection (OCP)	230VAC / 50Hz	constant current source
Over Temperature Protection (OTP)		automatic recovery after cool down
Isolation Voltage		3kVAC / 1 minute
Surge Capacity	L-N	2kV
	L,N-FG	4kV

Maximum loading of automatic circuit breakers*

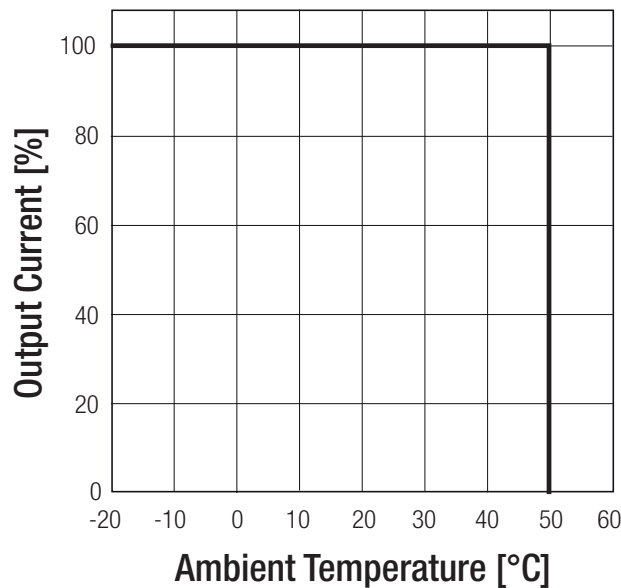
* @ 230VAC, 10hm, 90° phase angle and max. load

Power	Circuit Breaker Typ	Circuit Breaker Current			
		10A	16A	20A	25A
$\geq 7\text{W}$	B	61	100	121	150
	C	121	164	221	291
$\geq 15\text{W}$	B	35	57	69	85
	C	57	87	109	134
$\geq 25\text{W}$	B	24	38	46	58
	C	38	62	74	92
$\geq 35\text{W}$	B	18	30	35	43
	C	29	46	55	69
$\geq 45\text{W}$	B	17	28	33	41
	C	24	39	47	57

Specifications (measured @ ta= 25°C, 230VAC and rated load)

ENVIRONMENTAL		
Parameter	Condition	Value
Operating Temperature Range max. Case Temperature Range	all Types	-20°C to +50°C, Ambient
	RCOB-350 to -500	80°C max.
	RCOB-550 to -700	85°C max.
	RCOB-800 to -1050	90°C max.
Operating Humidity	RCOB-800 to -1050	45% to 85% RH
	RCOB-350 to -700	5% to 85% RH, non condensing
MTBF	at Tc= 80°C	50 x 10 ³ hours

Derating Graph



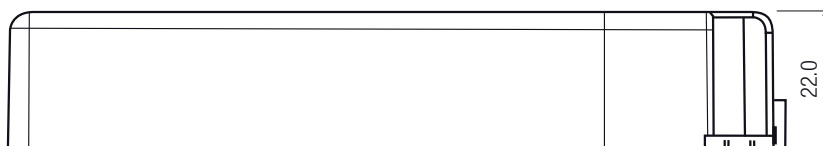
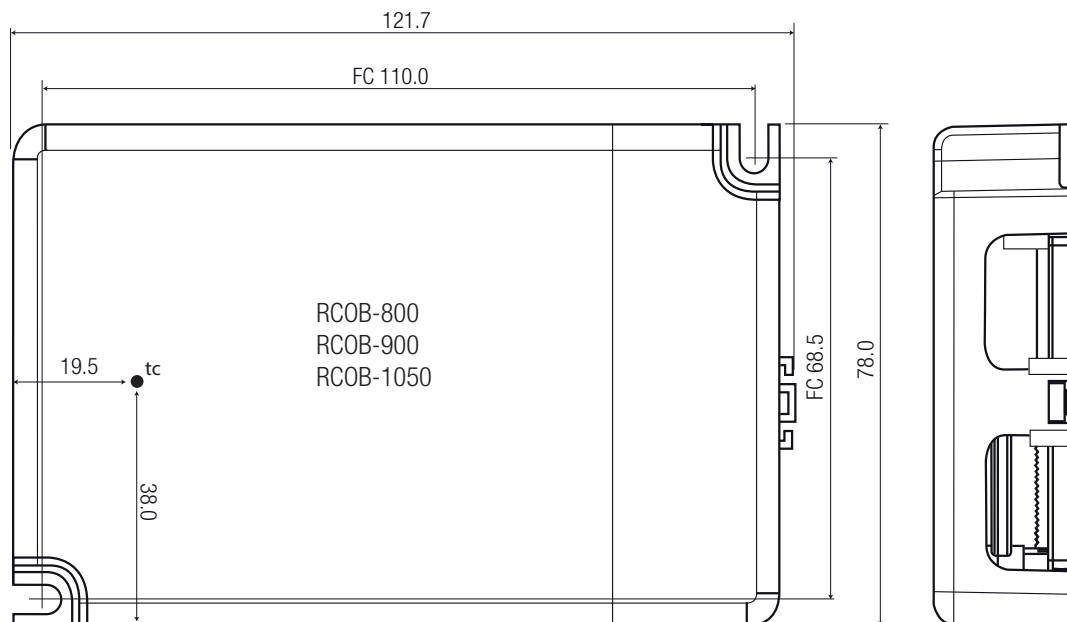
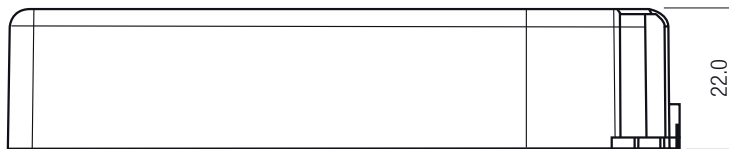
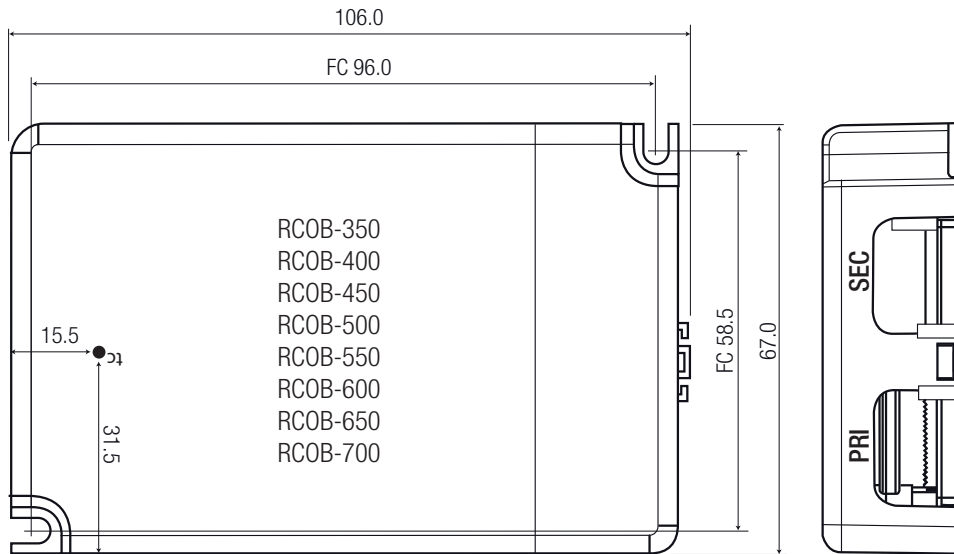
SAFETY AND CERTIFICATIONS		
Certificate Type		Standard
CE General Safety	Compliant	EN-61347-1
CE Safety of AC supplied Control Gear for LED Modules	Compliant	EN-61347-2-13
RoHS	Compliant	RoHS 6/6
Certificate Type (Environmental)		Standard / Criterion
Electric Lighting, EMC Immunity	Compliant	EN-61547
Electric Lighting, EMC Emissions	Compliant	EN55015, Class B
Limits for Harmonic Emissions	Compliant	EN-61000-3-2
EMC Compatibility: Flicker and Voltage Variations	Compliant	EN-61000-3-3
IP Rating		IP20

DIMENSION and PHYSICAL CHARACTERISTICS		
Parameter	Type	Value
Case Material		Integrated cable clamps, Plastic
Package Dimension (LxWxH)	RCOB-350 to 700	106 x 67 x 22mm
	RCOB-800 to -1050	121.7 x 78 x 22mm
Package Weight	RCOB-350 to 700	108g
	RCOB-800 to -1050	165g

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Specifications (measured @ ta= 25°C, 230VAC and rated load)

Dimensions Drawing (mm)



2 Mounting screws are included

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Specifications (measured @ $t_a = 25^\circ\text{C}$, 230VAC and rated load)

Wiring Diagram

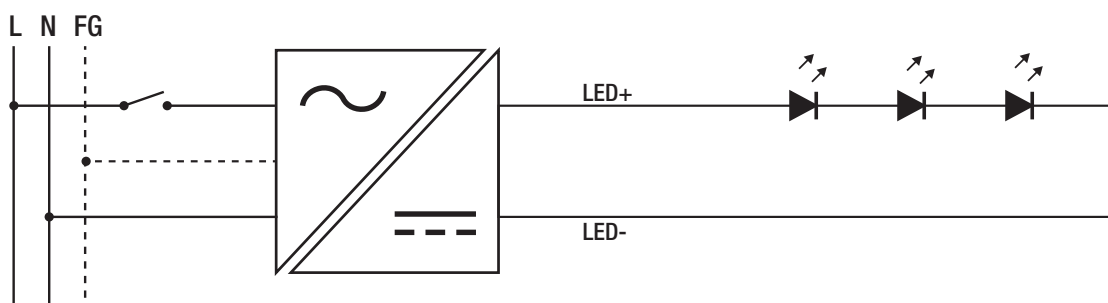
Screw Terminal Connection

Function	Type	Diameter
AC N	Screw Terminal	0.75mm ² - 1.5mm ²
AC L	Screw Terminal	0.75mm ² - 1.5mm ²
FG	Screw Terminal	0.75mm ² - 1.5mm ²
LED+	Screw Terminal	0.75mm ² - 1.5mm ²
LED-	Screw Terminal	0.75mm ² - 1.5mm ²

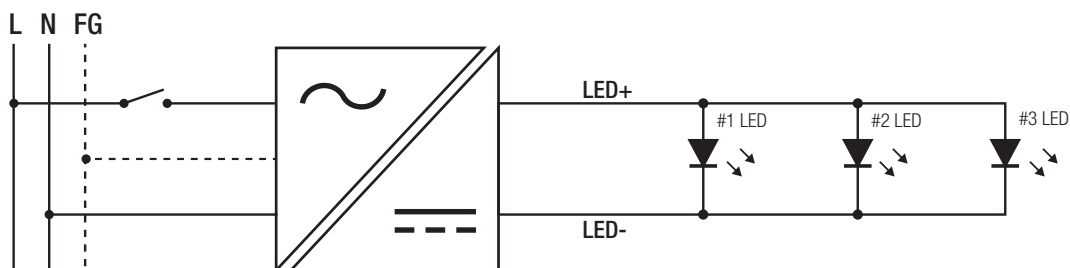
FC: fixing center
 tc: case temperature measuring point
 Tolerance: xx.x= ±0.5mm
 xx.xx=±0.35mm

INSTALLATION and APPLICATION INSTRUCTION

Standard Connection



Three LED's in parallel ^(1,2)



Notes:

- Note1: System was tested with 3 Osram Duros S10.
 Note2: LED's has to be placed on the same heatsink.

PACKAGING INFORMATION

Parameter	Type	Value
Packaging Dimension (LxWxH)	Cardboard Box	180 x 140 x 220mm
Packaging Quantity		10pcs
Storage Temperature Range		-30° to +80°C, Ambient
Storage Humidity		30% - 95% RH

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