

1x110 W **Constant Current** LED driver

- Maximum 110 W load
- Very high efficiency up to 95%
- Low current ripple, complying with IEEE 1789 recommendation
- Driver protection Class II
- Suitable for Class I and Class II luminaires
- Suitable for independent use
- Suitable for outdoor use (IP67 enclosure)

110 W 220-240 VAC 50-60 Hz



Functional Description

- Built-in overvoltage protection, open circuit protection and short circuit protection

Mains Characteristics

Voltage range	198 - 264 VAC
DC range	176-280 VDC,
starting voltage	> 190 VDC
Mains current at full load	Max. 0.6 A
Frequency	0 / 50 - 60 Hz
THD at full power	< 10 %
Leakage current to earth	< 0.3 mA
Tested surge protection	1 kV L-N, 2 kV L-GND (IEC 61000-4-5)
Tested fast transient protection	2 kV (IEC 61000-4-4)
Typical peak inrush current	41 A*

* See the MCB chart on page 2 for more details

Insulation between circuits & driver case

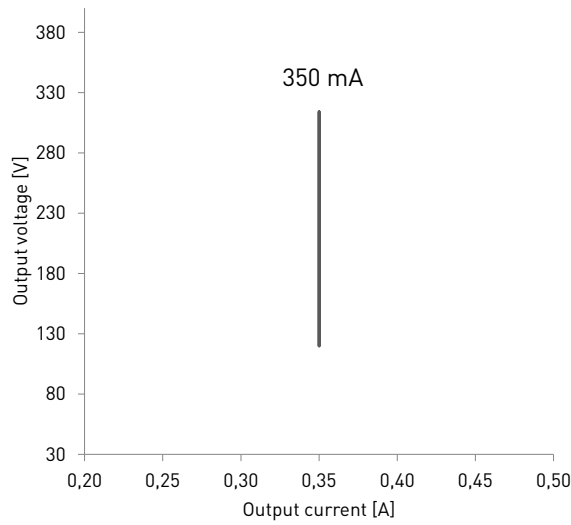
Mains circuit - Output	Non-isolated
Mains and output - Driver case	Double / reinforced insulation

Load Output

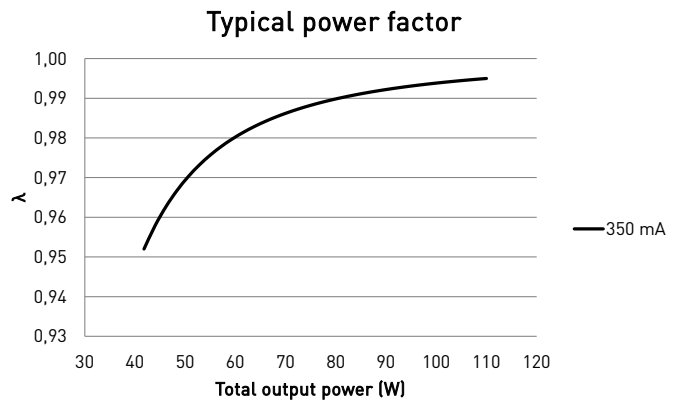
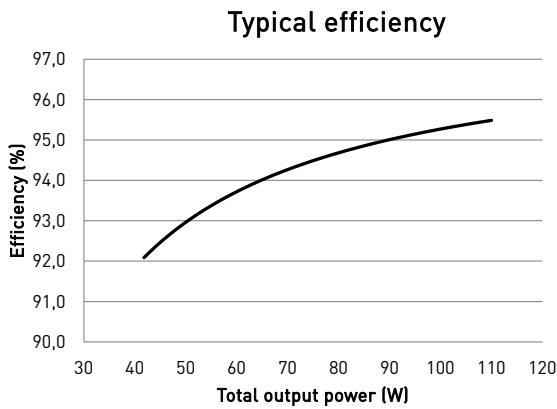
Output current (I_{out})	350 mA
Accuracy	$\pm 5 \%$
Ripple	< 2 %* at ≤ 120 Hz
	*] Low frequency, LED load: Cree XM-L LEDs
PstLM	< 0.03*
SVM	< 0.01*
	*] At full power, measured with Cree XP-G LED modules.
U_{out} (max) (abnormal)	400 V

I_{out}	350 mA
P_{out} (max)	110 W
U_{out}	120 V – 314 V
PF (λ) at full load	0.98
Efficiency (η) at full load	95 %

Operating window



Driver performance



Operating Conditions and Characteristics

- Max. temperature at tc point: 80°C
- Ambient temperature range: -40...+60 °C
- Storage temperature range: -40...+80 °C
- Maximum relative humidity: No condensation
- Life time: 50 000 h at tc max (90 % survival rate)

Quantity of drivers per miniature circuit breaker 16 A Type C

Based on I_{cont}	Based on inrush current I_{peak}	Typ. peak inrush current I_{peak}	1/2 value time, Δt	Calculated energy, $I_{peak}^2 \Delta t$
22 pcs.	24 pcs.	41 A	236 μs	0.301 A ² s

Connections and Mechanical Data

Connection wires	mains wires:	1.00 mm ² , soldered strips
	load wires:	1.00 mm ² , soldered strips
Wire insulation		According to EN 60598
Maximum driver to LED wire length		5m
Connection wire length		0.35 m
Weight		464 g
IP rating		IP67

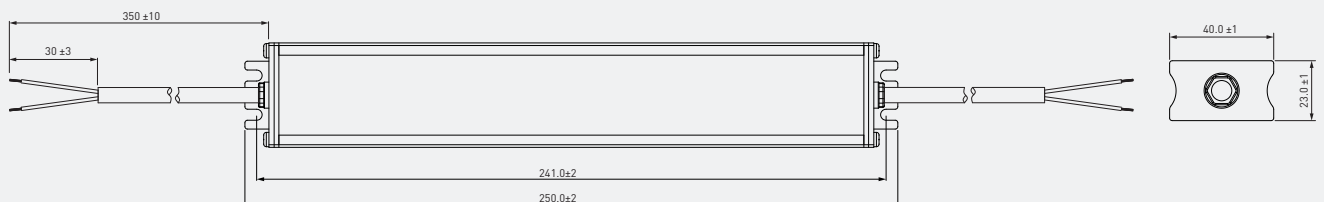
Terminal ratings	Supply	Output
Nr of terminals	2	2
Rated voltage	250 V	400 V
Connecting capacity	1 A	1 A
Preparation of conductors	Factory prepared (6.5 mm)	Factory prepared (6.5 mm)
Fixing	Connection inside IP67 rated junction box	Connection inside IP67 rated junction box

Connections



Note: Not suitable for load side switching operation

Dimensions



OL1x110-E-CC-350 LED driver is suited for inbuilt and independent luminaire usage. In order to have safe and reliable LED driver operation, the LED luminaires will need to comply with the relevant standards and regulations (e.g. IEC/EN 60598-1). The LED luminaire shall be designed to adequately protect the LED driver from dust, moisture and pollution. The luminaire manufacturer is responsible for the correct choice and installation of the LED drivers according to the application and product datasheets. Operating conditions of the LED drivers may never exceed the specifications as per the product datasheet.

Installation & operation

Maximum ambient and t_c temperature:

- For built-in applications inside luminaires, the t_a ambient temperature range is a guideline given for the optimum operating environment. However, integrator must always ensure proper thermal management (i.e. mounting base of the driver, air flow etc.) so that the t_c point temperature does not exceed the t_c maximum limit in any circumstance.
- Reliable operation and lifetime is only guaranteed if the maximum t_c point temperature is not exceeded under the conditions of use.

Installation site:

- The general preferred installation position of LED drivers for independent use is to have the top cover facing upwards.

Lamp failure functionality

No load

When open load is detected, driver limits output voltage according to $U_{out} (max)$ (abnormal).

Short circuit

Driver can withstand output short circuit.

Conformity & standards

General and safety requirements	EN 61347-1: 2008+ A1:2011+A2:2013
Particular safety requirements for DC or AC supplied electronic control gear for LED modules	EN 61347-2-13: 2014
Thermal protection class	EN61347, C5e
Mains current harmonics	EN 61000-3-2
Limits for Voltage Fluctuations and Flicker	EN 61000-3-3
Radio frequency interference	EN 55015: 2013
Immunity standard	EN 61547: 2009
Performance requirements	EN 62384: 2006+ A1:2009
Compliant with relevant EU directives	
RoHS / REACH compliant	
CE / UKCA marked	

Label symbols



Double insulated control gear suitable for independent use.



Symbol for independent control gear.



Thermally controlled control gear, incorporating means of protection against overheating to prevent the case temperature under any conditions of use from exceeding 120 °C.