

Light is OSRAM

OSRAM

ELEMENT 180/220-240/12 G2

12V Constant Voltage LED driver

A smart choice for the decorative lighting, well tested by OSRAM quality standard, fits 12V Flex & Signage applications in retails, hotels, restaurants, etc.

Benefits

Well design for Flex and Signage
High efficiency up to 91%
High Power Factor
Class II design for wide application
Excellent price/quality/watt ratio
Suitable for Class I/II luminaires

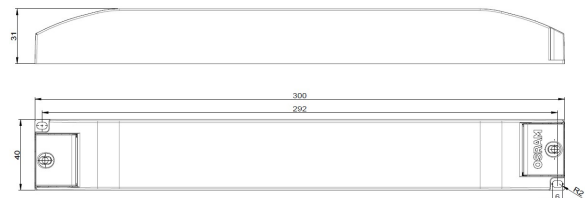
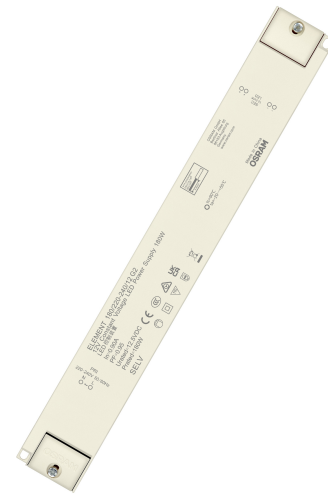
Applications

Hospitality – decorative lighting, night light
Restaurants – decorative lighting
Shops – decorative lighting, shelf lighting
Residential – cove lighting, under cabinet lighting

Approval marks



In preparation, if not already printed on product label



300 x 40 x 31 mm
Housing material: Plastic

Product Features

- 12 V constant output voltage
- Output power up to 180W
- Wide t_a range -20 ... +50 °C
- Mains voltage: 220 – 240 V_{AC}
- High efficiency up to 91%
- PF>0.95
- Screw terminals
- Integrated cable clamp
- Overload protection
- Over temperature protection
- Short circuit protection
- t_c max = 90 °C
- 30'000 h lifetime at t_c of 90°C
- 3 years guarantee
- Suitable for Class I / II luminaires
- Matching with OSRAM dimmers

Electrical specifications

	Item	Value	Unit	Remarks
Input	Nominal voltage	220 – 240	V	
	Nominal frequency	50 / 60	Hz	
	AC voltage range	198 – 264	V	
	DC voltage range	n/a		
	Maximum voltage	280	Vac	2 h maximum, unit might not operate in this abnormal Condition
	Nominal current	0.9	A	At 230 Vac
	Total Harmonic Distortion (THD)	<15	%	Full load, 230 Vac, 50 Hz / 60 Hz see graphs
	Power factor	0.95		Typical, Full load, 230 Vac, 50 Hz / 60 Hz, see graphs
	Efficiency	91	%	Typical, Full load, 230Vac, 50Hz, see graphs
	Power losses	17.8	W	Full load, 230 Vac, 50Hz / 60Hz
	No-load power	n/a		
	Protection class	II		Suitable for safety class I and II luminaires
	Touch current	<0.7	mA pk	Through Equi PIN, LED Output floating, acc. to EN 60598-1 Annex G and EN 61347-1 Annex A
	Inrush current	70A	A pk	Max, t = 240 µs
	Max. units per circuit breaker	B10: 3, B16: 6, B25: 9 C10: 5, C16: 8, C25: 13		
Output	Nominal output voltage	12.5	V	
	Voltage accuracy	+2.5/- 3	%	
	Voltage ripple	< 3	%	Ripple / average @ 100 Hz; Full load
	Nominal output power	180	W	
	Maximum power	180	W	LED output
	Capacitive load	20	uF/A	
	Galvanic isolation	SELV		
	Dimmable	No		
	U-OUT	25	V	
ENVIRONMENTAL	Ambient temperature range	-20 - +50	°C	
	Max. temperature at tc test point operation	90	°C	Measured on tc point indicated of the prod label, ta not exceeded
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-40 - +85	°C	
	Permitted rel. humidity during	5 – 85	%	Not condensing
	Surge capability (L/N)	1	kV	L/N acc to. EN 61547
	Environmental rating	Indoor		
	IP protection class	IP 20		
	Mains switching cycles	> 50'000		
	Expected lifetime	30'000 50'000	h	At tc max with 10% failure rate At tc-10°C with 10% failure rate
	No-load proof	Yes		
	Overheating protection	Yes		Automatically restart
	Overload protection	Yes		Automatically restart
	Short-circuit protection	Yes		Automatically restart
	Dimension	300x40x31	mm	L x W x H
	Weight	500	g	
	Casing material	Plastic		

Wiring diagram



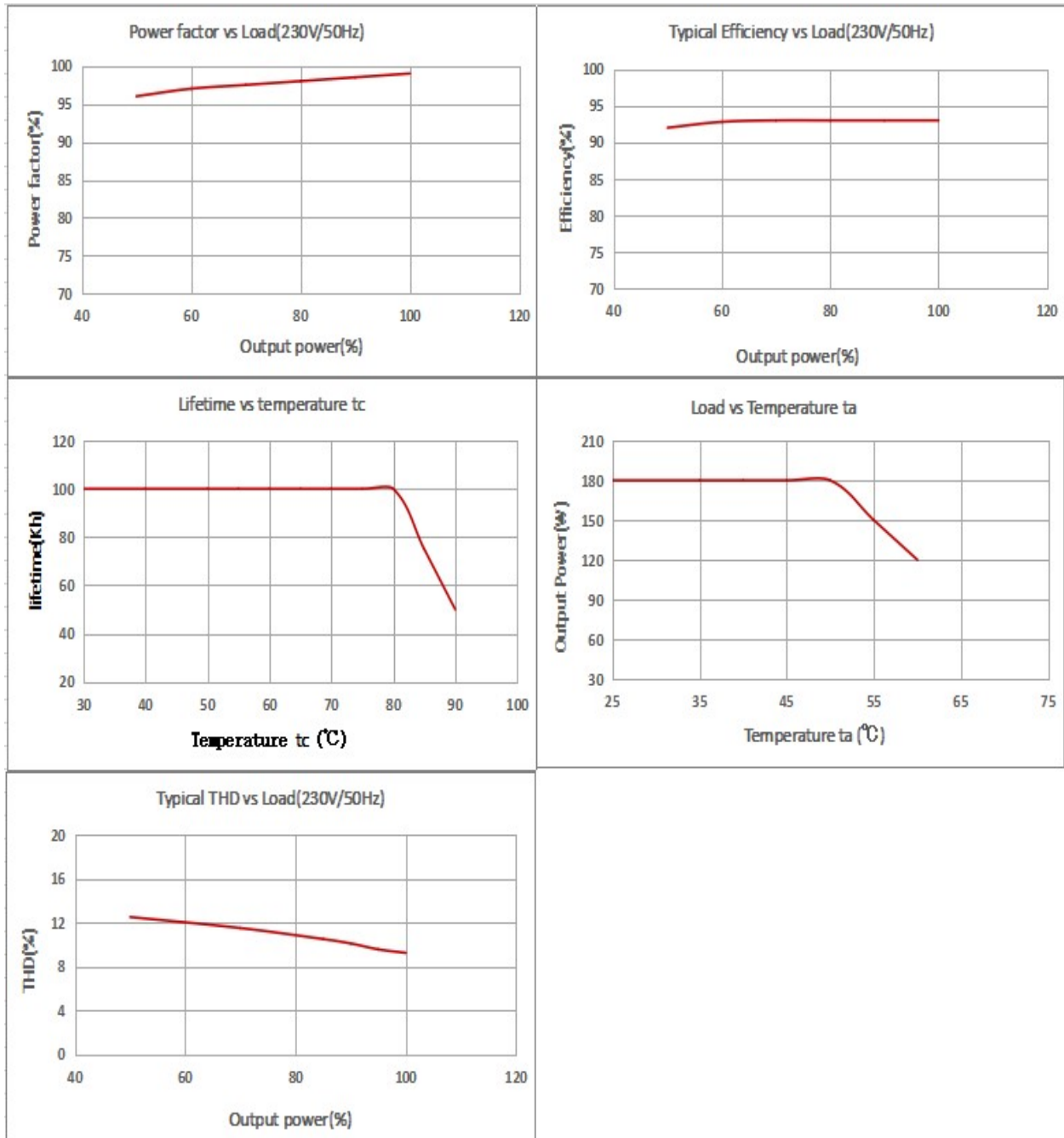
Cable and wire preparation

- Input wires cross section: 0.75 - 1,5 mm²
- Output wires cross section: 1.5 mm²
- Wire peeling length: input 5 mm; output 5 mm
- Load wires length: 3 m verified
- Screws are locked with 0.7nm torque
- Cable recommendation: H05VVH2-F 2*0.75mm²; H05VVH2-F 2*1.0mm²; H03VVH2-F 2x0.75mm²; H03VVH2-F 2x1.5mm²

Led wire length

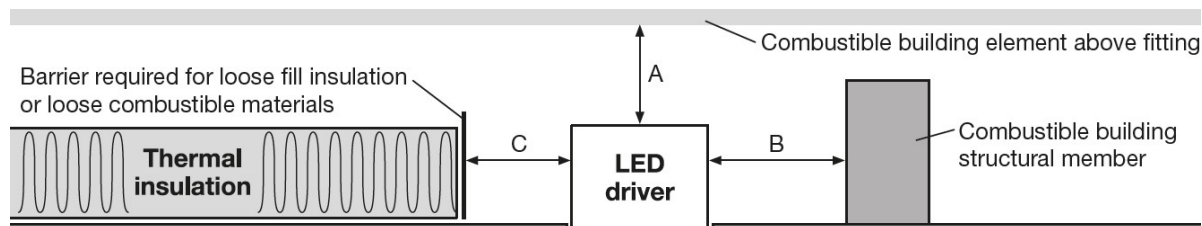
EMI pass verified with wire length below 3 m, within 50%-100% loading test condition. It is recommended to check the compliance of total system in design-in phase.

Electrical characteristics



Remarks

- The driver withstands an input voltage of up to 280 Vac for maximum 2 hours. Shut down of output load might occur in case the supply voltage exceeds the declared input voltage range.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded.
- The driver switches off the output in case the load voltage still above the maximum allowed voltage.
- The driver is protected against temporary overheating by automatically reduces the output current, the protection is reversible.
- **Recommendations on how to dispose of it at the end of its life in line with Directive 2012/19/EU:** separate control gear must be disposed of, in accordance with WEEE, at certified waste disposal companies. For this purpose, recycling centers and take-back systems (CRSO) collection points are available in the trade or at private disposal companies that accept separate control gears free of charge. In this way, raw materials are conserved, and materials are recycled.
- **Ecodesign regulation information:** Intended for use with LED modules. The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable. Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centers and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved, and materials are recycled.
- No-load conditions: hot plug-in or secondary switching of LEDs is not permitted. Please take care to switch the driver off via L.
- The independent type (with Cable clamp) of Element 12V G2 classified as "NON-IC": The control gear cannot be abutted against or covered by normally flammable materials or used in installations where building insulation or debris is, or may be, present in normal use. No use for residential installations. The minimum clearance distance from the top and sides of the independent LED driver to normally flammable building elements is A=B=C=10mm



Ordering information

Product name	EAN 10	EAN 40	Pieces / box
ELEMENT 180/220-240/12 G2	4062172277907	4062172277914	20

Standards

Safety:
 EN/IEC 61347-1,
 EN/IEC 61347-2-13
 Performance:
 EN/IEC 62384
 Harmonic content:
 EN/IEC 61000-3-2
 Radio interference: CISPR 15
 Immunity:
 EN/IEC 61000-3-3
 EN/IEC 61547

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