

## ELEMENT 60/220-240/24 G2

### 24V Constant Voltage LED driver

A smart choice for the decorative lighting, tested by Inventronics quality standard, fits 24V Flex & Signage applications in retails, hotels, restaurants, etc.

#### Benefits

Designed for Flex and Signage LED modules  
 High efficiency up to 88%  
 High Power Factor  
 Class II design for a wide range of applications  
 Excellent price/quality/watt ratio  
 Suitable for Class I/II luminaires

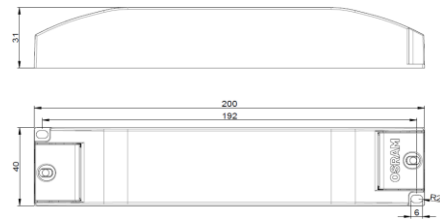
#### Applications

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



200 x 40 x 31 mm  
 Housing material: Plastic

### Product Features

- 24 V constant output voltage
- Output power up to 60W
- Wide  $t_a$  range -20 ... +50 °C
- Mains voltage: 220 – 240 V<sub>AC</sub>
- High efficiency up to 88%
- PF>0.95
- Screw terminals
- Integrated cable clamp
- Overload protection
- Over temperature protection
- Short circuit protection
- $t_c$  max = 85 °C
- 30'000 h lifetime at  $t_c$  of 85°C
- 3 years guarantee
- Suitable for Class I / II luminaires
- Matching with Inventronics 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	0.31	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	88	%	Typical, Full load, 230Vac, 50Hz, see graphs
	Power losses	8.2	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	25A	A pk	Max, t = 340 µs
	Max. units per circuit breaker	B10: 10, B16: 15, B25: 24 C10: 16, C16: 26, C25: 40		
Output	Nominal output voltage	24	V	
	Voltage accuracy	+/- 3	%	
	Voltage ripple	< 3	%	Ripple / average @ 100 Hz; Full load
	Nominal output power	60	W	
	Maximum power	60	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	85	°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	200x40x3.1	mm	L x W x H
	Weight	296	g	
	Casing material	Plastic		

## Wiring diagram

 220-240V 50/60Hz PRI	<b>ELEMENT 60/220-240/24 G2</b> 24V Constant Voltage LED Power Supply 60W LED 控制装置 In=0.31A PF=0.94C-0.99 U <sub>rated</sub> =24VDC Prated=60W <b>SELV</b>	 wire preparation 0.75-1.5mm <sup>2</sup> 5-6mm	Inventronics GmbH Berliner Allee 65 86153 Augsburg Germany <a href="http://www.inventronicsglobal.com">www.inventronicsglobal.com</a>
	       	 tc=85°C ta=-20...+50°C Made in China	  SEC 24V LED + -

## Cable and wire preparation

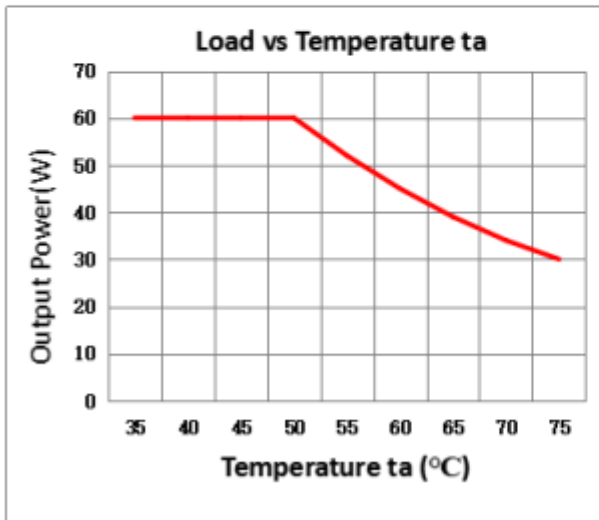
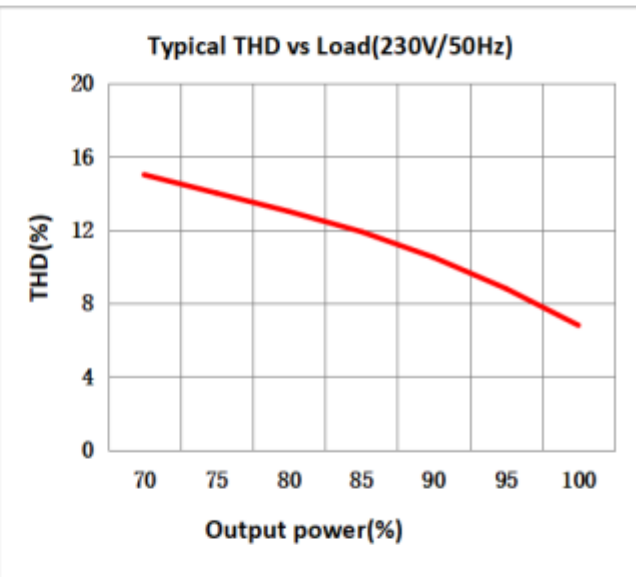
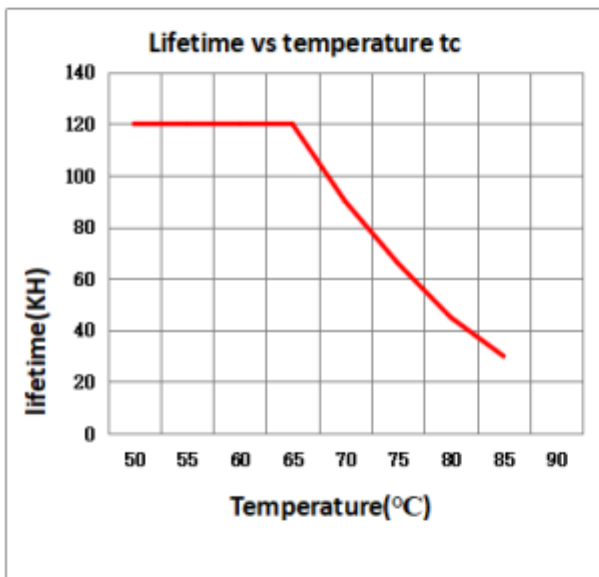
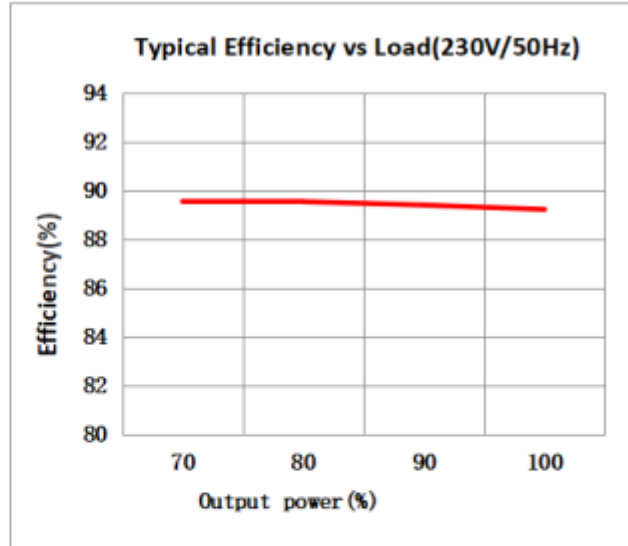
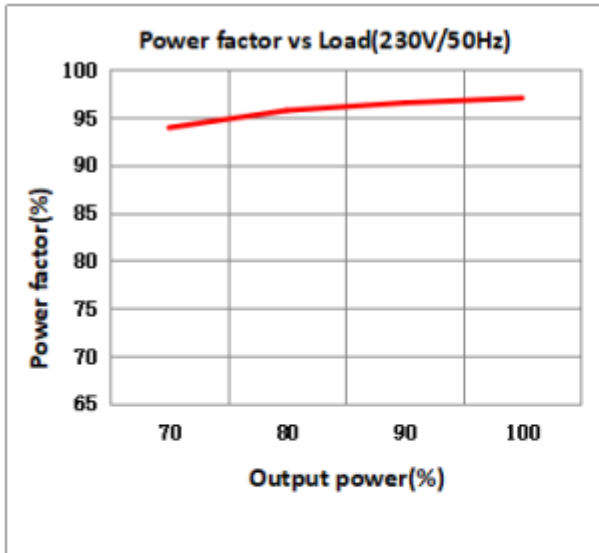
- Input wires cross section: 0.75 - 1,5 mm<sup>2</sup>
- Output wires cross section: 0.75 – 1.5 mm<sup>2</sup>
- Wire peeling length: input 5 mm; output 5 mm
- Load wires length: 3 m verified
- Screws are locked with 0.7nm torque
- Cable recommendation:

H05VVH2-F 2\*0.75mm<sup>2</sup>; H05VVH2-F 2\*1.0mm<sup>2</sup>; H03VVH2-F 2x0.75mm<sup>2</sup>; H03VVH2-F 2x1.5mm<sup>2</sup>

## Led wire length

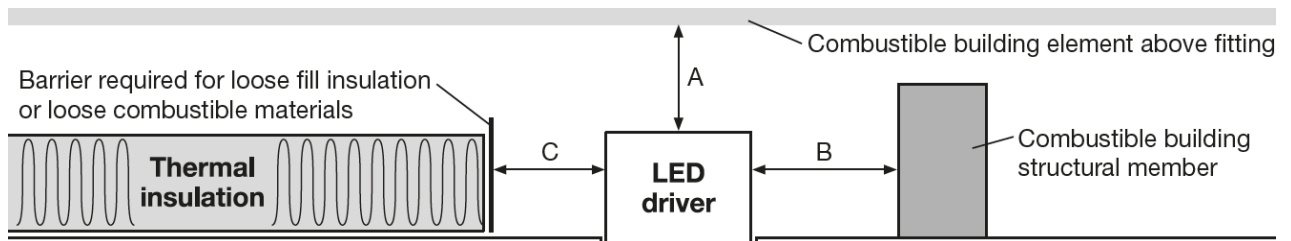
EMI pass verified with wire length below 3 m, within 70%-100% loading test condition. It is recommended to check the compliance of total system in design-in phase.

Electrical characteristics



## Remarks

- The driver withstands an input voltage of up to 280 Vac for maximum 2 hours. Shutting 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 is still above the maximum allowed voltage.
- The driver is protected against temporary overheating by automatically reducing 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 24V 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  $A=B=C=10\text{mm}$



## Ordering information

Product name	EAN 10	EAN 40	Pieces / box
ELEMENT 60/220-240/24 G2	6937186161871	6937186161888	30

## 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

Inventronics S.r.l.  
 Via Castagnole 65/A  
 31100 Treviso  
 Italy  
[www.inventronicsglobal.com](http://www.inventronicsglobal.com)

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