ITS FIX Track Series LED Power Supply

OSRAM

ITS FIX 18/220-240/450 CS T-G HE

18W Constant Current LED driver

Applications

Track light

Approvals

CE CB EL SELV

Housing material: plastic, grey

* image for information purpose only

Product Features

- For luminaire of protection class II
- Output current range: 300 - 450 mA
- SELV, Urated: 27 - 40 V
- For independent use
- Input Voltage: 220 - 240 Vac
- Power Factor: 0.95 (Typ.)
- Efficiency up to 92 %
- Suitable for emergency lighting acc. to EN 50172
- Adjustable Output Current with DIP switch
- Ta range: -20...+35 ℃
- Surge capability: 2 kV
- 5 years guarantee
- Protection: SCP / OLP / OVP / OTP

Electrical specification

Input

Item	Value
Rated input voltage	220 - 240 V
Range of input voltage (AC)	198 - 264 Vac
Range of input voltage (DC)	176 - 280 Vdc
Maximum voltage	300 Vac @ 1h maximum, the unit may not operate under this abnormal condition
Input Current Max.	0.15 A
Frequency	0 / 50 / 60 Hz
Total Harmonic Distortion (THD)	< 10 % @ Full load, 230 Vac, 50 Hz. See graphs
Power factor	0.95 @ Full load, 230 Vac, 50 Hz. See graphs
Displacement Factor	≥ 0.9 @ Full load, 230 Vac, 50 Hz
Start-up time (AC)	< 0.5 s
Start-up time (DC)	< 0.6 s
Switch over time (AC / DC mode)	< 0.6 s
No-load power	≤ 0.5 W @ 220 Vac

Output

Item	Value
Constant Current	300 - 450 mA
Voltage Range	27 - 40 Vdc
Unload voltage Max.	59 Vdc
Current accuracy	± 6 % @ 300 mA; ± 5 % @ 350 - 450 mA
Output current ripple (≤ 120Hz)	± 5 %
Output power range	8.1 - 18 W
SVM	≤ 0.4 @ Full load, 230 Vac
Pst	≤ 1 @ Full load, 230 Vac
Efficiency	92 % @ Full load, 230 Vac, 50 Hz. See graphs
EOFi	100 %
Galvanic isolation	SELV

Protection

Item	Value
Over Load Protection	103 - 120 % / Auto recovery
Over Voltage Protection	59 Vdc / Auto recovery
Short Circuit Protection	Auto recovery
Over Temperature Protection	Auto recovery

Surge capability

Item	Value
Surge capability (L - N)	2 kV
Surge capability (L / N - Ground)	2 kV

Withstand voltage

Item	Value
Input - Output	3750 V / 5 mA / 60 s

Environment

Item	Value
Ambient temperature range ta	-20 ... +35 ℃
Maximum case temperature tc	75 ℃
Storage temperature range	-40 ... +75 ℃
Lifetime	> 100,000 h @ tc=75 ℃
Noise	≤ 25 dB(A) @ 20 cm
Max. case temperature in fault condition	110 ℃
Humidity	20 % - 90 % RH
IP protection class	IP 20
Mains switching cycles	> 25000 cycles

Dimension

Item	Value
Length	133 mm
Width	31 mm
Height	42 mm
Max. allowed weight of complete luminaire	5 kg (50 N)

Output technical parameter

Number	Current (mA)	Voltage (Vdc)	Power (W)	PIN1	PIN2	Ambient temperature range ta
1	300 mA	27 - 40 Vdc	12.0 W	--	--	-20 ... +35 ℃
2	350 mA	27 - 40 Vdc	14.0 W	ON	--	-20 ... +35 ℃
3	400 mA	27 - 40 Vdc	16.0 W	--	ON	-20 ... +35 ℃
*4	450 mA	27 - 40 Vdc	18.0 W	ON	ON	-20 ... +35 ℃

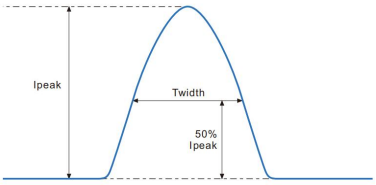
* Factory default

Inrush Current & Circuit Breaker

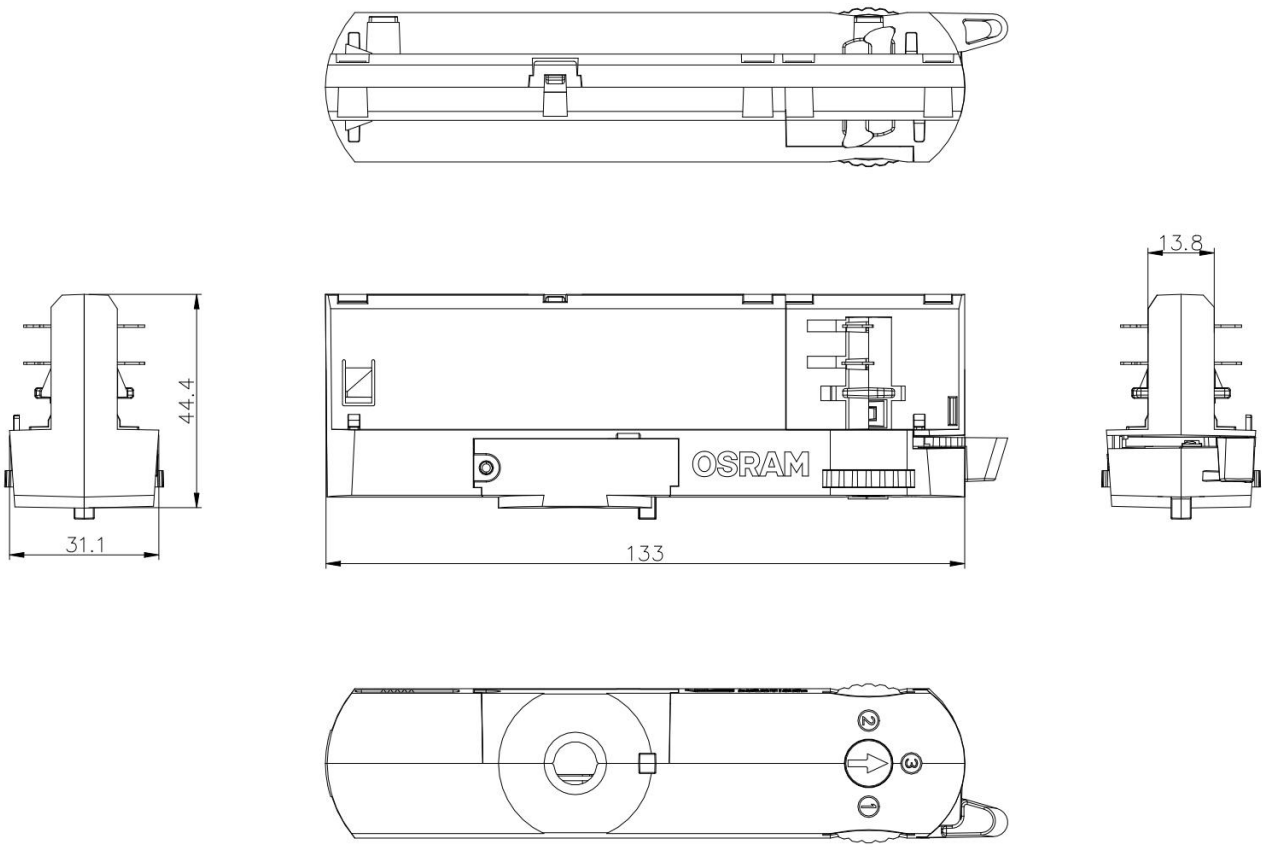
I_{peak}	T_{width}	B10	B16	B20	C10	C16	C20
22.9 A	130 µs	28 pcs	45 pcs	56 pcs	47 pcs	75 pcs	94 pcs

Notes:

1. The values in the table are the maximum number of drives that can be connected to each type of MCB. Do not exceed these values during installation.
2. The allowable number may vary slightly depending on the brand and model of the miniature circuit breaker (MCB).
3. Ipeak = peak inrush current; Twidth = half-peak pulse width. See the figure below for the waveform.

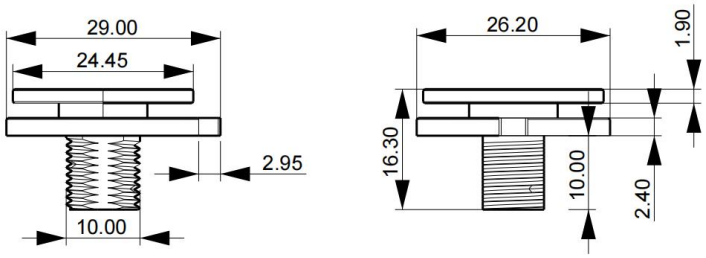


2D diagram

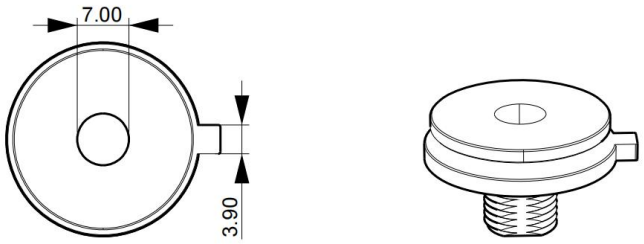


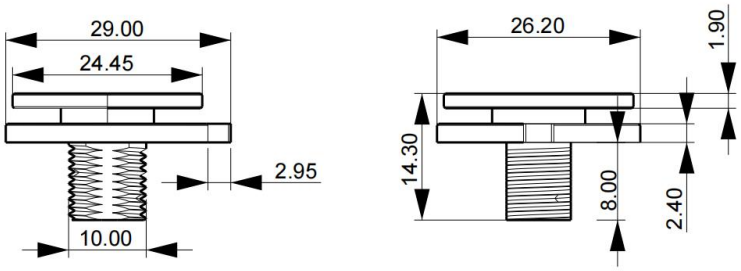
Nipple

- Optional threaded sleeve for luminaire mounting
- Suitable for M10x10 mm or M10x8 mm threaded nut

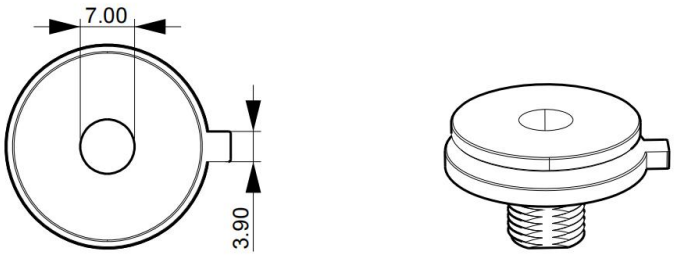


M10x10 mm

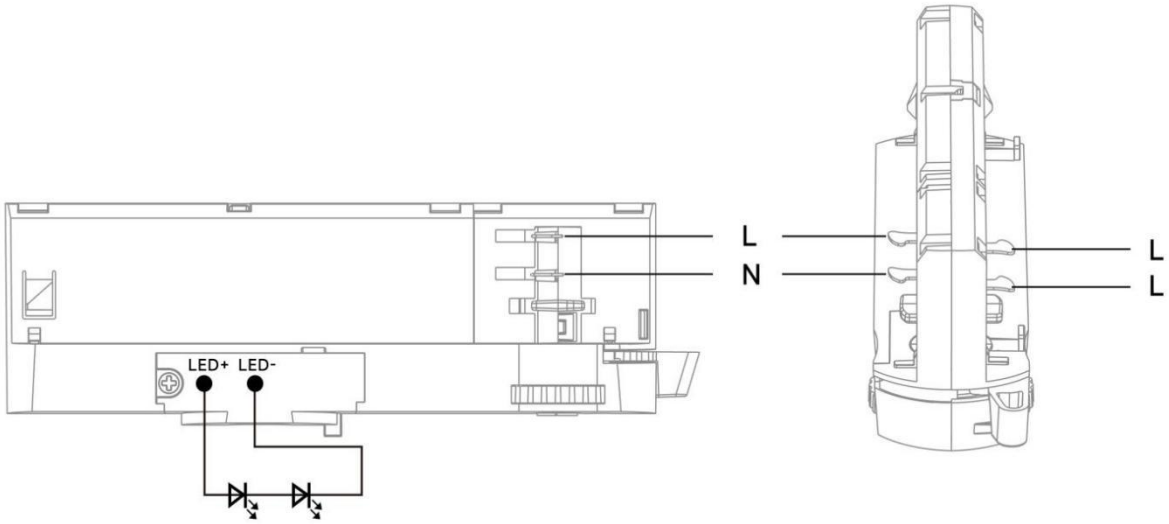




M10x8 mm



Wiring diagram



Notes:

- LED wiring should be kept as short as possible to ensure good EMC performance.
- To comply with EMC regulations, the secondary side wires (connecting to the LED module) shall be routed in parallel.
- The LED driver does not provide reverse polarity protection on the secondary side. Reverse polarity may damage LED modules that lack reverse polarity protection.
- Wrong wiring may cause malfunction or irreparable damage to the LED driver.

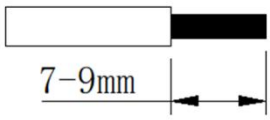
Suitable tracks

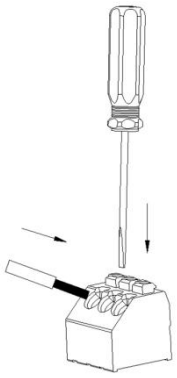
Manufacturer	Type	System	Intrack casing colour
Global	XTS11 & XTSC611	3P	Black, white, gray
A.A.G STUCCHI	9000A-2-ST	3P	Black, white, gray
Eutrac	25-106	3P	Black, white, gray
Unipro	T32B	3P	Black, white, gray
PowerGEAR	PRO-0431L	3P	Black, white, gray
ERCO	107 930 1000	3P	Black, white, gray
BELINIEGRA	4X	3P	Black, white, gray

Wiring & Connections

Specification item	Value (Unit)
Output wire cross-section	0.5 ... 1.5 mm^2
Output wire strip length	7 ... 9 mm

Strip the wire insulation to 7 - 9 mm before connecting to the driver terminals. This ensures proper electrical contact and avoids short circuits caused by exposed conductors. Only one wire per terminal.





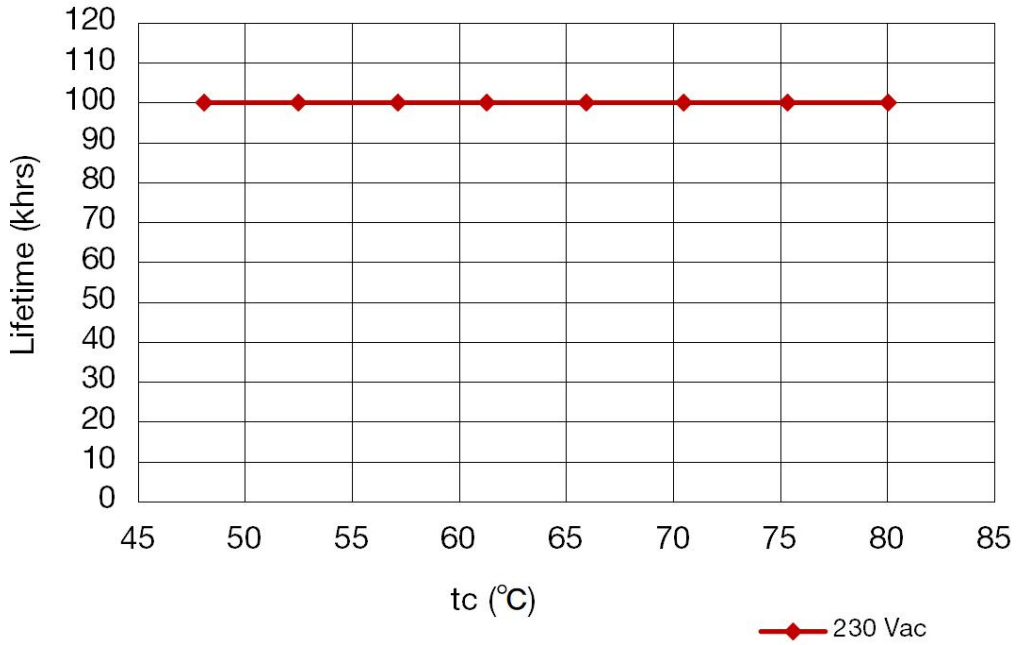
Expected lifetime

Output current	ta (℃)	30	35	40	45
450 mA	tc (℃)	48	53	57	61
	Lifetime	> 100,000 h	> 100,000 h	> 100,000 h	> 100,000 h

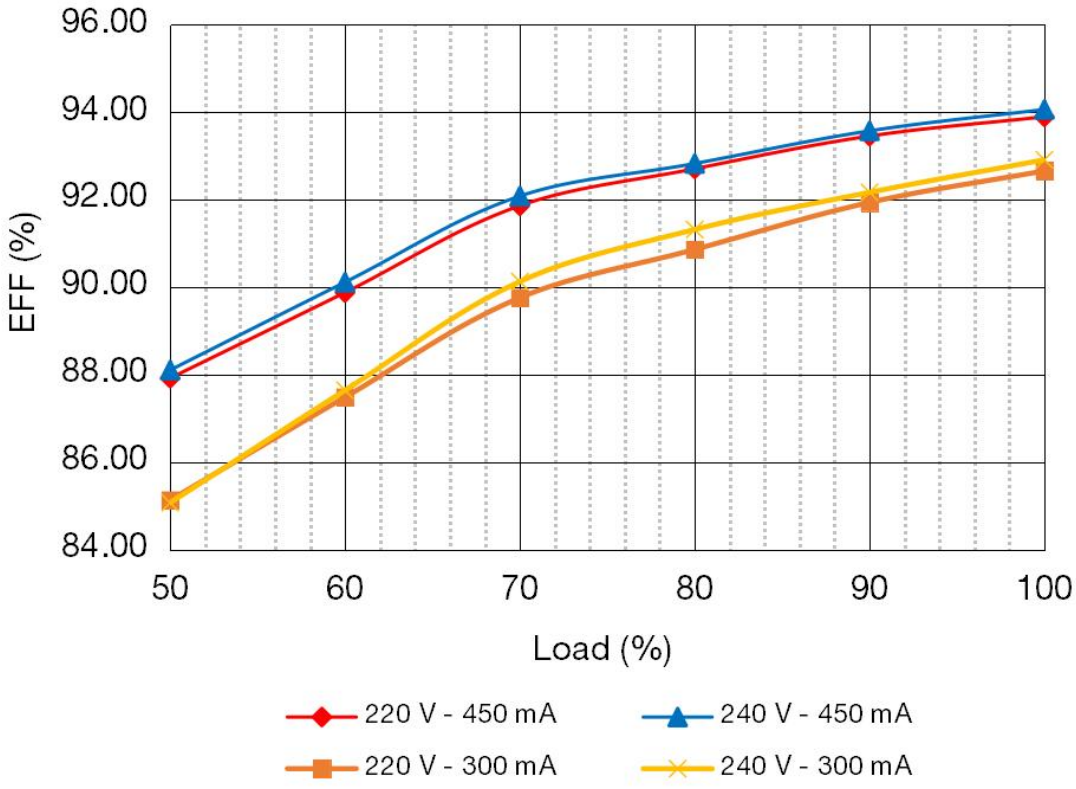
1. The LED driver achieves the above-specified lifetime under reference operating conditions.
2. The correlation between case temperature tc and ambient temperature ta is also affected by luminaire design.

Electrical characteristics

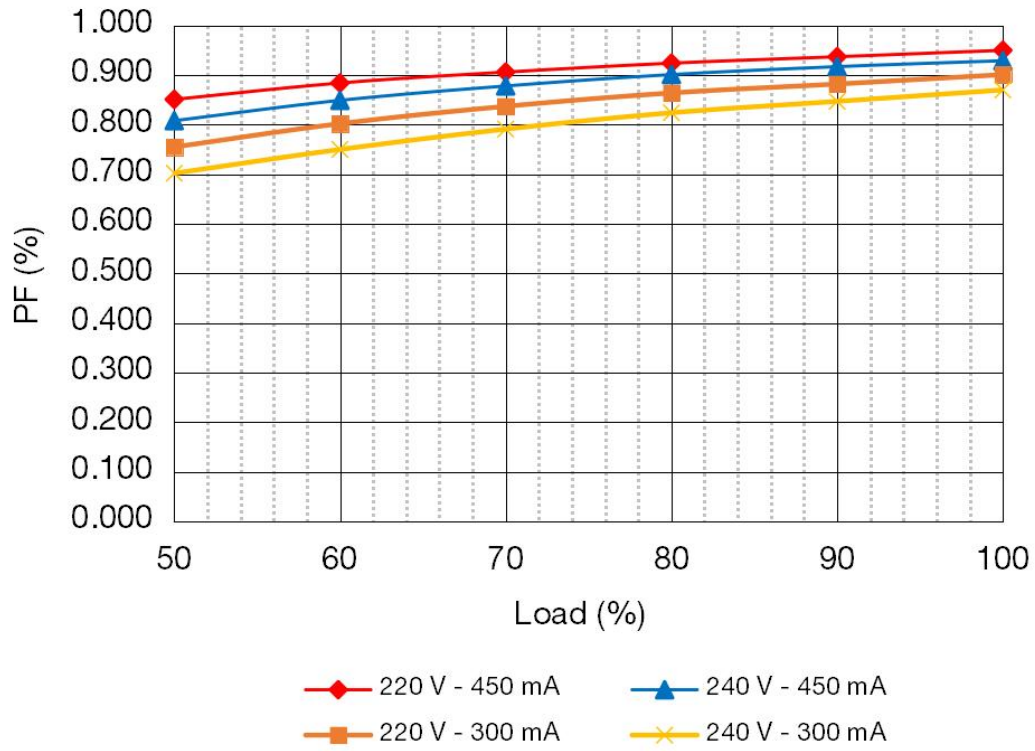
Lifetime vs. Temperature Curve



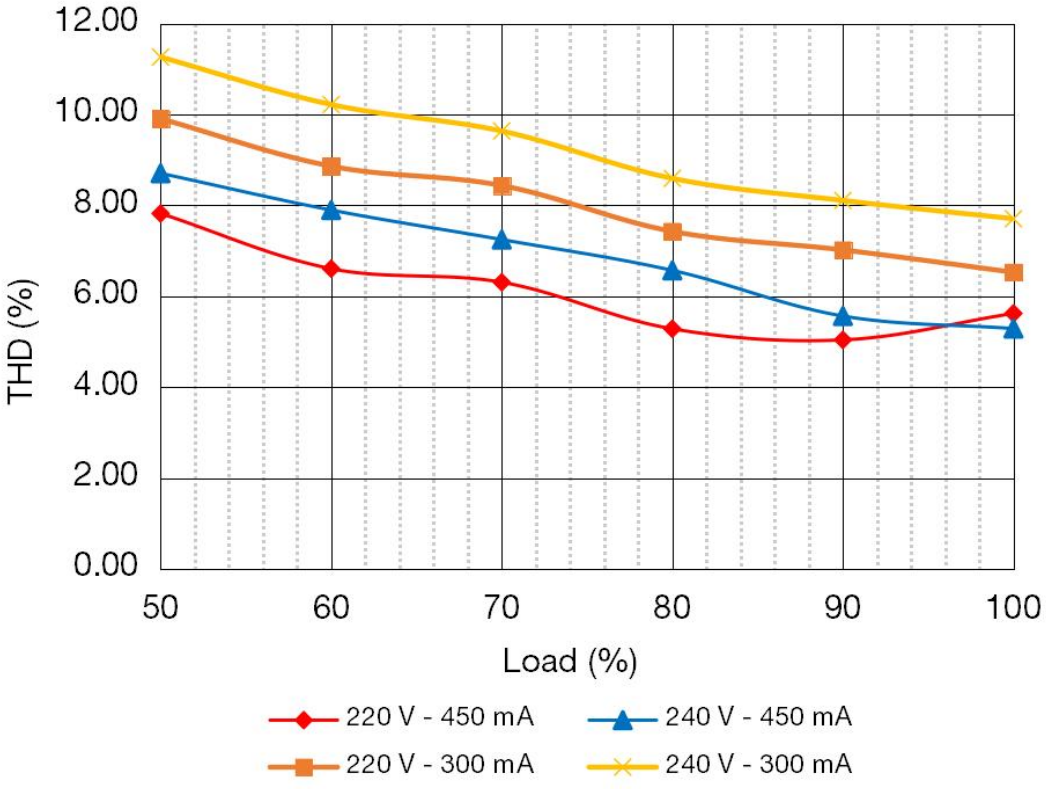
Efficiency vs. Load



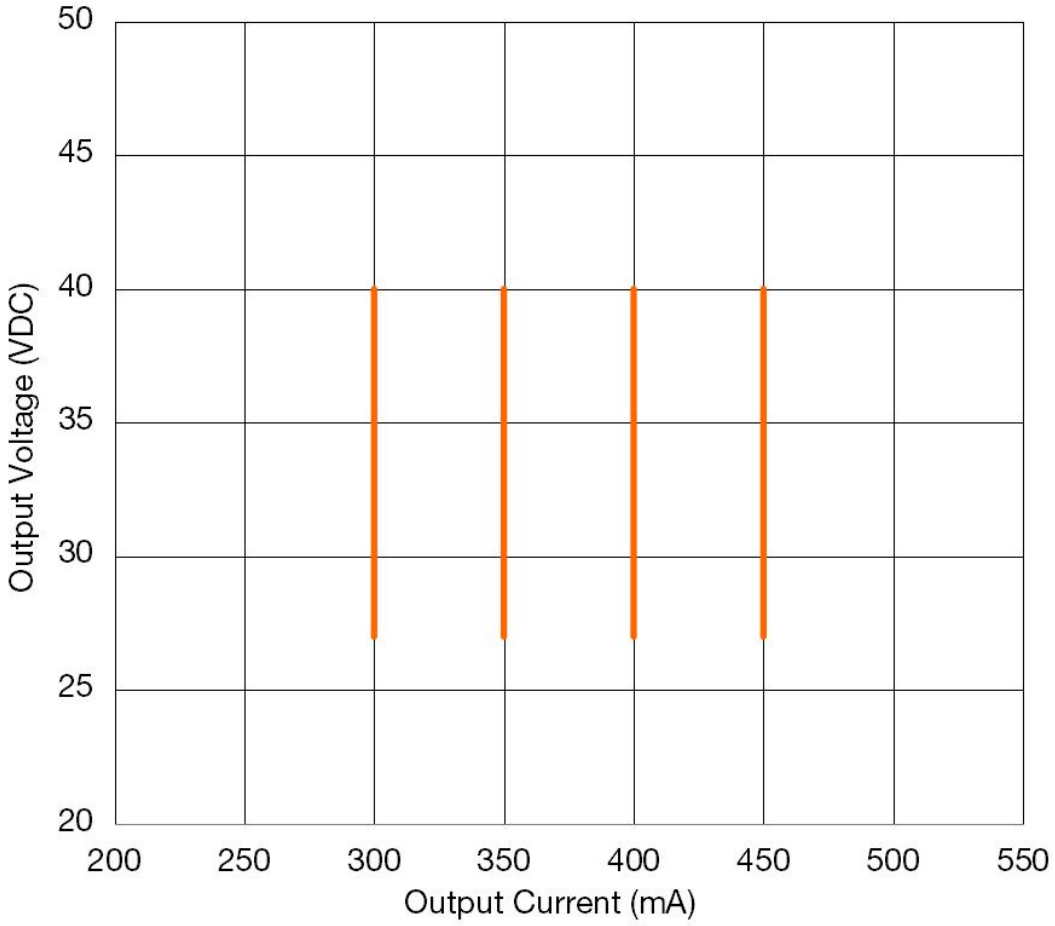
Power Factor Characteristics



THD vs. Load



Operating window



Remarks

- All parameters not specially mentioned are measured at 230 Vac input , full load and 25 ℃ of ambient temperature.
- Ripple & Noise are measured at 20 MHz of bandwidth by using a 300 mm twisted pair-wire terminated with a 0.1 µF & 47 µF parallel capacitor.
- EL compatible with IEC 61347-2-13 Annex J, compatible with EN 60598-2-22 emergency lighting fixtures, compatible with EN 50172 central battery system applications.
- The DC input for this product is only used for emergency lighting and applies to functional and safety requirements, EMC is not considered.
- The driver withstands an input voltage of up to 300 Vac for maximum 1 hour. Shut down of output load might occur in case the supply voltage exceeds the declared input voltage range.
- Shut down of output load happens if the input voltage of the load is below the minimum allowed voltage level.
- Hot plugging of the load or external switching on the secondary side is not permitted.
- Output short circuit protection: If the LED output is short-circuited, the driver shuts down output; normal operation resumes automatically after fault is removed.
- Output over load protection: The driver shuts off the output if the load exceeds the internal preset limit. If the overload persists after restart, the driver shuts down again. Normal operation resumes automatically after the fault is removed.
- Output over voltage protection: If the output voltage exceeds the specified limit, the driver shuts down the output, and automatically returns to normal after the fault is removed.
- Output over temperature protection: The over-temperature protection of the product is provided by the IC. If the temperature exceeds the preset limit, the driver reduces the output current and resumes normal operation after temperature drops.
- Max. allowed weight of complete luminaire: 5 kg (50 N).

Packaging information

Item NO. (I/N)	Product name	Colour	Weight /piece (kg)	Outer carton dimension (mm)	Quantity /carton	Net weight /carton (kg)	Gross weight /Carton (kg)
61303027	ITS FIX 18/220-240/450 CS T-G HE	Grey	0.0981	295 x 260 x 215	50	4.91	5.61

Item NO. (I/N)	Type	Weight (g) / pcs
63301019	M10x10mm	14.5
63301029	M10x8mm	14.5

Standards

IEC 61347-1
IEC 61347-2-13
EN 61347-1
EN 61347-2-13
AS/NZS 61347.1
AS 61347.2.13
EN 62384
EN 55015
EN 61000-3-2
EN 61000-3-3
EN 61547
EN 61000-4-5
Erp2.0 EU 2019/2020
RoHS (2011/65/EU) (EU)2015/863

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