OT 20/170…240/1A0 4DIMLT2 G2 CE

OPTOTRONIC - 4DIM NFC IP20 | DALI-2, AstroDIM, StepDIM, MainsDIM – constant current LED drivers

Product family features

- Supply voltage: 220…240 V
- Current output range: 70…1,050 mA
- Easy and fast wireless luminaire programming via NFC
- Flexible current setting with one additional wire (LEDset2)
- AstroDIM for autonomous dimming with five independent levels (astro, time mode)
- Allows for energy saving in twilight phases
- MainsDIM function for dimming via reduction of line voltage amplitude
- Isolated DALI interface for bidirectional telemanagement systems
- Standby power consumption: < 0.35 W
- Constant Lumen Output (CLO)
- Overtemperature protection via external NTC
- Integrated customizable thermal management (Driver Guard)

Product family benefits

- 4DIM functionality in one device (StepDIM, AstroDIM, MainsDIM, DALI)
- DALI-2 certified incl. Parts 251, 252, 253
- Easy and fast wireless luminaire programming
- Very high efficiency
- Wide current output range: 200 mA…1050 mA
- High surge protection: up to 10 kV (in protection class I or II)
- Great flexibility due to wide operating temperature range of -40…55 °C or 60 °C
- Protection through double isolation between mains input and LED output

Areas of application

- Street and urban lighting
- Industry
- Suitable for outdoor applications in luminaires with IP > 54
- Suitable for use in outdoor luminaires of protection class I and II

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

Technical data

Electrical data

Nominal voltage	220…240 V
Input voltage AC	170…264 V
Input voltage DC	176…276 V [1)]
Nominal current	012 A
Mains frequency	0/50/60 Hz [1)]
Power factor λ	057C099 [2)]
Total harmonic distortion	< 10 % [3)]
Device power loss	3.5 W
Inrush current	25 A [4)]
Max. ECG no. on circuit breaker 10 A (B)	22
Max. ECG no. on circuit breaker 16 A (B)	35
Max. ECG no. on circuit breaker 25 A (B)	55
Surge capability (L/N-Ground)	10 kV
Surge capability (L-N)	6 kV
Nominal output power	22 W [5)]
Maximum output power	22 W
Efficiency in full-load	87 % [6)]
Nominal output current	200…1050 mA
Output current LEDset open	70 mA
Output current LEDset shorted	Not allowed
Default output current	700 mA
Output current tolerance	±3 % [7)]
Output ripple current (100 Hz)	< 5 %
Output PSTLM	≤1
Output SVM	≤0.4
Minimum output current	70 mA
Galvanic isolation	SELV
Nominal output voltage	10…38 V
U-OUT (working voltage)	60 V
Max. no. of ECGs on 16A MCB with EBN-OS	93
Surge capability (SD – Ground)	10 kV
Surge capability (L/N – SD)	6 kV
Nominal input voltage (SD port)	220…277 V

1) Additional fuse needed in DC operation

2) Full load

3) At full power

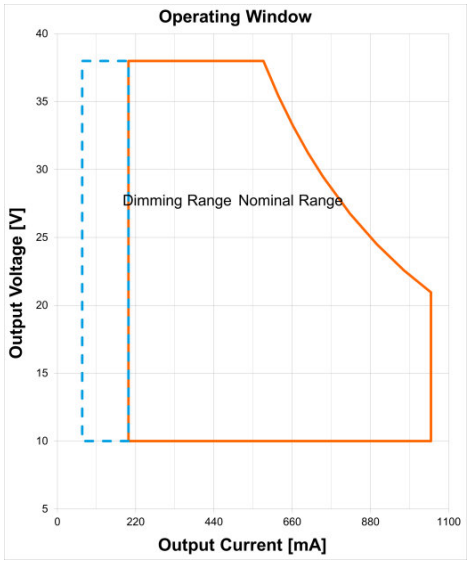
4) At 150 µs

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

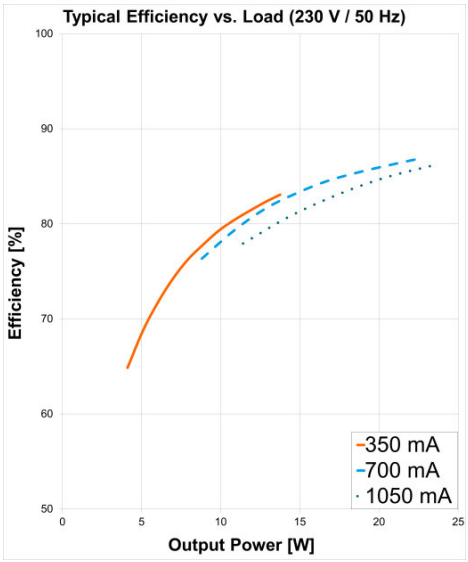
5) Max. 75% in DC operating mode

6) at 230 V, 50 Hz

7) +/- 5% for LEDset down to 300mA

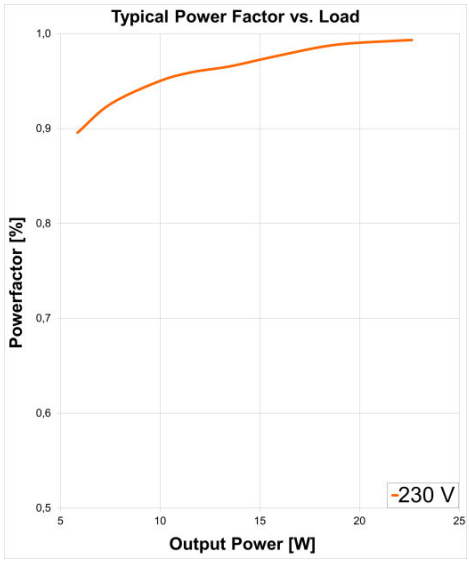


OT 20170-2401A0 4DIMLT2 G2 CE Operating Window

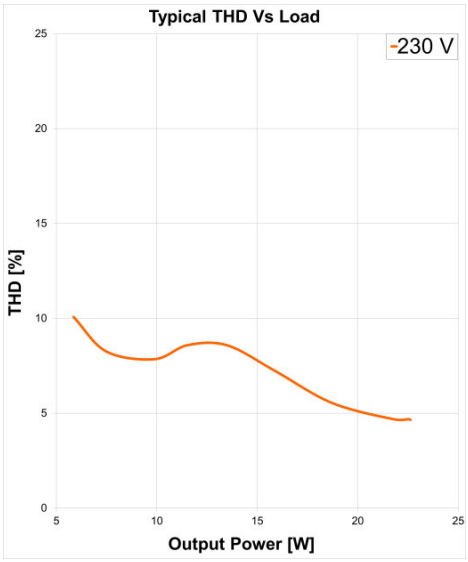


OT 20170-2401A0 4DIMLT2 G2 CE Typical Efficiency vs. Load (230 V 50 Hz)

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

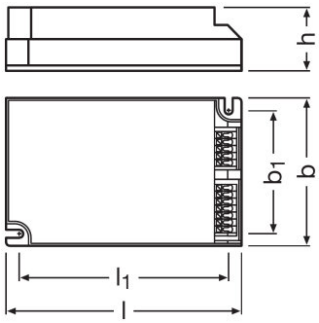


OT 20170-2401A0 4DIMLT2 G2 CE Typical Power Factor vs. Load



OT 20170-2401A0 4DIMLT2 G2 CE Typical THD Vs Load

Dimensions & weight



Length	1230 mm
Width	790 mm
Height	330 mm
Mounting hole spacing, length	111.0 mm
Mounting hole spacing, width	67.0 mm
Product weight	21000 g
Cable cross-section, input side	0.2…1.5 mm²
Cable cross-section, output side	0.2…1.5 mm²
Wire preparation length, input side	8.5…9.5 mm

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

Temperatures & operating conditions

Ambient temperature range	-40…+60 °C
Temperature range at storage	-25…85 °C
Maximum temperature at tc test point	75 °C
Max.housing temperature in case of fault	120 °C
Permitted rel. humidity during operation	5…95 % [1]

[1] The luminaire manufacturer must ensure that condensation water cannot be created within the fixture.

Lifespan

ECG lifetime	50000 / 100000 h [1]

[1] At maximum T_c = 75°C / 10% failure rate / At T_c = 63°C / 10% failure rate

Expected Lifetime

Product name				
OT 20/170…240/1A0 4DIMLT2 G2 CE	ECG ambient temperature [ta]	60	50	48
	Temperature at tc-point [°C]	75	65	63
	Lifetime [h]	50000	85000	100000

Capabilities

Dimmable	Yes
Dimming interface	4DIM / AstroDIM / DALI / MainsDIM / StepDIM
Dimming range	10…100 %
Suitable for fixtures with prot. class	I / II
Constant lumen function	Programmable
NTC input	Yes
Short-circuit protection	Automatic reversible
No-load proof	Yes
Intended for no-load operation	No
Max. cable length to lamp/LED module	2.0 m [1]
Overload protection	Automatic reversible
LEDset	Yes
Number of channels	1
DALI-2 Energy Data	Yes [2]
DALI-2 Diagnostic Data	Yes [3]

[1] Output wires must be routed as close as possible to each other

[2] Acc. DALI part 252

[3] Acc. DALI part 253

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

Programming

Box programming	Yes
Tuner4TRONIC	Yes
Tuner4TRONIC Field App	Yes
Programming device	DALI / NFC

Programmable features

Constant Lumen	Yes
Thermal Protection	Yes
Driver Guard	Yes
AstroDIM	Yes
StepDIM	Yes
MainsDIM	Yes
Emergency Mode	Yes
Configuration Lock	Yes
DALI-2 Luminaire Data	Yes [1)]

[1)] Acc. DALI part 251

Certificates & standards

Type of protection	IP20
Standards	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 55015:2006 + A1:2007 + A2:2009/Acc. to EN 61547/Acc. to FCC 47 part 15 class B/Acc. to IEC 61000-3-2/Acc. to IEC 61000-3-3/Acc. to IEC 62386-101/Acc. to IEC 62386-102/Acc. to IEC 62386-207/UL-8750
Approval marks – approval	CCC / CE / DALI-2 / EL / ENEC / RCM / VDE / VDE-EMC

Logistical data

Commodity code	85044083900

Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)	
Date of Declaration	30-10-2023
Primary Article Identifier	4052899981928 | 4050732430770
Candidate List Substance 1	Lead
CAS No. of substance 1	7439-92-1
Safe Use Instruction	The identification of the Candidate List substance is sufficient to allow safe use of the article.

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

Product datasheet

Declaration No. in SCIP database	e194334f-d00d-4b07-af4a-186bf7e8f154 | f078148f-0558-426b-a82f-b99e83ab5dd3

Additional product information

- The luminaire manufacturer must ensure that condensation water cannot be created within the fixture and, in particular, cannot affect the functionality of the product. Failing to comply with this requirement will make invalid any warranty claim.

Download Data

	File
	User instruction OPTOTRONIC Outdoor
	Brochures 4 DIM NFC G3 CE LED drivers and T4T C (EN)
	Certificates RCM Certificate CS10824N
	Certificates OT VDE ENEC 40050684 290923
	Certificates OT Outdoor CB DE1 62952A1 220920
	Certificates OT EMC 40050085 200220
	Certificates OT 20 4DIM LT2 G2 EATON AM35336 210520
	Certificates OT 20 4DIM LT2 G2 INOTEC AM35336 210520
	Certificates OT Outdoor CB DE1 62952A2 220920
	Certificates OT Outdoor VDE TESTREPORT 276377 220920
	Certificates VDE ENEC Certificate 40043863
	Certificates CB Certificate DE1-59452
	Certificates VDE ENEC Certificate 40043863 appendix
	Certificates OT EMC 40044675 031022
	Certificates CCC Certificate 2018171002002021
	Declarations of conformity OT 1DIMLT2 G1 4DIMLT2 G2 CE 3806542 061221
	Declarations of conformity OT DIM LT2 CE UK DoC 4291524 260221

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

	Declarations of conformity EATON(CEAG)-Conformity declaration AM04626_OT20_170-240_1A0_4DIMLT2_G2_CE
	Declarations of conformity INOTEC- Conformity declaration AM04626_OT20_170-240_1A0_4DIMLT2_G2_CE
	Declarations of conformity EU Declaration of Conformity 3584649
	CAD data CAD data STEP OT 20170-2401A0 4DIMLT2 G2 CE
	CAD data OT 20 4DIMLT2G2CE IGS 060820
	CAD data OT 20 4DIMLT2G2CE STEP 060820
	CAD Data 2-dim OT 20 4DIMLT2G2CE CAD2PDF 060820
	CAD data 3-dim OT 20 4DIMLT2G2CE CAD3PDF 060820

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 centres 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.

ISOLATION	Input / Mains	SD	EQUI	DALI	LEDset	LED Output	Case	NTC
Input / Mains	-	-	Double	Basic	SELV	SELV	Double	SELV
SD	-	-	Double	Basic	Double	Double	Double	Double
EQUI	Double	Double	-	Double	Basic	Basic	Basic	Double
DALI	Basic	Basic	Double	-	Double	Double	Double	Double
LEDset	SELV	Double	Basic	Double	-	-	Basic	-
LED Output	SELV	Double	Basic	Double	-	-	Basic	-
Case	Double	Double	Basic	Double	Basic	Basic	-	Basic
NTC	SELV	Double	Double	Double	-	-	Basic	-

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899981928	OT 20/170…240/1A0 4DIMLT2 G2 CE	Shipping carton box 10	280 mm x 175 mm x 102 mm	5.00 dm^3	2279.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on www.myosram.com and downloading theTuner4TRONIC software from the Internet. The Tuner4TRONIC software enables users to access and view the operational data of a luminaire or driver via the corresponding programming interfaces. A password key (Config Lock) must be set up in the driver via the Tuner4TRONIC software in order to control which users can access and view operational data. Follow the instructions for password setup. To grant an external person or company rights to access or view operational data, you can assign password keys. In this case, however, you are responsible for ensuring that the third party concerned takes notice of the information described here. However, OSRAM can read out operating data from devices for maintenance and service purposes even when a password key has been assigned. In individual cases, OSRAM will also use its access rights in order to optimize or improve driver hardware and driver functions. In accordance with data privacy principles, any user of operating data (luminaire manufacturers, third parties with access rights) must ensure that personal data (e.g. name, address, location IDs) are only merged with the prior written consent of the person (end user) concerned. The respective user of the operating data is responsible for providing evidence of consent.

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.

© 2024, Inventronics GmbH. All rights reserved. Inventronics is a licensee of the OSRAM brand. OSRAM is a trademark of ams OSRAM.