

OT 165/170...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



Technical data

Electrical data

Nominal voltage	220...240 V
Input voltage AC	170...264 V
Input voltage DC	176...276 V ¹⁾
Nominal current	076 A
Mains frequency	0/50/60 Hz ¹⁾
Power factor λ	085C...099 ²⁾
Total harmonic distortion	< 5 % ³⁾
Device power loss	11.5 W
Inrush current	77 A ⁴⁾
Max. ECG no. on circuit breaker 10 A (B)	5
Max. ECG no. on circuit breaker 16 A (B)	9
Max. ECG no. on circuit breaker 25 A (B)	14
Surge capability (L/N-Ground)	10 kV
Surge capability (L-N)	6 kV
Nominal output power	165 W ⁵⁾
Maximum output power	165 W
Efficiency in full-load	93.5 % 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 %
Minimum output current	70 mA
Galvanic isolation	Double
Nominal output voltage	130...260 V
U-OUT (working voltage)	300 V
Max. no. of ECGs on 16A MCB with EBN-OS	15
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

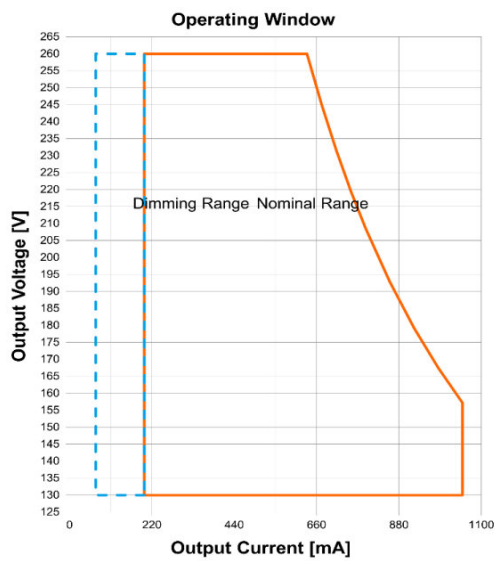
³⁾ At full power

⁴⁾ At 180 μ s

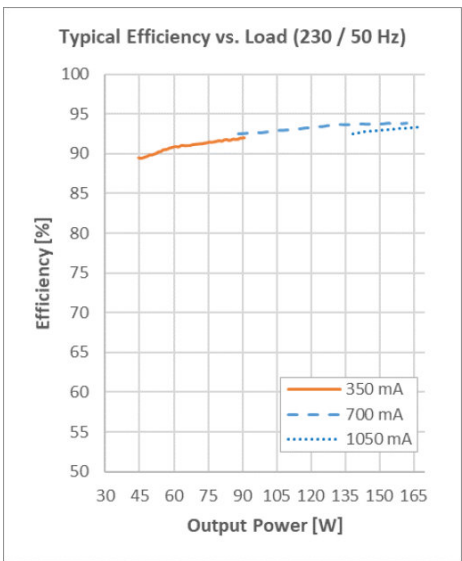
⁵⁾ Max. 75% in DC operating mode

⁶⁾ at 230 V, 50 Hz

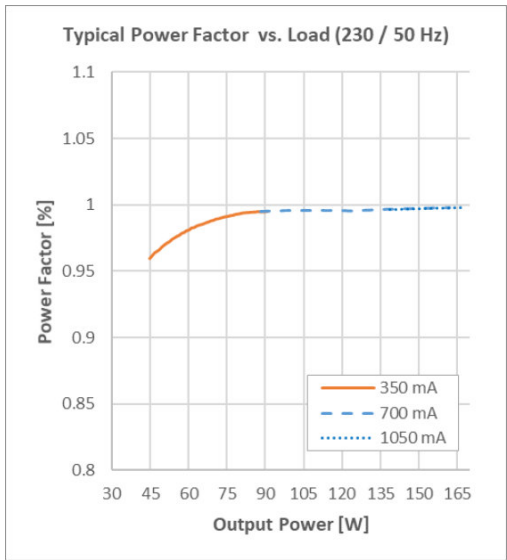
7) +/- 5% for LEDset down to 300mA



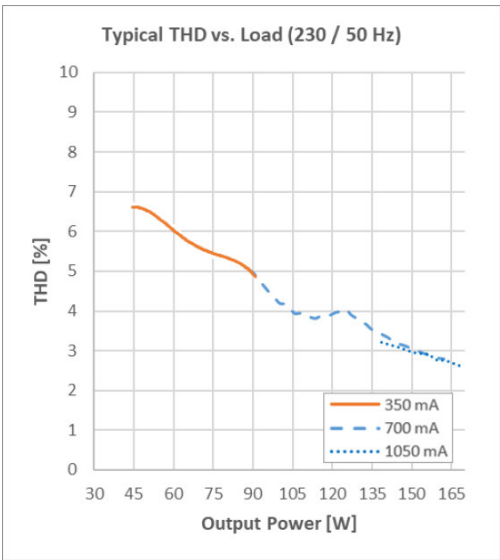
OT 165 4DIMLT2 G2 Operating Window



OT 165 4DIMLT2 G2 Typical Efficiency vs Load



OT 165 4DIMLT2 G2 Typical Power Factor vs Load



OT 165 4DIMLT2 G2 Typical THD vs Load

Dimensions & weight



Length	1700 mm
Width	1000 mm
Height	400 mm
Mounting hole spacing, length	160.0 mm
Mounting hole spacing, width	90.0 mm
Product weight	98000 g
Cable cross-section, input side	0.2...1.5 mm ²
Cable cross-section, output side	0.2...1.5 mm ²
Wire preparation length, input side	8.5...9.5 mm

Temperatures & operating conditions

Ambient temperature range	-40...+55 °C
Temperature range at storage	-40...+85 °C
Maximum temperature at tc test point	90 °C
Max.housing temperature in case of fault	110 °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⁾
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¹⁾ At maximum T_c = 90°C / 10% failure rate / At T_c = 78°C / 10% failure rate

Expected Lifetime

Product name				
OT 165/170...240/1A0 4DIMLT2 G2 CE	ECG ambient temperature [ta]	55	45	43
	Temperature at tc-point [°C]	90	80	78
	Lifetime [h]	50000	85000	100000

Additional product data

Predecessor EAN	4052899925212
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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

Programming

Tuner4TRONIC	Yes
Tuner4TRONIC Field App	Yes
Programming device	DALI / NFC

Programmable features

Constant Lumen	Yes
Thermal Protection	Yes

Product datasheet

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	BIS / CCC / CE / DALI-2 / EL / ENEC / VDE / VDE-EMC

Logistical data

Commodity code	85044083900
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Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH)	
Date of Declaration	03-11-2023
Primary Article Identifier	4062172053952 8010703816770 4055462326874
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.
Declaration No. in SCIP database	3df45517-1430-4628-9bac-58fb426845aa 90b0d98b-73d6-4b09-b6a7-8dfddbc4f19d 075c4855-5594-4ee0-8332-f0d291e95ac6

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

Product datasheet

File	
	User instruction OPTOTRONIC Outdoor
	Certificates OT VDE ENEC 40050684 290923
	Certificates OT 165 4DIM G2 CE BIS 34496 170420
	Certificates OT 165 4DIM LT2 G2 EATON AM27702 210520
	Certificates OT 165 4DIM LT2 G2 INOTEC AM27702 210520
	Certificates OT 165 4DIMLT2 G2 CE UK DoC 4310787 010621
	Certificates OT EMC 40044675 031022
	Declarations of conformity OT 4DIMLT2 G2 CE 3813028 100921
	CAD data OT 165 4DIMLT2G2CE IGS 060820
	CAD data OT 165 4DIMLT2G2CE STEP 060820
	CAD Data 2-dim OT 165 4DIMLT2G2CE CAD2PDF 060820
	CAD data 3-dim OT 165 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.

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4062172053952	OT 165/170...240/1A0 4DIMLT2 G2 CE	Shipping carton box 10	303 mm x 285 mm x 205 mm	17.70 dm ³	10352.00 g

Product datasheet

Logistical Data

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 the Tuner4TRONIC 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.