

## 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 <sup>1)</sup>
Nominal current	0.76 A
Mains frequency	0/50/60 Hz <sup>1)</sup>
Power factor $\lambda$	> 0.98 <sup>2)</sup>
Total harmonic distortion	< 5 % <sup>3)</sup>
Device power loss	11.5 W
Networked standby power	<0.25 W <sup>4)</sup>
Inrush current	77 A <sup>5)</sup>
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 <sup>6)</sup>
Maximum output power	165 W
Efficiency in full-load	93.5 % <sup>4)</sup>
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	$\pm 3$ % <sup>7)</sup>
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

<sup>1)</sup> Additional fuse needed in DC operation

<sup>2)</sup> Full load

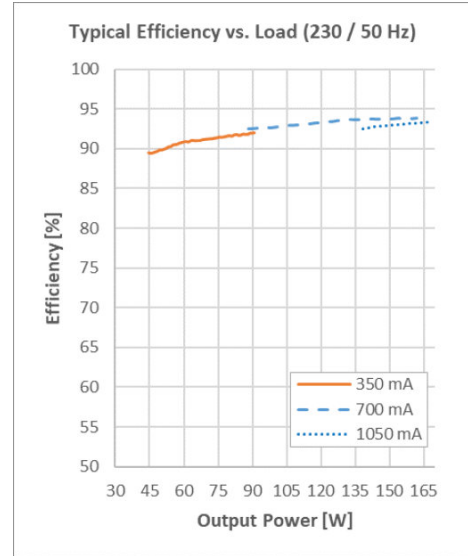
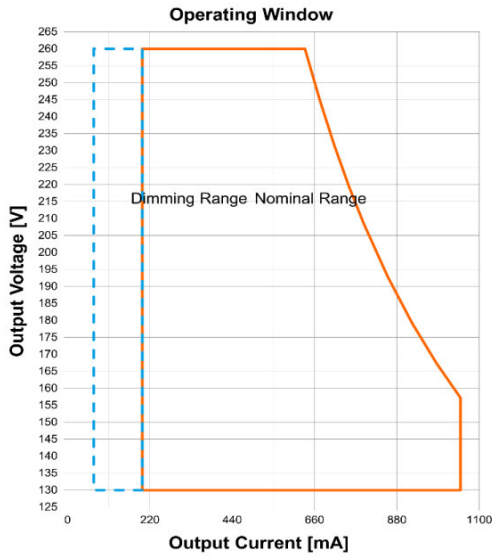
<sup>3)</sup> At full power

<sup>4)</sup> at 230 V, 50 Hz

<sup>5)</sup> At 180  $\mu$ s

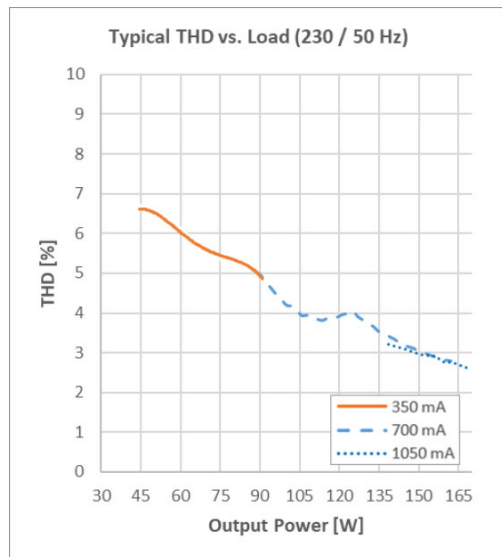
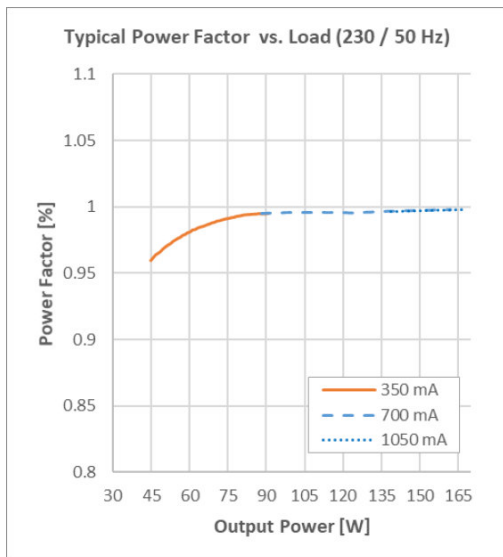
# Product datasheet

- 6) Max. 75% in DC operating mode
- 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



<b>Length</b>	170.0 mm
<b>Width</b>	100.0 mm
<b>Height</b>	40.0 mm
<b>Mounting hole spacing, length</b>	160.0 mm
<b>Mounting hole spacing, width</b>	90.0 mm
<b>Product weight</b>	980.00 g
<b>Cable cross-section, input side</b>	0.2...1.5 mm <sup>2</sup>
<b>Cable cross-section, output side</b>	0.2...1.5 mm <sup>2</sup>
<b>Wire preparation length, input side</b>	8.5...9.5 mm

Temperatures & operating conditions

<b>Ambient temperature range</b>	-40...+55 °C
<b>Temperature range at storage</b>	-40...+85 °C
<b>Maximum temperature at tc test point</b>	90 °C
<b>Max.housing temperature in case of fault</b>	110 °C
<b>Permitted rel. humidity during operation</b>	5...85 % <sup>1)</sup>

<sup>1)</sup> Maximum 56 days/year at 85 %

Lifespan

<b>ECG lifetime</b>	50000 / 100000 h <sup>1)</sup>
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<sup>1)</sup> At maximum T<sub>c</sub> = 90°C / 10% failure rate / At Tc = 78°C / 10% failure rate

## Product datasheet

### 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 <sup>1)</sup>
Overload protection	Automatic reversible
LEDset	Yes
Number of channels	1
DALI-2 Energy Data	Yes <sup>2)</sup>
DALI-2 Diagnostic Data	Yes <sup>3)</sup>

<sup>1)</sup> Output wires must be routed as close as possible to each other

<sup>2)</sup> Acc. DALI part 252

<sup>3)</sup> 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 <sup>1)</sup>

<sup>1)</sup> 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	850440829000
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### Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH)	
Date of Declaration	14-04-2022
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	4c0de48f-a83c-4e21-b0b4-51a129897291   b14fb74b-7496-4707-9d46-7065fb740fb4   7d356b07-e1f1-4883-9dd9-aac2350a2758

### Download Data

File	
	User instruction OPTOTRONIC Outdoor
	Certificates OT ENEC 40050684 010622

## Product datasheet

	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 250621
	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	395 mm x 148 mm x 248 mm	14.50 dm <sup>3</sup>	10536.00 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.

### Accessories Optional

## Product datasheet

Product description	Accessory name	Accessory code
OT 165/170...240/1A0 4DIMLT2 G2 CE	NFC Scanner by TERTIUM Technology	4055462290281

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### Data privacy

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on [www.myosram.com](http://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.

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### Disclaimer

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