OTi QBM 20/220...240/500 NFC S

OPTOTRONIC Intelligent – Qualified Bluetooth Mesh NFC S | Compact constant current LED driver – Dimmable



Product family features

- Qualified Bluetooth mesh enabled by Silvair
- Works with OSRAM Hubsense

Product family benefits

- Versatile QBM window driver due to flexible output characteristic
- Locking and unlocking of programmable features
- Easy and fast output current setting via NFC
- Very high efficiency
- High-quality dimming of 1...100 % by amplitude dimming

Areas of application

- Suitable for downlights, spotlights and LED panels
- Suitable for use in luminaires with flexible current setting
- Suitable for indoor SELV installations
- Suitable for luminaires of protection classes I and II

Works with OSRAM HubSense

Bluetooth

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Technical data

Electrical data

Nominal input voltage	220...240 V
Mains frequency	0,50,60 Hz
Input voltage AC	198...264 V [1)]
Input voltage DC	176...276 V
Total harmonic distortion	< 10 % [2)]
Power factor λ	≥ 0.95
Efficiency in full-load	88 % [3)]
Inrush current	< 20 A [4)]
Max. ECG no. on circuit breaker 10 A (B)	20
Max. ECG no. on circuit breaker 16 A (B)	30
Surge capability (L/N-Ground)	2 kV
Surge capability (L-N)	1 kV
Nominal output voltage	20...50 V [5)]
U-OUT (working voltage)	60 V
Nominal output current	200...500 mA [6)]
Default output current	350 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	< 5 % [7)]
Output PSTLM	≤1
Output SVM	≤0.4
Nominal output power	20 W [8)]
Maximum output power	20 W
Current set	NFC
Radio frequency	2.4 GHz
Maximum TX power	+4 dBm [9)]
Wireless protocol	Qualified Bluetooth mesh enabled by Silvair
Wireless range	10 m line of sight
Power loss in stand-by mode	<0.15 W
Galvanic isolation primary/secondary	SELV
Networked standby power	<0.22 W [3)]

1) Permitted voltage range

2) At full load, 220...240 V, 50 Hz / see graphs

3) at 230 V, 50 Hz

4) t_{width} = 200 µs (measured at 50 % I_{peak})

5) Maximum 60 V

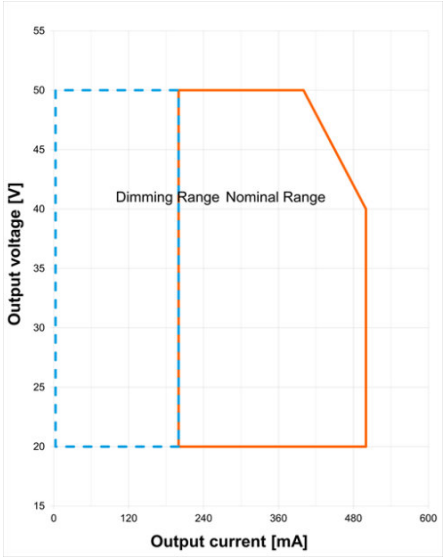
6) ±5%

7) Ripple average at 100 Hz

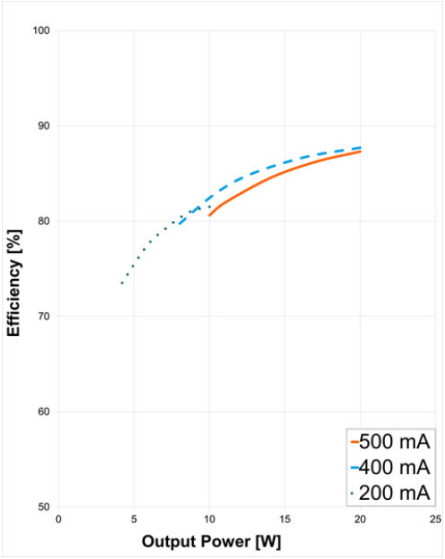
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8) Partial load 4...20 W

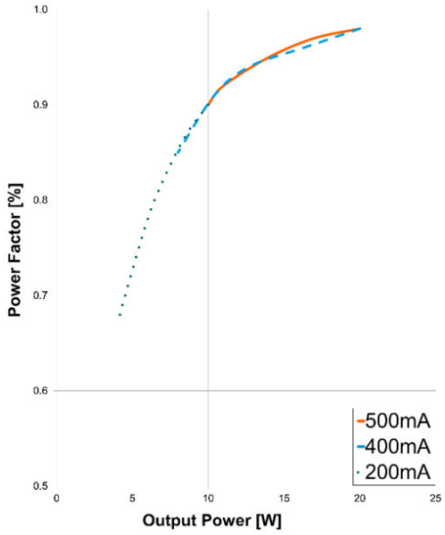
9) 2.512 mW



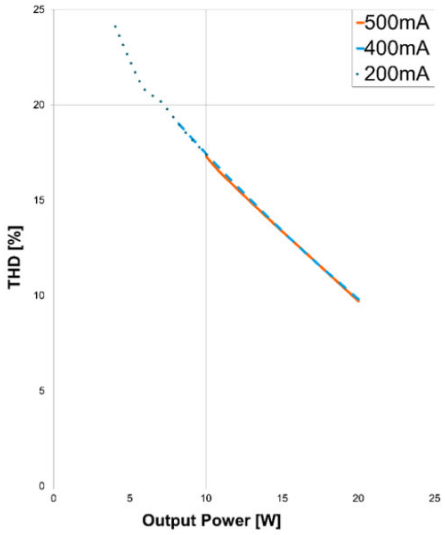
OTI QBM DALI 20 Operating Window



OTI QBM DALI 20 Typical Efficiency vs. Load



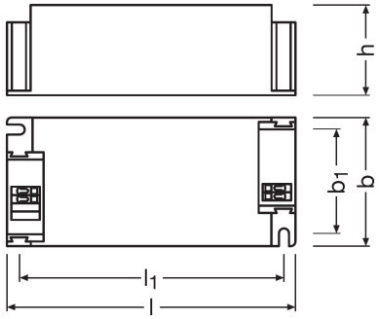
OTI QBM DALI 20 Typical Power Factor vs. Load

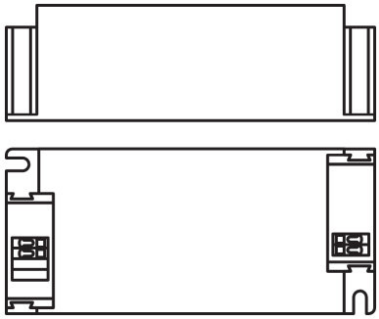


OTI QBM DALI 20 Typical THD Vs Load

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Dimensions & weight





Mounting hole spacing, length	88.0 mm
Mounting hole spacing, width	34.0 mm
Product weight	110.00 g
Cable cross-section, input side	0.5…1.5 mm² [1]
Cable cross-section, output side	0.5…1.5 mm² [1]
Wire preparation length, input side	7…8 mm
Wire preparation length, output side	7…8 mm
Length	97.0 mm
Width	43.0 mm
Height	29.5 mm

[1] Solid or flexible leads

Colors & materials

Casing material	Plastic

Temperatures & operating conditions

Ambient temperature range	-20…+50 °C
Permitted rel. humidity during operation	5…85 % [1]
Temperature range at storage	-25…85 °C
Max.housing temperature in case of fault	110 °C
Maximum temperature at tc test point	75 °C [2]

[1] Maximum 56 days/year at 85 %

[2] Maximum at the Tc-point

Lifespan

ECG lifetime	50000 / 100000 h [1]

[1] T_c = 75°C, 0.2% / 1,000 h failure rate / T_c = 65°C, 0.1% / 1,000 h failure rate

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Capabilities

Dimmable	Yes
Dimming interface	Qualified Bluetooth mesh by Silvair
Dimming range	1...100 %
Dimming method	Amplitude Modulation
Overheating protection	Automatic reversible
Overload protection	Automatic reversible
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)]
Suitable for fixtures with prot. class	I / II
Type of connection, input side	Push terminal
Type of connection, output side	Push terminal
Suitable for through-wiring	No
Suitable for emergency lighting	Yes
Constant lumen function	Programmable
Programming interface	NFC
Reset	Manual [2)]
Number of channels	1
DALI-2 Energy Data	No
DALI-2 Diagnostic Data	No

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

[2)] see additional product information

Programming

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

Programmable features

Emergency Mode	Yes

Certificates & standards

Approval marks – approval	CE / EL / EAC [1)]

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Standards	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62479/Acc. to ETSI EN 300 328/Acc. to ETSI EN 301 489-17/Acc. to ETSI EN 301 489 - 1
Protection class	II
Type of protection	IP20

[1] In preparation

Logistical data

Commodity code	85044095900

Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)	
Date of Declaration	05-05-2023
Primary Article Identifier	4062172110129
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	c3f33c40-89a9-4146-a55d-b711bd9783c7

Additional product information

- By integrating the device into a casing the wireless range could be affected, in particular by metal surfaces. Therefore, the wireless range needs to be verified after integration.
- The device has passed successfully the SILVAIR Testing process.
- The device can be put into operation using the OSRAM HubSense Commissioning Tool (https://platform.hubsense.eu), subject to prior acceptance of the Terms of Use and the Privacy Policy.
- OSRAM may terminate or suspend the use of the HubSense Commissioning Tool at any time and for any or no reason in its sole discretion, even if access and use is continued to be allowed to others.
- The device complies with Bluetooth mesh Standard v1.0. It can also be used in 3rd party Bluetooth mesh network, that complies with this standard and that supports the mesh models of this device, and with certain 3rd party commissioning tools, that support the mesh models of this device. In order to ensure correct interoperability a verification with the 3rd party network components and the 3rd party commissioning tool is necessary in advance. Please contact OSRAM (support@hubsense.eu) to receive the actual list of supported models for this device.
- OSRAM shall have no liability for any 3rd party commissioning tool and does not make any representations, express or implied, about the availability and/or performance of such commissioning tool.
- OSRAM shall have no liability for and does not make any representations, express or implied, about the connectivity of OSRAM QBM products with any other products, that have passed the SILVAIR Testing process.
- Reset to factory setting: (1) Power off device and disconnect from mains, apply short circuit between LED+ and LED-, (2) connect device to mains and power on for at least 2 seconds, (3) power off device, disconnect from mains and remove short circuit. Reset completed.

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Download Data

	File
	User instruction OPTOTRONIC LED Power Supply
	User instruction OPTOTRONIC LED Power Supply
	Certificates OTi QBM NFC S I UK DoC 4281118 110222
	Certificates OT ENEC 40038447 260623
	Certificates OT EMC 40044675 031022
	Declarations of conformity OTi QBM NFC S I CE 4200206 110222
	CAD data OTI QBM NFC S IGS 140220
	CAD data OTI QBM NFC S STEP 140220
	CAD Data 2-dim OTI QBM NFC S CAD2PDF 140220
	CAD data 3-dim OTI QBM NFC S CAD3PDF 140220

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
4062172110129	OTi QBM 20/220...240/500 NFC S	Shipping carton box 20	208 mm x 158 mm x 107 mm	3.52 dm^3	2315.00 g

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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.

Disclaimer

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

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