

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

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



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

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

Product family features

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



Technical data

Electrical data

Nominal input voltage	220...240 V
Mains frequency	0...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
ECG efficiency	88 % ³⁾
Power loss in stand-by mode	<0.15 W
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⁾
Galvanic isolation	SELV
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

1) Permitted voltage range

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

3) Typical / At full load and 230 V

4) $t_{width} = 200 \mu s$ (measured at 50 % I_{peak})

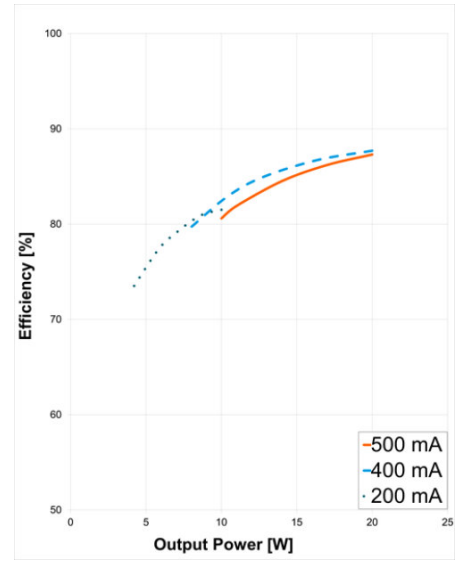
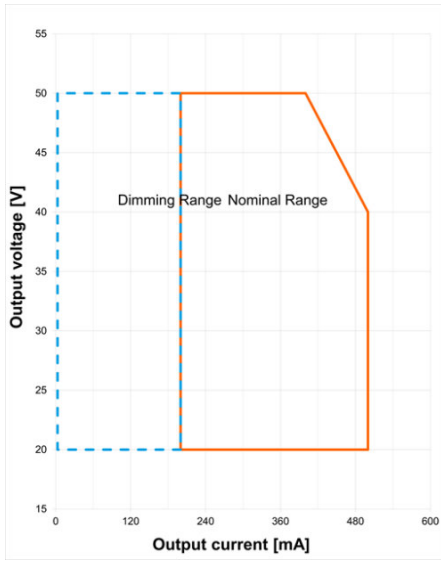
5) Maximum 60 V

6) $\pm 5\%$

7) Ripple average at 100 Hz

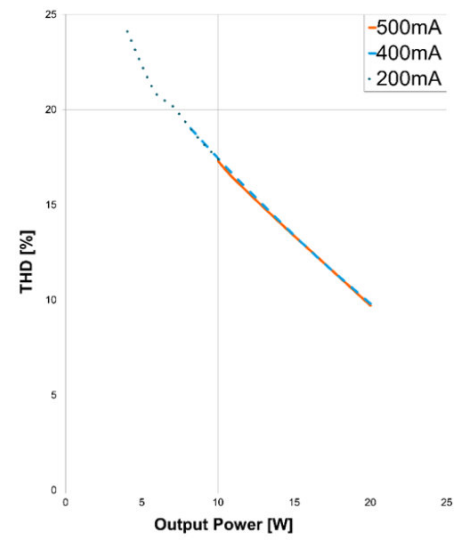
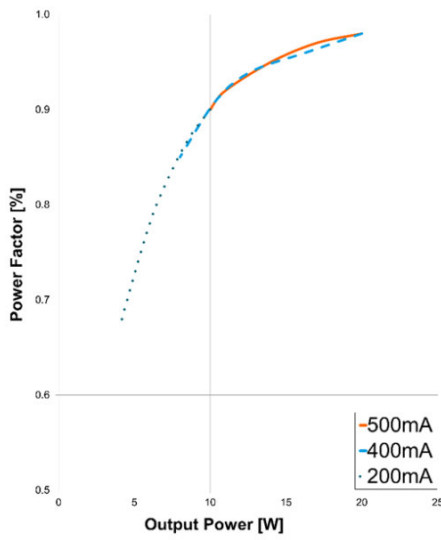
8) Partial load 4...20 W

9) 2.512 mW



Operating Window

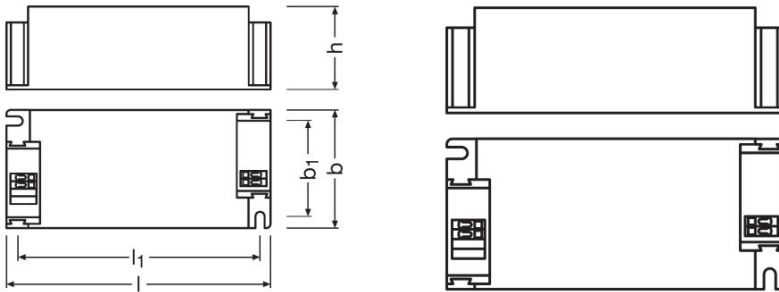
Typical Efficiency v Load 230 V 50 Hz



Typical Power Factor v Load

Typical THD v Load

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 mm ² ¹⁾
Cable cross-section, output side	0.5...1.5 mm ² 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
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Temperatures & operating conditions

Ambient temperature range	-20...+50 °C
Permitted rel. humidity during operation	5...85 % ¹⁾
Temperature range at storage	-25...85 °C
Permitted relative humidity at storage	0...85 %
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 T_c-point

Lifespan

ECG lifetime	50000 / 100000 h ¹⁾
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¹⁾ T_c = 75°C, 0.2% / 1,000 h failure rate / T_c = 65°C, 0.1% / 1,000 h failure rate

Additional product data

Encapsulated	No
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Capabilities

Dimmable	Yes
Dimming interface	Qualified Bluetooth mesh by Silvair
Dimming range	1...100 % ¹⁾
Dimming method	Amplitude Modulation
Overheating protection	Automatic reversible
Overload protection	Automatic reversible
Short-circuit protection	Automatic reversible
No-load proof	Yes
Max. cable length to lamp/LED module	2.0 m
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⁾ For maximum nominal output current

²⁾ see additional product information

Programming

Tuner4TRONIC	Yes
Tuner4TRONIC Field App	No
Programming device	NFC

Programmable features

Operating Current	Yes
Tuning Factor	Yes
Constant Lumen	Yes
Lamp Operating Time	Yes
End of Life	Yes

Product datasheet

Driver Guard	Yes
Emergency Mode	Yes
DALI-2 Luminaire Data	No
Configuration Lock	Yes
Soft Switch Off	Yes
Dim to Dark	Yes
OEM Key	No

Certificates & standards

Approval marks – approval	CE / EL / EAC ¹⁾
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	850440829000
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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.

Download Data

Product datasheet

File	
	User instruction OPTOTRONIC LED Power Supply
	Product Datasheet OTi QBM 20 NFC S DS 210720
	Certificates OT ENEC 40038447 030720
	Certificates OT EMC 40044675 080920
	Declarations of conformity OTi QBM NFC S I CE 4200206 290420
	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

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	228 mm x 208 mm x 78 mm	3.70 dm ³	2310.00 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.

Disclaimer

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