

OPTOTRONIC Intelligent – Qualified Bluetooth Mesh NFC I

Compact constant current LED driver – Dimmable



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
- Cable clamp housing for independent mounting
- Through-looping



Product family datasheet

Technical data

Electrical data

Product description	Nominal input voltage	Mains frequency	Input voltage AC	Input voltage DC	Total harmonic distortion	Power factor λ
OTi QBM 20/220...240/500 NFC I	220...240 V	0,50,60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	≥ 0.95
OTi QBM 30/220...240/700 NFC I	220...240 V	0,50,60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	≥ 0.95
OTi QBM 40/220...240/1A0 NFC I	220...240 V	0,50,60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	≥ 0.95

Product description	ECG efficiency	Power loss in stand-by mode	Inrush current	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 16 A (B)
OTi QBM 20/220...240/500 NFC I	88 % ³⁾	<0.15 W	< 20 A ⁴⁾	20	30
OTi QBM 30/220...240/700 NFC I	90 % ³⁾	<0.15 W	< 20 A ⁴⁾	20	30
OTi QBM 40/220...240/1A0 NFC I	91 % ³⁾	<0.15 W	< 20 A ⁴⁾	20	30

Product description	Surge capability (L/N-Ground)	Surge capability (L-N)	Nominal output voltage	U-OUT (working voltage)	Nominal output current
OTi QBM 20/220...240/500 NFC I	2 kV	1 kV	20...50 V ⁵⁾	60 V	200...500 mA ⁶⁾
OTi QBM 30/220...240/700 NFC I	2 kV	1 kV	20...50 V ⁵⁾	60 V	350...700 mA ⁶⁾
OTi QBM 40/220...240/1A0 NFC I	2 kV	1 kV	20...50 V ⁵⁾	60 V	500...1050 mA ⁶⁾

Product description	Default output current	Output current tolerance	Output ripple current (100 Hz)
OTi QBM 20/220...240/500 NFC I	350 mA	± 5 %	< 5 % ⁷⁾
OTi QBM 30/220...240/700 NFC I	500 mA	± 5 %	< 5 % ⁷⁾
OTi QBM 40/220...240/1A0 NFC I	700 mA	± 5 %	< 5 % ⁷⁾

Product description	Output PSTLM	Output SVM	Nominal output power	Galvanic isolation
OTi QBM 20/220...240/500 NFC I	≤ 1	≤ 0.4	20 W ⁸⁾	SELV
OTi QBM 30/220...240/700 NFC I	≤ 1	≤ 0.4	30 W ¹⁰⁾	SELV
OTi QBM 40/220...240/1A0 NFC I	≤ 1	≤ 0.4	40 W ¹¹⁾	SELV

Product description	Current set	Radio frequency	Maximum TX power
OTi QBM 20/220...240/500 NFC I	NFC	2.4 GHz	+4 dBm ⁹⁾
OTi QBM 30/220...240/700 NFC I	NFC	2.4 GHz	+4 dBm ⁹⁾
OTi QBM 40/220...240/1A0 NFC I	NFC	2.4 GHz	+4 dBm ⁹⁾

Product description	Wireless protocol	Wireless range
OTi QBM 20/220...240/500 NFC I	Qualified Bluetooth mesh enabled by Silvair	10 m line of sight
OTi QBM 30/220...240/700 NFC I	Qualified Bluetooth mesh enabled by Silvair	10 m line of sight

Product family datasheet

Product description	Wireless protocol	Wireless range
OTi QBM 40/220...240/1A0 NFC I	Qualified Bluetooth mesh enabled by Silvair	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) $t_{\text{width}} = 200 \mu\text{s}$ (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
 10) Partial load 10...30 W
 11) Partial load 20...40 W

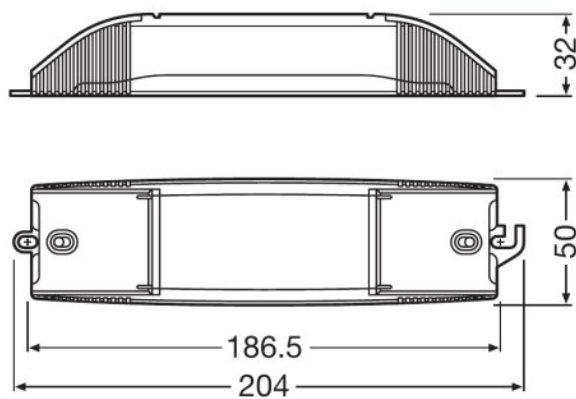
Dimensions & weight

Product description	Mounting hole spacing, length	Product weight	Cable cross-section, input side	Cable cross-section, output side	Wire preparation length, input side
OTi QBM 20/220...240/500 NFC I	186.5 mm	160.00 g	0.75...2.5 mm ² 1)	0.5...1.5 mm ² 1)	6.0 mm
OTi QBM 30/220...240/700 NFC I	186.5 mm	160.00 g	0.75...2.5 mm ² 1)	0.5...1.5 mm ² 1)	6.0 mm
OTi QBM 40/220...240/1A0 NFC I	186.5 mm	170.00 g	0.75...2.5 mm ² 1)	0.5...1.5 mm ² 1)	6.0 mm

Product description	Wire preparation length, output side	Height	Width	Length
OTi QBM 20/220...240/500 NFC I	7...8 mm	32.0 mm	50.0 mm	204.0 mm
OTi QBM 30/220...240/700 NFC I	7...8 mm	32.0 mm	50.0 mm	204.0 mm
OTi QBM 40/220...240/1A0 NFC I	7...8 mm	32.0 mm	50.0 mm	204.0 mm

- 1) Solid or flexible leads

Product line drawing



OTi QBM 20/220...240/500 NFC I, OTi QBM
30/220...240/700 NFC I, OTi QBM 40/220...240/1A0 NFC I

Colors & materials

Product description	Casing material
OTi QBM 20/220...240/500 NFC I	Plastic
OTi QBM 30/220...240/700 NFC I	Plastic
OTi QBM 40/220...240/1A0 NFC I	Plastic

Temperatures & operating conditions

Product description	Ambient temperature range	Permitted rel. humidity during operation	Temperature range at storage	Permitted relative humidity at storage
OTi QBM 20/220...240/500 NFC I	-20...+50 °C	5...85 % ¹⁾	-25...85 °C	0...85 %
OTi QBM 30/220...240/700 NFC I	-20...+50 °C	5...85 % ¹⁾	-25...85 °C	0...85 %
OTi QBM 40/220...240/1A0 NFC I	-20...+50 °C	5...85 % ¹⁾	-25...85 °C	0...85 %

Product description	Max.housing temperature in case of fault	Maximum temperature at tc test point
OTi QBM 20/220...240/500 NFC I	110 °C	75 °C ²⁾
OTi QBM 30/220...240/700 NFC I	110 °C	80 °C ²⁾
OTi QBM 40/220...240/1A0 NFC I	110 °C	85 °C ²⁾

Product family datasheet

¹⁾ Maximum 56 days/year at 85 %

²⁾ Maximum at the T_c-point

Lifespan

Product description	ECG lifetime
OTi QBM 20/220...240/500 NFC I	50000 / 100000 h ¹⁾
OTi QBM 30/220...240/700 NFC I	50000 / 100000 h ²⁾
OTi QBM 40/220...240/1A0 NFC I	50000 / 100000 h ³⁾

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

²⁾ T_c = 80°C, 0.2% / 1,000 h failure rate / T_c = 70°C, 0.1% / 1,000 h failure rate

³⁾ T_c = 85°C, 0.2% / 1,000 h failure rate / T_c = 75°C, 0.1% / 1,000 h failure rate

Capabilities

Product description	Reset
OTi QBM 20/220...240/500 NFC I	Manual ¹⁾
OTi QBM 30/220...240/700 NFC I	Manual ¹⁾
OTi QBM 40/220...240/1A0 NFC I	Manual ¹⁾

¹⁾ see additional product information

Programming

Product description	Programming device	Tuner4TRONIC Field App	Tuner4TRONIC
OTi QBM 20/220...240/500 NFC I	NFC	Yes	Yes
OTi QBM 30/220...240/700 NFC I	NFC	Yes	Yes
OTi QBM 40/220...240/1A0 NFC I	NFC	Yes	Yes

Product description	Box programming
OTi QBM 20/220...240/500 NFC I	Yes
OTi QBM 30/220...240/700 NFC I	Yes
OTi QBM 40/220...240/1A0 NFC I	Yes

Programmable features

Product description	DALI-2 Luminaire Data
OTi QBM 20/220...240/500 NFC I	No
OTi QBM 30/220...240/700 NFC I	No
OTi QBM 40/220...240/1A0 NFC I	No

Certificates & standards

Product description	Approval marks – approval	Standards	Protection class	Type of protection
OTi QBM 20/220...240/500 NFC I	CE / EL / EAC ¹⁾	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	II	IP20
OTi QBM 30/220...240/700 NFC I	CE / EL / EAC ¹⁾	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	II	IP20
OTi QBM 40/220...240/1A0 NFC I	CE / EL / EAC ¹⁾	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	II	IP20

¹⁾ In preparation

Logistical data

Product description	Commodity code
OTi QBM 20/220...240/500 NFC I	850440909000
OTi QBM 30/220...240/700 NFC I	850440909000
OTi QBM 40/220...240/1A0 NFC I	850440909000

Application advice

For more detailed application information and graphics please see product datasheet.

Product family datasheet

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.

Sales and Technical Support

Sales and Technical Support www.osram.com

Download Data

File	
	User instruction OPTOTRONIC LED Power Supply
	User instruction OPTOTRONIC LED Power Supply
	Product Datasheet OTi QBM 20 NFC I DS 210720
	Certificates OTi QBM NFC S I UK DoC 4281118 010621
	Certificates OT ENEC 40038447 210721
	Certificates OT EMC 40044675 250621
	Declarations of conformity OTi QBM NFC S I CE 4200206 290420
	CAD data 3-dim PTi 20 I CAD3PDF
	CAD data 3-dim PTi 20 I IGS

Product family datasheet

	CAD data 3-dim PTi 20 I STEP
	CAD data PDF PTi 20 I CAD2PDF
	Product Datasheet OTi QBM 30 NFC I DS 210720
	Product Datasheet OTi QBM 40 NFC I DS 210720

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4062172115025	OTi QBM 20/220...240/500 NFC I	Shipping carton box 20	428 mm x 173 mm x 121 mm	8.96 dm ³	3467.00 g
4062172115049	OTi QBM 30/220...240/700 NFC I	Shipping carton box 20	428 mm x 173 mm x 121 mm	8.96 dm ³	3467.00 g
4062172115063	OTi QBM 40/220...240/1A0 NFC I	Shipping carton box 20	428 mm x 173 mm x 121 mm	8.96 dm ³	3467.00 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.