Product family datasheet

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

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 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	Efficiency in full-load	Inrush current	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 16 A (B)
OTi QBM 30/220...240/700 NFC I	90 % [3)]	< 20 A [4)]	20	30
OTi QBM 40/220...240/1A0 NFC I	91 % [3)]	< 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 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 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	Maximum output power
OTi QBM 30/220...240/700 NFC I	≤1	≤0.4	30 W [8)]	30 W
OTi QBM 40/220...240/1A0 NFC I	≤1	≤0.4	40 W [10)]	40 W

Product description	Current set	Radio frequency	Maximum TX power
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	Power loss in stand-by mode	Galvanic isolation primary/secondary
OTi QBM 30/220...240/700 NFC I	Qualified Bluetooth mesh enabled by Silvair	10 m line of sight	<0.15 W	SELV
OTi QBM 40/220...240/1A0 NFC I	Qualified Bluetooth mesh enabled by Silvair	10 m line of sight	<0.15 W	SELV

Product description	Networked standby power
OTi QBM 30/220...240/700 NFC I	<0.22 W [3)]
OTi QBM 40/220...240/1A0 NFC I	<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

8) Partial load 10…30 W

9) 2.512 mW

10) Partial load 20…40 W

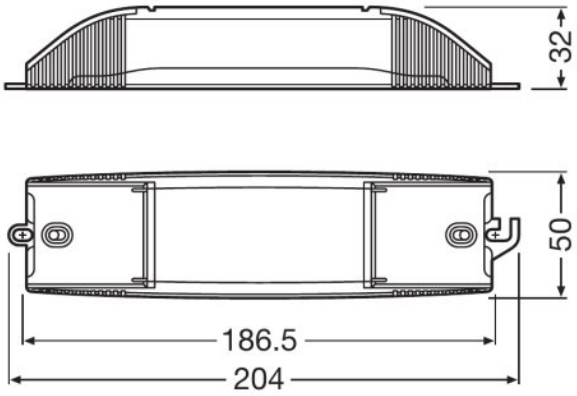
Dimensions & weight

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 30/220…240/700 NFC I	186.5 mm	160.00 g	0.75…2.5 mm² 1)	0.5…1.5 mm² 1)	6.0 mm
OTi QBM 40/220…240/1A0 NFC I	186.5 mm	170.00 g	0.75…2.5 mm² 1)	0.5…1.5 mm² 1)	6.0 mm

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

1) Solid or flexible leads

Product line drawing



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

Colors & materials

Product description	Casing material
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	Max.housing temperature in case of fault
OTi QBM 30/220...240/700 NFC I	-20...+50 °C	5...85 % [1]	-25...85 °C	110 °C
OTi QBM 40/220...240/1A0 NFC I	-20...+50 °C	5...85 % [1]	-25...85 °C	110 °C

Product description	Maximum temperature at tc test point
OTi QBM 30/220...240/700 NFC I	80 °C [2]
OTi QBM 40/220...240/1A0 NFC I	85 °C [2]

[1] Maximum 56 days/year at 85 %

[2] Maximum at the Tc-point

Lifespan

Product description	ECG lifetime
OTi QBM 30/220...240/700 NFC I	50000 / 100000 h [1]
OTi QBM 40/220...240/1A0 NFC I	50000 / 100000 h [2]

[1] T_c = 80°C, 0.2% / 1,000 h failure rate / T_c = 70°C, 0.1% / 1,000 h failure rate
[2] T_c = 85°C, 0.2% / 1,000 h failure rate / T_c = 75°C, 0.1% / 1,000 h failure rate

Additional product data

Product description	Encapsulated
OTi QBM 30/220...240/700 NFC I	No
OTi QBM 40/220...240/1A0 NFC I	

Capabilities

Product description	Dimmable	Dimming interface	Dimming range	Dimming method
OTi QBM 30/220...240/700 NFC I	Yes	Qualified Bluetooth mesh by Silvair	1...100 %	Amplitude Modulation
OTi QBM 40/220...240/1A0 NFC I	Yes	Qualified Bluetooth mesh by Silvair	1...100 %	Amplitude Modulation

Product description	Overheating protection	Overload protection	Short-circuit protection	No-load proof
OTi QBM 30/220...240/700 NFC I	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTi QBM 40/220...240/1A0 NFC I	Automatic reversible	Automatic reversible	Automatic reversible	Yes

Product description	Intended for no-load operation	Max. cable length to lamp/LED module	Suitable for fixtures with prot. class	Type of connection, input side
OTi QBM 30/220...240/700 NFC I	No	2.0 m [1]	I / II	Screw terminal
OTi QBM 40/220...240/1A0 NFC I	No	2.0 m [1]	I / II	Screw terminal

Product description	Type of connection, output side	DALI-2 Diagnostic Data	DALI-2 Energy Data
OTi QBM 30/220...240/700 NFC I	Push terminal	No	No
OTi QBM 40/220...240/1A0 NFC I	Push terminal	No	No

Product description	Constant lumen function	Suitable for emergency lighting	Reset	Control interface
OTi QBM 30/220...240/700 NFC I	Programmable	Yes	Manual [2]	qualified Bluetooth mesh
OTi QBM 40/220...240/1A0 NFC I	Programmable	Yes	Manual [2]	

Product description	Suitable for through-wiring	Programming interface	Number of channels
OTi QBM 30/220...240/700 NFC I	Yes	NFC	1
OTi QBM 40/220...240/1A0 NFC I	Yes	NFC	1

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

2) see additional product information

Programming

Product description	Box programming	Tuner4TRONIC	Tuner4TRONIC Field App
OTi QBM 30/220...240/700 NFC I	Yes	Yes	Yes
OTi QBM 40/220...240/1A0 NFC I	Yes	Yes	Yes

Product description	Programming device
OTi QBM 30/220...240/700 NFC I	NFC
OTi QBM 40/220...240/1A0 NFC I	NFC

Programmable features

Product description	Dim to Dark	Soft Switch Off	OEM Key
OTi QBM 30/220...240/700 NFC I	Yes	Yes	No
OTi QBM 40/220...240/1A0 NFC I			

Product description	Configuration Lock	Emergency Mode	Driver Guard
OTi QBM 30/220...240/700 NFC I	Yes	Yes	Yes
OTi QBM 40/220...240/1A0 NFC I		Yes	

Certificates & standards

Product description	Approval marks – approval	Standards	Protection class	Type of protection
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 30/220...240/700 NFC I	85044095900
OTi QBM 40/220...240/1A0 NFC I	85044095900

Environmental information
Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)

Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1
OTi QBM 30/220...240/700 NFC I	07-07-2023	4062172115049	Lead
OTi QBM 40/220...240/1A0 NFC I	05-05-2023	4062172115063	Lead

Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTi QBM 30/220...240/700 NFC I	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	27499a45-fac3-4510-a0cd-d7682f1fa53a
OTi QBM 40/220...240/1A0 NFC I	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	8abe20bd-1677-4589-a4f1-7eee7a3a3c94

Application advice

For more detailed application information and graphics please see product 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
	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 3-dim PTi 20 I CAD3PDF
	CAD data 3-dim PTi 20 I IGS
	CAD data 3-dim PTI 20 I STEP

	CAD data PDF PTi 20 I CAD2PDF

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
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	3667.00 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.