

OPTOTRONIC Intelligent – DALI 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
- Installation in emergency lighting systems according to IEC 61347-2-13, appendix J
- Suitable for indoor SELV installations
- Suitable for luminaires of protection classes I and II

Product family benefits

- Versatile DALI window driver due to flexible output characteristic
- Locking and unlocking of luminaire/driver data
- Easy and fast output current setting via NFC
- Very high efficiency
- High-quality dimming of 1...100 % by amplitude dimming
- DALI-2 certified incl. Parts 251, 252, 253



Product family datasheet

Product family features

- Supply voltage: 220...240 V
- Line frequency: 0 Hz, 50...60 Hz
- Line voltage: 198...264 V
- According to EN 61347-1, 61347-2-13, 62384
- RI suppression: to EN 55015/CISPR 15
- Immunity according to EN 61547
- Type of protection: IP20
- Integrated cable clamp for luminaire and independent installation

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 DALI 20/220...240/500 NFC I	220...240 V	0,50,60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	0.61C...0.95
OTi DALI 30/220...240/700 NFC I	220...240 V	0,50,60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	0.75C...0.98
OTi DALI 40/220...240/1A0 NFC I	220...240 V	0,50,60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	0.84C...0.98

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 DALI 20/220...240/500 NFC I	88 % ³⁾	< 20 A ⁴⁾	20	30
OTi DALI 30/220...240/700 NFC I	90 % ³⁾	< 20 A ⁴⁾	20	30
OTi DALI 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 DALI 20/220...240/500 NFC I	2 kV	1 kV	20...50 V ⁵⁾	60 V	200...500 mA ⁶⁾
OTi DALI 30/220...240/700 NFC I	2 kV	1 kV	20...50 V ⁵⁾	60 V	350...700 mA ⁶⁾
OTi DALI 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 DALI 20/220...240/500 NFC I	350 mA	±5 %	< 5 % ⁷⁾
OTi DALI 30/220...240/700 NFC I	500 mA	±5 %	< 5 % ⁷⁾
OTi DALI 40/220...240/1A0 NFC I	700 mA	±5 %	< 5 % ⁷⁾

Product description	Output PSTLM	Output SVM	Nominal output power	Maximum output power
OTi DALI 20/220...240/500 NFC I	≤1	≤0.4	20 W ⁸⁾	20 W
OTi DALI 30/220...240/700 NFC I	≤1	≤0.4	30 W ⁹⁾	30 W
OTi DALI 40/220...240/1A0 NFC I	≤1	≤0.4	40 W ¹⁰⁾	40 W

Product description	Galvanic isolation DALI/mains	Power loss in stand-by mode	Networked standby power	Current set
OTi DALI 20/220...240/500 NFC I	Basic	<0.15 W	≤0.18 W ³⁾	DALI / NFC
OTi DALI 30/220...240/700 NFC I	Basic	<0.15 W	≤0.18 W ³⁾	DALI / NFC
OTi DALI 40/220...240/1A0 NFC I	Basic	<0.15 W	≤0.18 W ³⁾	DALI / NFC

Product family datasheet

Product description	Galvanic isolation primary/secondary	Galvanic isolation DALI/output
OTi DALI 20/220...240/500 NFC I	SELV	SELV
OTi DALI 30/220...240/700 NFC I	SELV	SELV
OTi DALI 40/220...240/1A0 NFC I	SELV	SELV

- 1) Permitted voltage range
- 2) At full load, 220...240 V, 50 Hz / see graphs
- 3) at 230 V, 50 Hz
- 4) $t_{width} = 200 \mu s$ (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) Partial load 10...30 W
- 10) Partial load 20...40 W

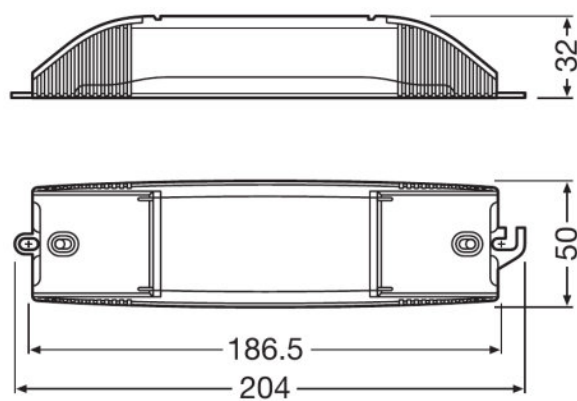
Dimensions & weight

Product description	Mounting hole spacing, length	Product weight	Cable cross- section, input side	Cable cross- section, output side	Wire preparation length, input side
OTi DALI 20/220...240/500 NFC I	186.5 mm	160.00 g	0.2...2.5 mm ² 1)	0.2...1.5 mm ² 1)	7...8 mm
OTi DALI 30/220...240/700 NFC I	186.5 mm	160.00 g	0.2...2.5 mm ² 1)	0.2...1.5 mm ² 1)	7...8 mm
OTi DALI 40/220...240/1A0 NFC I	186.5 mm	170.00 g	0.2...2.5 mm ² 1)	0.2...1.5 mm ² 1)	7...8 mm

Product description	Wire preparation length, output side	Length	Width	Height
OTi DALI 20/220...240/500 NFC I	8.0...9.0 mm	204.0 mm	50.0 mm	32.0 mm
OTi DALI 30/220...240/700 NFC I	8.0...9.0 mm	204.0 mm	50.0 mm	32.0 mm
OTi DALI 40/220...240/1A0 NFC I	8.0...9.0 mm	204.0 mm	50.0 mm	32.0 mm

- 1) Solid or flexible leads

Product line drawing



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

Colors & materials

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

Temperatures & operating conditions

Product description	Ambient temperature range	Maximum temperature at tc test point	Max.housing temperature in case of fault	Temperature range at storage
OTi DALI 20/220...240/500 NFC I	-20...+50 °C	75 °C ¹⁾	110 °C	-25...85 °C
OTi DALI 30/220...240/700 NFC I	-20...+50 °C	80 °C ¹⁾	110 °C	-25...85 °C
OTi DALI 40/220...240/1A0 NFC I	-20...+50 °C	85 °C ¹⁾	110 °C	-25...85 °C

Product description	Permitted rel. humidity during operation
OTi DALI 20/220...240/500 NFC I	5...85 % ²⁾
OTi DALI 30/220...240/700 NFC I	5...85 % ²⁾
OTi DALI 40/220...240/1A0 NFC I	5...85 % ²⁾

¹⁾ Maximum at the Tc-point

Product family datasheet

2) Maximum 56 days/year at 85 %

Lifespan

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

Additional product data

Product description	Encapsulated
OTi DALI 20/220...240/500 NFC I	No
OTi DALI 30/220...240/700 NFC I	No
OTi DALI 40/220...240/1A0 NFC I	No

Capabilities

Product description	Dimmable	Dimming interface	Dimming range	Dimming method
OTi DALI 20/220...240/500 NFC I	Yes	DALI-2	1...100 %	Amplitude Modulation
OTi DALI 30/220...240/700 NFC I	Yes	DALI-2	1...100 %	Amplitude Modulation
OTi DALI 40/220...240/1A0 NFC I	Yes	DALI-2	1...100 %	Amplitude Modulation

Product description	Overheating protection	Overload protection	Short-circuit protection	No-load proof
OTi DALI 20/220...240/500 NFC I	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTi DALI 30/220...240/700 NFC I	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTi DALI 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 DALI 20/220...240/500 NFC I	No	2.0 m ¹⁾	I / II	Screw terminal
OTi DALI 30/220...240/700 NFC I	No	2.0 m ¹⁾	I / II	Screw terminal
OTi DALI 40/220...240/1A0 NFC I	No	2.0 m ¹⁾	I / II	Screw terminal

Product description	Type of connection, output side	Number of channels	DALI-2 Energy Data
OTi DALI 20/220...240/500 NFC I	Push terminal	1	Yes ²⁾
OTi DALI 30/220...240/700 NFC I	Push terminal	1	Yes ²⁾
OTi DALI 40/220...240/1A0 NFC I	Push terminal	1	Yes ²⁾

Product family datasheet

Product description	Suitable for through-wiring	Control interface	Programming interface
OTi DALI 20/220...240/500 NFC I	Yes	DALI-2	DALI, NFC
OTi DALI 30/220...240/700 NFC I	Yes	DALI-2	DALI, NFC
OTi DALI 40/220...240/1A0 NFC I	Yes	DALI-2	DALI, NFC

Product description	Constant lumen function	Suitable for emergency lighting	DALI-2 Diagnostic Data
OTi DALI 20/220...240/500 NFC I	Programmable	Yes	Yes ³⁾
OTi DALI 30/220...240/700 NFC I	Programmable	Yes	Yes ³⁾
OTi DALI 40/220...240/1A0 NFC I	Programmable	Yes	Yes ³⁾

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

2) Acc. DALI part 252

3) Acc. DALI part 253

Programming

Product description	Box programming	Tuner4TRONIC	Tuner4TRONIC Field App
OTi DALI 20/220...240/500 NFC I	Yes	Yes	Yes
OTi DALI 30/220...240/700 NFC I	Yes	Yes	Yes
OTi DALI 40/220...240/1A0 NFC I	Yes	Yes	Yes

Product description	Programming device
OTi DALI 20/220...240/500 NFC I	DALI / NFC
OTi DALI 30/220...240/700 NFC I	DALI / NFC
OTi DALI 40/220...240/1A0 NFC I	DALI / NFC

Programmable features

Product description	Lamp Operating Time	Constant Lumen	Operating Current
OTi DALI 20/220...240/500 NFC I	Yes	Yes	Yes
OTi DALI 30/220...240/700 NFC I	Yes	Yes	Yes
OTi DALI 40/220...240/1A0 NFC I	Yes	Yes	Yes

Product description	OEM Key	Corridor Functionality	TouchDIM + Sensor
OTi DALI 20/220...240/500 NFC I	No	No	No
OTi DALI 30/220...240/700 NFC I	No	No	No
OTi DALI 40/220...240/1A0 NFC I	No	No	No

Product description	Dim to Dark	Soft Switch Off	Configuration Lock
OTi DALI 20/220...240/500 NFC I	Yes	Yes	Yes
OTi DALI 30/220...240/700 NFC I	Yes	Yes	Yes
OTi DALI 40/220...240/1A0 NFC I	Yes	Yes	Yes

Product description	DALI-2 Luminaire Data	Emergency Mode	DALI Settings
OTi DALI 20/220...240/500 NFC I	Yes ¹⁾	Yes	Yes
OTi DALI 30/220...240/700 NFC I	Yes ¹⁾	Yes	Yes

Product family datasheet

Product description	DALI-2 Luminaire Data	Emergency Mode	DALI Settings
OTi DALI 40/220...240/1A0 NFC I	Yes ¹⁾	Yes	Yes

Product description	Driver Guard
OTi DALI 20/220...240/500 NFC I	Yes
OTi DALI 30/220...240/700 NFC I	Yes
OTi DALI 40/220...240/1A0 NFC I	Yes

¹⁾ Acc. DALI part 251

Certificates & standards

Product description	Approval marks – approval	Standards	Protection class	Type of protection
OTi DALI 20/220...240/500 NFC I	CE / EL / DALI-2 / EAC	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 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1	II	IP20
OTi DALI 30/220...240/700 NFC I	CE / UKCA / EL / DALI-2 / EAC	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 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1	II	IP20
OTi DALI 40/220...240/1A0 NFC I	CE / UKCA / EL / DALI-2 / EAC	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 62386/Acc. to IEC 62386-101:Ed2/Acc. to IEC 62386-102:Ed2/Acc. to IEC 62386-207:Ed1	II	IP20

Logistical data

Product description	Commodity code
OTi DALI 20/220...240/500 NFC I	85044083900
OTi DALI 30/220...240/700 NFC I	85044083900
OTi DALI 40/220...240/1A0 NFC I	85044083900

Product family datasheet

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 DALI 20/220...240/500 NFC I	28-04-2023	4062172114967	Lead
OTi DALI 30/220...240/700 NFC I	28-04-2023	4062172114981	Lead
OTi DALI 40/220...240/1A0 NFC I	21-04-2023	4062172115001	Lead

Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTi DALI 20/220...240/500 NFC I	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	4091d053-f0ca-4748-84b0-fea365ceb59b
OTi DALI 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.	807afa58-f1c0-4da2-bc24-0e0630eec6f4
OTi DALI 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.	296646cd-9a51-4a08-a754-5089827f49f9

Application advice

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

Sales and Technical Support

Sales and Technical Support www.osram.com

Download Data

File	
	User instruction OPTOTRONIC LED Power Supply
	Certificates OT ENEC 40038447 260623
	Certificates OT EMC 40044675 031022
	Declarations of conformity OTi DALI NFC S I CE 4169161 110222
	Declarations of conformity OTi DALI NFC S I UK DoC 4281113 110222

Product family datasheet

	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
4062172114967	OTi DALI 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
4062172114981	OTi DALI 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
4062172115001	OTi DALI 40/220...240/1A0 NFC I	Shipping carton box 20	428 mm x 263 mm x 87 mm	9.79 dm ³	3807.00 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.

Data privacy

Product family datasheet

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on 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.

Disclaimer

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