

OPTOTRONIC Intelligent – DEXAL

Compact constant current LED driver – Dimmable



Areas of application

- DEXAL, easy connection to different partner BMS systems
- Suitable for "Works with OSRAM DEXAL" partner components
- Installation in emergency lighting systems according to IEC 61347-2-13, appendix J
- Suitable for use in luminaires with flexible current setting
- Suitable for indoor SELV installations
- Suitable for luminaires of protection classes I and II
- Suitable for downlights, spotlights and LED panels
- Installation via Cable Clamp Kit possible (depending on version of product)

Product family benefits

- Versatile DALI window driver due to flexible output characteristic
- Integrated DEXAL Bus power supply for sensors and wireless radios
- Simplified luminaire design for wireless lighting control system and sensors
- Locking and unlocking of luminaire/driver data
- Advanced luminaire/driver data (power, energy, operating hours...) for analytics
- D4i certified incl. Parts 250, 251, 252, 253
- Easy and fast output current setting via NFC
- Very high efficiency
- High-quality dimming of 1...100 % by amplitude dimming



Product family datasheet

Versatile scope of application due to OSRAM DALI Technology:

- Suitable for emergency Installations (acc. to EN 60598-2-22 and IEC 61347-2-13,appendix J) thanks to DC detection (0 Hz, pulsating DC), on/off switchable
 - Feedback of power consumption and operating hours (Fit for SMART GRID)
 - Suitable for buildings according to EPBD/BREEAM/LEED due to automatic Constant Lumen Output setting
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Product family features

- Supply voltage: 220...240 V
- Line frequency: 0 Hz | 50 Hz | 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
- Lifetime: up to 100,000 h
- Type of protection: IP20

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 DX 25/220...240/700 NFC	220...240 V	0/50/60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	> 0.95
OTI DX 35/220...240/1A0 NFC	220...240 V	0/50/60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	> 0.95
OTI DX 50/220...240/1A4 NFC	220...240 V	50...60 Hz	198...264 V ¹⁾	176...276 V	< 10 % ²⁾	> 0.95

Product description	Efficiency in full-load	Device power loss	Networked standby power	Inrush current
OTI DX 25/220...240/700 NFC	88 % ³⁾	-	0.15 W ³⁾	15 A ⁴⁾
OTI DX 35/220...240/1A0 NFC	90 % ³⁾	-	0.15 W ³⁾	15 A ⁴⁾
OTI DX 50/220...240/1A4 NFC	91 % ³⁾	6.2 W	<0.15 W ³⁾	30 A ¹⁰⁾

Product description	Max. ECG no. on circuit breaker 10 A (C)	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 16 A (B)	Max. ECG no. on circuit breaker 16 A (C)	Max. ECG no. on circuit breaker 25 A (B)
OTI DX 25/220...240/700 NFC	-	18	28	-	-
OTI DX 35/220...240/1A0 NFC	-	18	28	-	-
OTI DX 50/220...240/1A4 NFC	-	12	20	-	-

Product description	Surge capability (L/N-Ground)	Surge capability (L-N)	Nominal output voltage	U-OUT (working voltage)	Nominal output current
OTI DX 25/220...240/700 NFC	2 kV	1 kV	15...54 V ⁵⁾	60 V	180...700 mA ⁶⁾
OTI DX 35/220...240/1A0 NFC	2 kV	1 kV	15...54 V ⁵⁾	60 V	350...1050 mA ⁶⁾
OTI DX 50/220...240/1A4 NFC	2 kV	1 kV	15...54 V ⁵⁾	60 V	600...1400 mA ⁶⁾

Product description	Default output current	Output current tolerance	Output ripple current (100 Hz)
OTI DX 25/220...240/700 NFC	500 mA	±3 %	< 3 % ⁷⁾
OTI DX 35/220...240/1A0 NFC	700 mA	±3 %	< 3 % ⁷⁾
OTI DX 50/220...240/1A4 NFC	1050 mA	±3 %	< 3 % ⁷⁾

Product description	Output PSTLM	Output SVM	Nominal output power	Maximum output power
OTI DX 25/220...240/700 NFC	≤1	≤0.4	27 W ⁸⁾	27 W
OTI DX 35/220...240/1A0 NFC	≤1	≤0.4	35 W ⁹⁾	35 W
OTI DX 50/220...240/1A4 NFC	≤1	≤0.4	55 W ¹¹⁾	55 W

Product description	Galvanic isolation primary/secondary	Galvanic isolation DALI/mains	Current set
OTI DX 25/220...240/700 NFC	SELV	SELV	DALI / NFC
OTI DX 35/220...240/1A0 NFC	SELV	SELV	DALI / NFC

Product family datasheet

Product description	Galvanic isolation primary/secondary	Galvanic isolation DALI/mains	Current set
OTI DX 50/220...240/1A4 NFC	SELV	SELV	DALI / NFC

Product description	Galvanic isolation DALI/output	DEXAL Peak Supply Current	DEXAL Guaranteed Supply Current
OTI DX 25/220...240/700 NFC	SELV	60 mA	53 mA
OTI DX 35/220...240/1A0 NFC	SELV	60 mA	53 mA
OTI DX 50/220...240/1A4 NFC	SELV	60 mA	53 mA

Product description	DEXAL Supply Voltage
OTI DX 25/220...240/700 NFC	15 V
OTI DX 35/220...240/1A0 NFC	15 V
OTI DX 50/220...240/1A4 NFC	15 V

1) Permitted voltage range

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

3) at 230 V, 50 Hz

4) $t_{width} = 220 \mu s$ (measured at 50 % I_{peak})

5) Maximum 60 V

6) $\pm 3\%$

7) Ripple average at 100 Hz

8) Partial load 7...27 W

9) Partial load 15...35 W

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

11) Partial load 22...55 W

Dimensions & weight

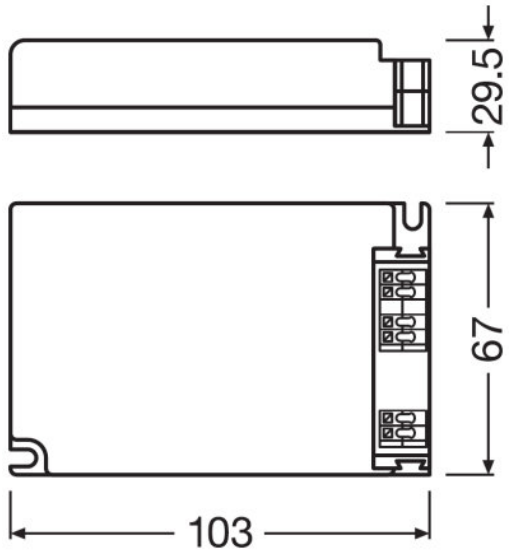
Product description	Mounting hole spacing, length	Mounting hole spacing, width	Product weight	Cable cross-section, input side	Cable cross-section, output side
OTI DX 25/220...240/700 NFC	94.0 mm	58.0 mm	155.00 g	0.2...1.5 mm ² 1)	0.2...1.5 mm ² 1)
OTI DX 35/220...240/1A0 NFC	94.0 mm	58.0 mm	155.00 g	0.2...1.5 mm ² 1)	0.2...1.5 mm ² 1)
OTI DX 50/220...240/1A4 NFC	99.0 mm	64.0 mm	185.00 g	0.2...1.5 mm ² 1)	0.2...1.5 mm ² 1)

Product description	Wire preparation length, input side	Wire preparation length, output side	Height	Length	Width
OTI DX 25/220...240/700 NFC	8.0...9.0 mm	8.0...9.0 mm	29.5 mm	103.0 mm	67.0 mm
OTI DX 35/220...240/1A0 NFC	8.0...9.0 mm	8.0...9.0 mm	29.5 mm	103.0 mm	67.0 mm
OTI DX 50/220...240/1A4 NFC	8.0...9.0 mm	8.0...9.0 mm	25.0 mm	110.0 mm	75.0 mm

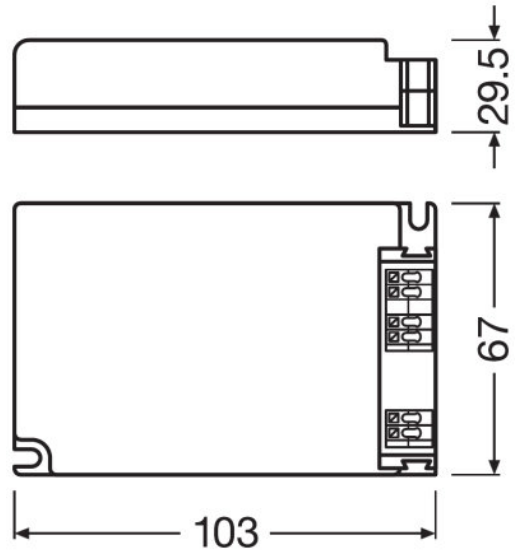
1) Solid or flexible leads

Product family datasheet

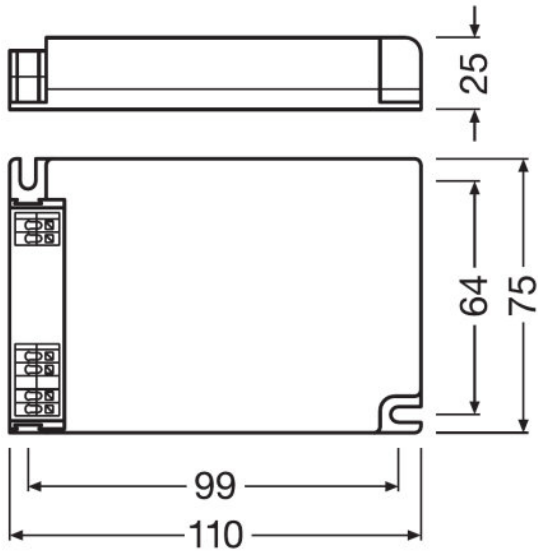
Product line drawing



OTI DX 25/220...240/700 NFC



OTI DX 35/220...240/1A0 NFC



OTI DX 50/220...240/1A4 NFC

Product family datasheet

Colors & materials

Product description	Casing material
OTI DX 25/220...240/700 NFC	Plastic
OTI DX 35/220...240/1A0 NFC	Plastic
OTI DX 50/220...240/1A4 NFC	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 DX 25/220...240/700 NFC	-20...+50 °C	75 °C ¹⁾	110 °C	-40...+85 °C
OTI DX 35/220...240/1A0 NFC	-20...+50 °C	80 °C ¹⁾	110 °C	-40...+85 °C
OTI DX 50/220...240/1A4 NFC	-20...+50 °C	80 °C ¹⁾	110 °C	-40...+85 °C

Product description	Permitted rel. humidity during operation
OTI DX 25/220...240/700 NFC	5...85 % ²⁾
OTI DX 35/220...240/1A0 NFC	5...85 % ²⁾
OTI DX 50/220...240/1A4 NFC	5...85 % ²⁾

¹⁾ Maximum at the T_c-point

²⁾ Maximum 56 days/year at 85 %

Lifespan

Product description	ECG lifetime
OTI DX 25/220...240/700 NFC	50000 / 100000 h ¹⁾
OTI DX 35/220...240/1A0 NFC	50000 / 100000 h ¹⁾
OTI DX 50/220...240/1A4 NFC	50000 / 100000 h ²⁾

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

Capabilities

Product description	Dimmable	Dimming interface	Dimming range	Dimming method
OTI DX 25/220...240/700 NFC	Yes	DALI/DEXAL/D4i	1...100 % ¹⁾	Amplitude Modulation
OTI DX 35/220...240/1A0 NFC	Yes	DALI/DEXAL/D4i	1...100 % ¹⁾	Amplitude Modulation
OTI DX 50/220...240/1A4 NFC	Yes	DALI/DEXAL/D4i	1...100 % ¹⁾	Amplitude Modulation

Product description	Overheating protection	Overload protection	Short-circuit protection	No-load proof
OTI DX 25/220...240/700 NFC	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTI DX 35/220...240/1A0 NFC	Automatic reversible	Automatic reversible	Automatic reversible	Yes
OTI DX 50/220...240/1A4 NFC	Automatic reversible	Automatic reversible	Automatic reversible	Yes

Product family datasheet

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 DX 25/220...240/700 NFC	No	2.0 m	I / II	Push terminal
OTI DX 35/220...240/1A0 NFC	No	2.0 m	I / II	Push terminal
OTI DX 50/220...240/1A4 NFC	No	2.0 m	I / II	Push terminal

Product description	Type of connection, output side	Number of channels	Constant lumen function
OTI DX 25/220...240/700 NFC	Push terminal	1	Programmable
OTI DX 35/220...240/1A0 NFC	Push terminal	1	Programmable
OTI DX 50/220...240/1A4 NFC	Push terminal	1	Programmable

Product description	Programming interface	DALI-2 Energy Data	DALI-2 Diagnostic Data
OTI DX 25/220...240/700 NFC	DALI, NFC	Yes ²⁾	Yes ³⁾
OTI DX 35/220...240/1A0 NFC	DALI, NFC	Yes ²⁾	Yes ³⁾
OTI DX 50/220...240/1A4 NFC	DALI, NFC	Yes ²⁾	Yes ³⁾

¹⁾ For maximum nominal output current

²⁾ Acc. DALI part 252

³⁾ Acc. DALI part 253

Programming

Product description	Programming device	Tuner4TRONIC Field App	Tuner4TRONIC
OTI DX 25/220...240/700 NFC	DALI / NFC	Yes	Yes
OTI DX 35/220...240/1A0 NFC	DALI / NFC	Yes	Yes
OTI DX 50/220...240/1A4 NFC	DALI / NFC	Yes	Yes

Product description	Box programming
OTI DX 25/220...240/700 NFC	Yes
OTI DX 35/220...240/1A0 NFC	Yes
OTI DX 50/220...240/1A4 NFC	Yes

Programmable features

Product description	OEM Key	Configuration Lock	DALI-2 Luminaire Data
OTI DX 25/220...240/700 NFC	No	Yes	Yes ¹⁾
OTI DX 35/220...240/1A0 NFC	No	Yes	Yes ¹⁾
OTI DX 50/220...240/1A4 NFC	No	Yes	Yes ¹⁾

Product description	Emergency Mode	Dim to Dark	Soft Switch Off
OTI DX 25/220...240/700 NFC	Yes	Yes	Yes
OTI DX 35/220...240/1A0 NFC	Yes	Yes	Yes
OTI DX 50/220...240/1A4 NFC	Yes	Yes	Yes

Product description	Driver Guard	DALI Settings	Constant Lumen
OTI DX 25/220...240/700 NFC	Yes	Yes	Yes

Product family datasheet

Product description	Driver Guard	DALI Settings	Constant Lumen
OTI DX 35/220...240/1A0 NFC	Yes	Yes	Yes
OTI DX 50/220...240/1A4 NFC	Yes	Yes	Yes

Product description	Lamp Operating Time
OTI DX 25/220...240/700 NFC	Yes
OTI DX 35/220...240/1A0 NFC	Yes
OTI DX 50/220...240/1A4 NFC	Yes

¹⁾ Acc. DALI part 251

Certificates & standards

Product description	Approval marks – approval	Standards	Protection class	Type of protection
OTI DX 25/220...240/700 NFC	ENEC 10 / VDE / EMC / EL / CE / DALI-2 / CCC / EAC / D4i	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 DX 35/220...240/1A0 NFC	ENEC 10 / VDE / EMC / EL / CE / DALI-2 / CCC / EAC / D4i	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 DX 50/220...240/1A4 NFC	ENEC 10 / VDE / EMC / EL / CE / DALI-2 / CCC / EAC / D4i	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/Acc. to IEC 62386-250/Acc. to IEC 62386-251, -252, -253	II	IP20

Logistical data

Product description	Commodity code
OTI DX 25/220...240/700 NFC	850440829000
OTI DX 35/220...240/1A0 NFC	850440829000
OTI DX 50/220...240/1A4 NFC	850440829000

Product family datasheet

Environmental information

Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1
OTI DX 25/220...240/700 NFC	23-12-2021	4062172017947	Lead
OTI DX 35/220...240/1A0 NFC	23-12-2021	4062172017961	Lead
OTI DX 50/220...240/1A4 NFC	23-12-2021	4062172061865	Lead

Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTI DX 25/220...240/700 NFC	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	cb61cdff-9d61-423c-a954-5e8540103da3
OTI DX 35/220...240/1A0 NFC	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	48e5bfe5-9ab7-4cca-860d-46ea0a81627c
OTI DX 50/220...240/1A4 NFC	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	9a354ebd-cd87-4186-b800-9e3338e51037

Application advice

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



Additional product information

- The DEXAL interface is polarity sensitive, even if the DEXAL bus power supply in the driver is turned off. Therefore the polarity of all connected drivers should not be mixed.
- For efficiency and standby power measurement, the D4i bus power supply shall be switched off by using Tuner4TRONIC. Refer to www.tuner4tronic.com.






Sales and Technical Support

Sales and Technical Support www.osram.com

Download Data

File
 User instruction OPTOTRONIC LED Power Supply
 Brochures Technical application guide DEXAL LED drivers (EN)

Product family datasheet

	Certificates OTI DX DALI NFC CB DE1 63108 190220
	Certificates OT EMC 40050085 200220
	Certificates OT ENEC 40038447 161221
	Certificates OT EMC 40044675 250621
	Declarations of conformity OTI DX DALI NFC CE 3770568 210921
	Declarations of conformity OTI DALI DX NFC UK CE 4281072 210121
	CAD data OTI DX 25 35 NFC IGS 280120
	CAD data OTI DX 25 35 NFC STEP 280120
	CAD Data 2-dim OTI DX 25 35 NFC CAD2PDF 280120
	CAD data 3-dim OTI DX 25 35 NFC CAD3PDF 280120
	CAD data CAD data OTi DALI 50220-2401A4 NFC built in IGS
	CAD data CAD data OTi DALI 50220-2401A4 NFC built in STEP
	CAD data PDF CAD data OTi DALI 50220-2401A4 NFC built in pdf

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
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Product family datasheet

Logistical Data

4062172017947	OTI DX 25/220...240/700 NFC	Shipping carton box 20	218 mm x 158 mm x 155 mm	5.34 dm ³	3237.00 g
4062172017961	OTI DX 35/220...240/1A0 NFC	Shipping carton box 20	218 mm x 158 mm x 155 mm	5.34 dm ³	3237.00 g
4062172061865	OTI DX 50/220...240/1A4 NFC	Shipping carton box 20	262 mm x 253 mm x 98 mm	6.50 dm ³	3954.00 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.

Accessories Optional

Product description	Accessory name	Accessory code
OTI DX 25/220...240/700 NFC	OT CABLE CLAMP B-STYLE	▶ 4052899077881
OTI DX 25/220...240/700 NFC	OT CABLE CLAMP B-STYLE TL	▶ 4052899948051
OTI DX 35/220...240/1A0 NFC	OT CABLE CLAMP B-STYLE	▶ 4052899077881
OTI DX 35/220...240/1A0 NFC	OT CABLE CLAMP B-STYLE TL	▶ 4052899948051
OTI DX 50/220...240/1A4 NFC	OT CABLE CLAMP A-STYLE	▶ 4052899089570
OTI DX 50/220...240/1A4 NFC	OT CABLE CLAMP A-STYLE TL	▶ 4052899325982

Data privacy

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.