OPTOTRONIC Intelligent – DEXAL (non-isolated)

Linear constant current LED driver – Dimmable



Areas of application

- Linear lighting for office, education, industry, storage areas and retail
- DEXAL, easy connection to different partner BMS systems
- Suitable for "Works with OSRAM DEXAL" partner components
- Suitable for luminaires of protection class I

Product family benefits

- Versatile non-isolated DEXAL LED driver up to 75 W 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
- Prepared for DiiA Specification Parts -250, -251, -252 and -253
- Fully programmable via T4T software (NFC, DALI Interface)
- Very high efficiency
- Protection against 4 kV burst and 1.5 kV surge voltage (L-N)
- Wide operating range up to 600 mA

OSRAM DEXAL®

Luminaire Data

Data Energy Diagnostic

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Product family features

- Line frequency: 0 Hz | 50 Hz | 60 Hz
- Supply voltage: 220…240 V
- Constant Lumen Output (CLO)
- Monitoring of luminaire operating parameters
- Non-isolated drivers

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Technical data

Electrical data

Product description	Nominal input voltage	Mains frequency	Input voltage AC	Input voltage DC	Current set
OTI DX 35/220…240/400 D NFC L	220…240 V	0/50/60 Hz	198…264 V	176…276 V	DALI / NFC / LEDset / Programmable
OTI DX 75/220…240/600 D NFC L	220…240 V	0/50/60 Hz	198…264 V	176…276 V	DALI / NFC / LEDset / Programmable

Product description	Total harmonic distortion	Power factor λ	Efficiency in full-load	Device power loss	Inrush current
OTI DX 35/220…240/400 D NFC L	< 10 % [1]	0.45C…0.96 [2]	90 % [3]	3.8 W	18 A
OTI DX 75/220…240/600 D NFC L	< 10 % [1]	0.46C…0.98 [2]	93 % [3]	5.25 W	27 A [6]

Product description	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 16 A (B)	Surge capability (L/N-Ground)	Surge capability (L-N)
OTI DX 35/220…240/400 D NFC L	17	28	2 kV	1.5 kV
OTI DX 75/220…240/600 D NFC L	15	24	2 kV	1.5 kV

Product description	Nominal output voltage	U-OUT (working voltage)	Nominal output current	Default output current	Output current tolerance
OTI DX 35/220…240/400 D NFC L	54…240 V	< 250 V	75…400 mA	60 mA [4]	±5 %
OTI DX 75/220…240/600 D NFC L	54…240 V	< 250 V	120…600 mA	60 mA [4]	±5 %

Product description	Output ripple current (100 Hz)	Output PSTLM	Output SVM	Nominal output power
OTI DX 35/220…240/400 D NFC L	< 4 %	≤1	≤0.4	4…38 W
OTI DX 75/220…240/600 D NFC L	< 4 %	≤1	≤0.4	6.5…75 W

Product description	Maximum output power	Galvanic isolation	Power loss in stand-by mode	DEXAL Peak Supply Current
OTI DX 35/220…240/400 D NFC L	38 W	Non isolated	<0.25 W [5]	60 mA
OTI DX 75/220…240/600 D NFC L	75 W	Non isolated	<0.25 W [5]	60 mA

Product description	DEXAL Guaranteed Supply Current	DEXAL Supply Voltage
OTI DX 35/220…240/400 D NFC L	53 mA	15 V
OTI DX 75/220…240/600 D NFC L	53 mA	15 V

[1] At full load

[2] Full load at 230 V

[3] at 230 V, 50 Hz

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4) LEDset deactivated

5) DEXAL "OFF"

6) t_{width} = 200 µs (measured at 50 % I_{peak})

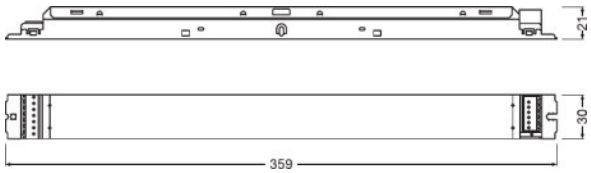
Dimensions & weight

Product description	Mounting hole spacing, length	Product weight	Cable cross-section, input side	Cable cross-section, output side	Wire preparation length, input side
OTI DX 35/220…240/400 D NFC L	350.0 mm	227.40 g	0.5…1.5 mm² 1)	0.5…1.5 mm² 1)	8.0…9.0 mm
OTI DX 75/220…240/600 D NFC L	350.0 mm	243.00 g	0.5…1.5 mm² 1)	0.5…1.5 mm² 1)	8.0…9.0 mm

Product description	Wire preparation length, output side	Width	Length	Height
OTI DX 35/220…240/400 D NFC L	8.0…9.0 mm	30.0 mm	360.0 mm	21.0 mm
OTI DX 75/220…240/600 D NFC L	8.0…9.0 mm	30.0 mm	360.0 mm	21.0 mm

1) Solid or flexible leads

Product line drawing



OTI DX 35/220…240/400 D NFC L, OTI DX 75/220…240/600 D NFC L

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Colors & materials

Product description	Casing material
OTI DX 35/220…240/400 D NFC L	Metal
OTI DX 75/220…240/600 D NFC L	Metal

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 35/220…240/400 D NFC L	-25…+60 °C	75 °C [1]	110 °C	-40…+85 °C
OTI DX 75/220…240/600 D NFC L	-25…+55 °C	75 °C [1]	110 °C	-40…+85 °C

Product description	Permitted rel. humidity during operation
OTI DX 35/220…240/400 D NFC L	5…85 % [2]
OTI DX 75/220…240/600 D NFC L	5…85 % [2]

[1] Maximum at the Tc-point

[2] Maximum 56 days/year at 85 %

Lifespan

Product description	ECG lifetime
OTI DX 35/220…240/400 D NFC L	50000 / 100000 h [1]
OTI DX 75/220…240/600 D NFC L	50000 / 100000 h [1]

[1] At maximum T_c = 75°C / 10% failure rate / At T_c = 65°C / 10% failure rate

Expected Lifetime

Product name				
OTI DX 35/220…240/400 D NFC L	ECG ambient temperature [ta]	60	50	-
	Temperature at tc-point [°C]	75	65	-
	Lifetime [h]	50000 [1]	100000 [1]	-
OTI DX 75/220…240/600 D NFC L	ECG ambient temperature [ta]	55	45	-
	Temperature at tc-point [°C]	75	65	-
	Lifetime [h]	50000 [2]	100000 [2]	-

[1] Max. 10% failure rate at tc max and input voltage 230 V_{AC}

[2] Max. 10% failure rate at tc max and input voltage 230 V_{AC}

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Additional product data

Product description	Encapsulated
OTI DX 35/220…240/400 D NFC L	No
OTI DX 75/220…240/600 D NFC L	No

Capabilities

Product description	Programming interface	Dimmable	Dimming interface	Dimming range
OTI DX 35/220…240/400 D NFC L	DEXAL, NFC, LEDset	Yes	DALI-2 / DEXAL	1…100 %
OTI DX 75/220…240/600 D NFC L	DEXAL, NFC, LEDset	Yes	DALI-2 / DEXAL	1…100 %

Product description	Dimming method	Overheating protection	Overload protection
OTI DX 35/220…240/400 D NFC L	Full analogue dimming [1]	Automatic reversible	Non-reversible
OTI DX 75/220…240/600 D NFC L	Full analogue dimming [1]	Automatic reversible	Non-reversible

Product description	Short-circuit protection	No-load proof	Intended for no-load operation	Max. cable length to lamp/LED module
OTI DX 35/220…240/400 D NFC L	Automatic reversible	Yes	No	2.0 m [2]
OTI DX 75/220…240/600 D NFC L	Automatic reversible	Yes	No	2.0 m [2]

Product description	Suitable for fixtures with prot. class	Suitable for emergency lighting	Type of connection, input side	Type of connection, output side
OTI DX 35/220…240/400 D NFC L	I	Yes	Push terminal	Push terminal
OTI DX 75/220…240/600 D NFC L	I	Yes	Push terminal	Push terminal

Product description	Constant lumen function	DALI-2 Diagnostic Data	DALI-2 Energy Data
OTI DX 35/220…240/400 D NFC L	Programmable	Yes	Yes
OTI DX 75/220…240/600 D NFC L	Programmable	Yes	Yes

Product description	Number of channels
OTI DX 35/220…240/400 D NFC L	1
OTI DX 75/220…240/600 D NFC L	1

[1] Selectable by Tuner4TRONIC

[2] Output wires must be routed as close as possible to each other

Programming

Product description	Programming device	Box programming
OTI DX 35/220…240/400 D NFC L	DALI magic / NFC Scanner	Yes
OTI DX 75/220…240/600 D NFC L	DALI magic / NFC Scanner	Yes

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Programmable features

Product description	DALI-2 Luminaire Data	Soft Switch Off	DEXAL Power Supply Unit
OTI DX 35/220…240/400 D NFC L	Yes	Yes	Yes
OTI DX 75/220…240/600 D NFC L	Yes	Yes	Yes

Product description	Driver Guard	Lamp Operating Time	Constant Lumen
OTI DX 35/220…240/400 D NFC L	Yes	Yes	Yes
OTI DX 75/220…240/600 D NFC L	Yes	Yes	Yes

Product description	Operating Current	TouchDIM + Sensor	Dim to Dark
OTI DX 35/220…240/400 D NFC L	Yes	Yes	Yes
OTI DX 75/220…240/600 D NFC L	Yes	Yes	Yes

Certificates & standards

Product description	Approval marks – approval	Standards	Type of protection
OTI DX 35/220…240/400 D NFC L	CE / EL / VDE-ENEC / VDE-EMC / EAC / CCC / BIS / RCM	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 61000-3-2/Acc. to EN 61000-3-3/Acc. to EN 61547	IP20
OTI DX 75/220…240/600 D NFC L	CE / EL / VDE-ENEC / VDE-EMC / EAC / CCC / BIS / RCM	Acc. to EN 61347-1/Acc. to EN 61347-2-13/Acc. to EN 62384/Acc. to EN 61000-3-2/Acc. to EN 61000-3-3/Acc. to EN 61547	IP20

Logistical data

Product description	Commodity code
OTI DX 35/220…240/400 D NFC L	85044083900
OTI DX 75/220…240/600 D NFC L	85044083900

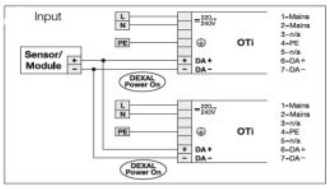
Environmental information
Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)

Product description	Date of Declaration	Primary Article Identifier	Candidate List Substance 1
OTI DX 35/220…240/400 D NFC L	20-11-2023	4052899590380	Lead
OTI DX 75/220…240/600 D NFC L	20-11-2023	4052899590403	Lead

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Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTI DX 35/220...240/400 D NFC L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	0510b763-eb43-437e-9b94-83ead9143051
OTI DX 75/220...240/600 D NFC L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	62c5caf0-ea2e-4828-bb8c-cd92a8441e8e

Wiring Diagram



OTI DX 35/220...240/400 D NFC L, OTI DX 75/220...240/600 D NFC L

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.

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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)
	Certificates OT EMC 40050085 200220
	Certificates OT ENEC 40038085 010322
	Certificates OT EMC 40044675 031022
	Declarations of conformity OTi DX D NFC L UK DoC 4281283 080321
	Declarations of conformity OTI DX D NFC L CE 3704710 020921
	CAD data OTI DX D NFC L IGS 281119
	CAD data OTI DX D NFC L STEP 281119
	CAD Data 2-dim OTI DX D NFC L CAD2PDF 281119
	CAD data 3-dim OTI DX D NFC L CAD3PDF 281119

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.

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Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899590380	OTI DX 35/220...240/400 D NFC L	Shipping carton box 20	385 mm x 160 mm x 100 mm	6.16 dm^3	4719.00 g
4052899590403	OTI DX 75/220...240/600 D NFC L	Shipping carton box 20	385 mm x 160 mm x 100 mm	6.16 dm^3	5031.00 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

This OSRAM driver can be configured using the Tuner4TRONIC software. This requires registering on www.myosram.com and downloading theTuner4TRONIC 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

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