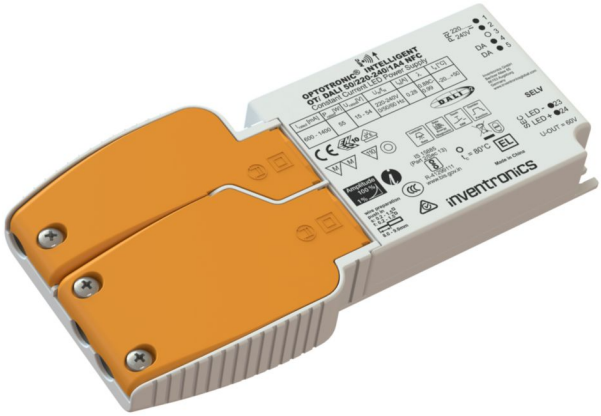
OTi DALI 50/220-240/1A4 NFC CCTL

OPTOTRONIC Intelligent – DALI NFC CCTL | Compact constant current LED driver - Dimmable



Product family features

- Supply voltage: 220…240 V
- Line frequency: 0 Hz | 50 Hz | 60 Hz
- Line voltage: 198…264 V
- Lifetime: up to 100,000 h
- Type of protection: IP20
- Integrated cable clamp for luminaire and independent installation

Product family benefits

- Versatile DALI window driver due to flexible output characteristic
- 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
- Easy to use in corridors and restrooms because of three-level Corridor function
- Touch DIM application: easy to control via pushbutton or sensor

Specifications are subject to changes without notice.

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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

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Technical data

Electrical data

Nominal input voltage	220…240 V
Mains frequency	0/50/60 Hz
Input voltage AC	198…264 V [1)]
Input voltage DC	176…276 V
Nominal input current at 230 V	0.28 A
Total harmonic distortion	< 10 % [2)]
Power factor λ	0.88C…0.99
Efficiency in full-load	91 % [3)]
Networked standby power	≤0.15 W [3)]
Inrush current	30 A [4)]
Max. ECG no. on circuit breaker 10 A (B)	12
Max. ECG no. on circuit breaker 16 A (B)	20
Surge capability (L-N)	1 kV
Surge capability (L/N-Ground)	2 kV
Protective conductor current	not relevant
Nominal output voltage	15…54 V [5)]
U-OUT (working voltage)	60 V
Nominal output current	600…1400 mA [6)]
Minimum output current	6 mA
Default output current	1050 mA
Output current tolerance	±3 %
Output ripple current (100 Hz)	< 3 % [7)]
Output PSTLM	≤1
Output SVM	≤0.4
Nominal output power	15…55 W [8)]
Maximum output power	55 W
Galvanic isolation primary/secondary	SELV
Galvanic isolation DALI/mains	Basic
Galvanic isolation DALI/output	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 µs (measured at 50 % I_{peak})
5) Maximum 60 V
6) ±3%
7) Ripple average at 100 Hz
8) Partial load 22…55 W

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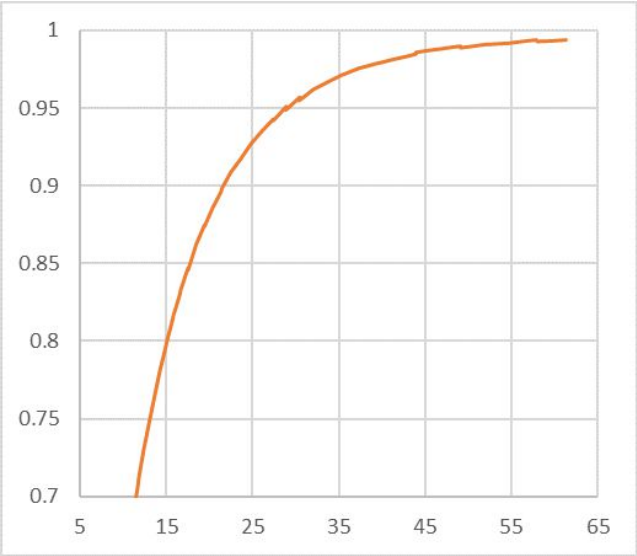
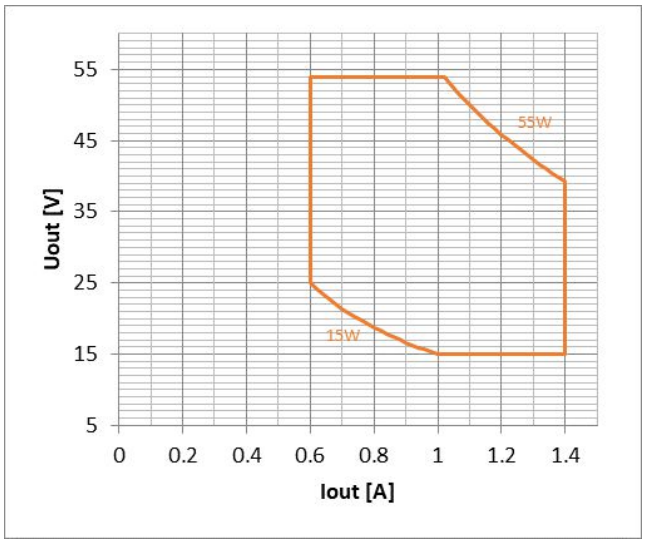
Typical Power Factor v Load



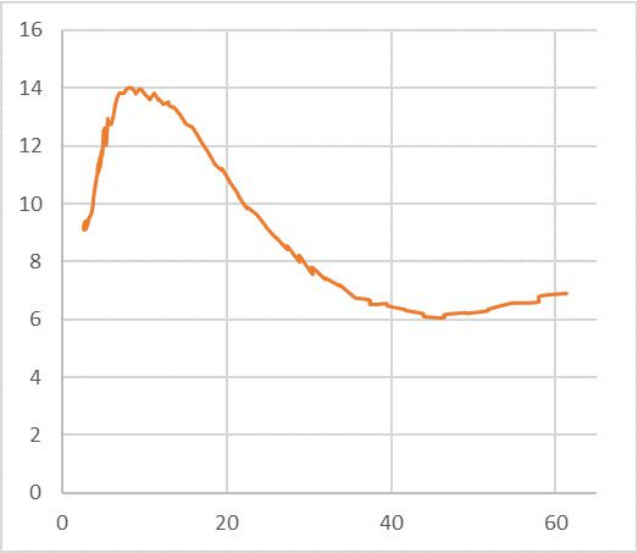
OTI DX DALI 50 NFC Typical Power Factor vs. Load

Operating Window



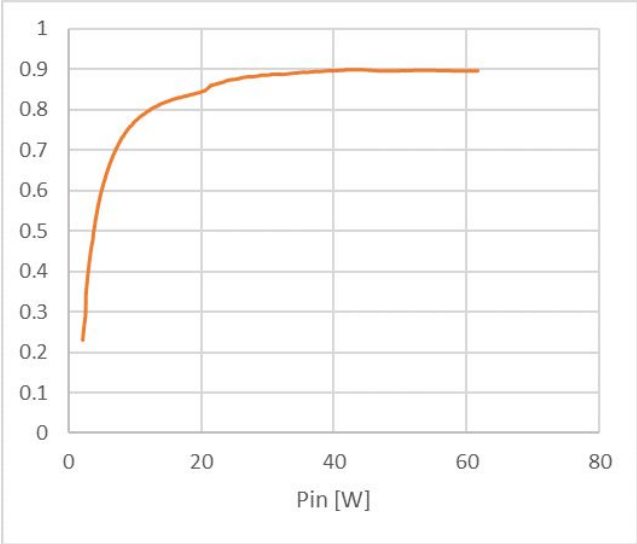
OTI DX DALI 50 NFC Operating window

Typical THD v Load



OTI DX DALI 50 NFC Typical THD Vs Load

Typical Efficiency v Load 230 V 50 Hz



OTI DX DALI 50 NFC Typical Efficiency vs. Load (230 V / 50 Hz)

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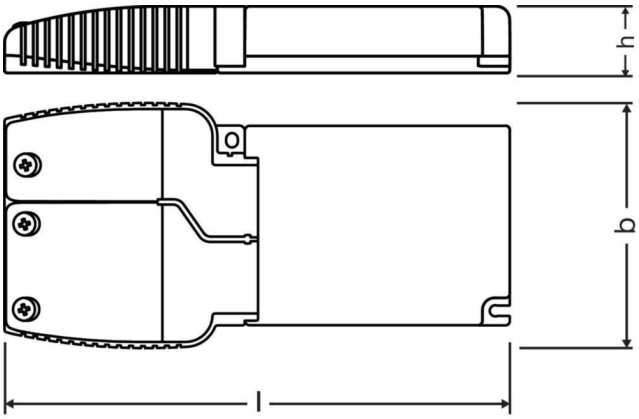
Dimensions & weight



Product weight	255.00 g
Length	190.0 mm
Width	92.0 mm
Height	25.0 mm
Mounting hole spacing, length	99.0 mm
Mounting hole spacing, width	64.0 mm
Cable cross-section, input side	1.5...2.5 mm² [1)]
Cable cross-section, output side	0.2…1.5 mm² [1)]
Wire preparation length, input side	8.0…9.0 mm
Wire preparation length, output side	8.0…9.0 mm
Cable/wire length, output side	2000 mm

1) Solid or flexible leads

Colors & materials

Casing material	Plastic
Product color	White / Orange

Temperatures & operating conditions

Ambient temperature range	-20…+50 °C
Maximum temperature at tc test point	80 °C [1)]
Max.housing temperature in case of fault	110 °C
Temperature range at storage	-40…+85 °C
Permitted rel. humidity during operation	5…85 % [2)]

1) Maximum at the Tc-point
2) Maximum 56 days/year at 85 %

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Lifespan

ECG lifetime	50000 h / 100000 h [1)]

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

Additional product data

Encapsulated	No

Capabilities

Programming interface	DALI, NFC
Control interface	DALI-2, Touch DIM, Corridor
Dimmable	Yes
Dimming interface	DALI-2 / Touch DIM / Corridor
Dimming range	1…100 %
Dimming method	Amplitude Modulation
DALI-2 Diagnostic Data	Yes [1)]
DALI-2 Energy Data	Yes [2)]
Constant lumen function	Programmable
Max. cable length to lamp/LED module	2.0 m [3)]
Suitable for fixtures with prot. class	I / II
Suitable for emergency lighting	Yes
Type of connection, input side	Push terminal
Type of connection, output side	Push terminal
Suitable for through-wiring	Yes
Number of channels	1
Overheating protection	Automatic reversible
Overload protection	Automatic reversible
Short-circuit protection	Automatic reversible
Intended for no-load operation	No
No-load proof	Yes

1) Acc. DALI part 253
2) Acc. DALI part 252
3) Output wires must be routed as close as possible to each other

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Programming

Programming device	DALI / NFC
Tuner4TRONIC	Yes
Tuner4TRONIC Field App	Yes

Programmable features

DALI Settings	Yes
DALI-2 Luminaire Data	Yes [1)]
TouchDIM + Sensor	Yes
Corridor Functionality	Yes
Dim to Dark	Yes
Soft Switch Off	Yes
Tuning Factor	Yes
Configuration Lock	Yes
Driver Guard	Yes
Emergency Mode	Yes

1) Acc. DALI part 251

Certificates & standards

Approval marks – approval	CE / EL / ENEC / DALI-2
Standards	EN 61347-1 / EN 61347-2-13 / EN 55015 / EN 61547 / EN 61000-3-2 / EN 62384 / EN 62386 / IEC 62386-101:Ed2 / IEC 62386-102:Ed2 / IEC 62386-207:Ed1
Type of protection	IP20

Logistical data

Commodity code	85044083900
Applicable region	APAC (excl. China, India, Japan) / CHINA / EUROPE / INDIA / MEA / SOUTH AMERICA

Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)	
Date of Declaration	01-09-2026
Primary Article Identifier	4062172197373 | 6977770431768
Declaration No. in SCIP database	In work
SCIP_STATUS	In work
SCIP_ID	

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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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Download Data

File		
Certificates	PDF	►CED OTi DALI_ xx NFC family
Certificates	PDF	►VDE ENEC certificate 40038447 INV 171225
CAD data 3-dim	PDF	►OTI DALI 50/220-240/1A4 NFC CCTL | 3-dim PDF
CAD data 2-dim	PDF	►OTI DALI 50/220-240/1A4 NFC CCTL | 2-dim PDF
CAD data	UNKNOWN	►OTI DALI 50/220-240/1A4 NFC CCTL | IGS
CAD data	UNKNOWN	►OTI DALI 50/220-240/1A4 NFC CCTL | STEP
User instruction	PDF	►UI OTI DALI 25 35 50 NFC CCTL

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Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
6977770431768 INVENTRONICS	OTi DALI 50/220-240/1A4 NFC CCTL	Shipping carton box 18 Pieces	400 x 277 x 119 mm	13.19 dm³	288.28 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 Inventronics driver can be configured using the Tuner4TRONIC software. This requires registering on www.inventronicsglobal.com/ds 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, Inventronics can read out operating data from devices for maintenance and service purposes even when a password key has been assigned. In individual cases, Inventronics 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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