OT DX 75/220…240/1A0 DIMA LT2 E

OPTOTRONIC - DEXAL NFC IP20 | D4i, DEXAL, AstroDIM, StepDIM - constant current LED drivers

Product family features

- DEXAL interface based on DALI-2 communication
- Available with different wattage: 40 W, 75 W, 110 W, 165 W
- Current output range: 70…1,050 mA
- AstroDIM for autonomous dimming with five independent levels (astro, time mode)
- Standby power consumption: < 0.5 W
- Integrated customizable thermal management (Driver Guard)
- Constant Lumen Output (CLO)

Product family benefits

- For Zhaga Book18 Luminaires and D4i certified incl. Parts 25x + AUX
- Electrical interface and data communication fully based on open standards
- Fully programmable via software (DALI Interface, NFC)
- Low luminous efficacy tolerance through low output current tolerance of ± 3 %
- High surge protection: up to 10 kV (1 pulse) in protection class I or II
- Lifetime: up to 100,000 h (depending on T_c temperature, max. 10 % failure rate)
- Mains input undervoltage protection
- Very high efficiency
- Fulfill safety requirement due to overload, overtemperature, Hot Plug protection

www.inventronicsglobal.com

support@inventronicsglobal.com

Mon Mar 25 15:03:29 CST 2024

Areas of application

- Street and urban lighting
- Industry
- Suitable for outdoor applications in luminaires with IP > 54
- Suitable for use in outdoor luminaires of protection class I and II

www.inventronicsglobal.com   support@inventronicsglobal.com

Technical data

Electrical data

Nominal input voltage	220…240 V
Mains frequency	0/50/60 Hz [1]
Input voltage AC	198…264 V [2]
Input voltage DC	176…276 V [1]
Total harmonic distortion	< 10 % [3]
Power factor λ	0.54C...0.99 [4]
Efficiency in full-load	93 % [5]
Device power loss	5.3 W [6]
Inrush current	54 A [7]
Max. ECG no. on circuit breaker 10 A (B)	8 [8]
Max. ECG no. on circuit breaker 16 A (B)	12 [8]
Surge capability (L/N-Ground)	10 kV [9]
Surge capability (L-N)	6 kV [10]
Nominal output voltage	35…115 V
U-OUT (working voltage)	120 V
Nominal output current	200…1050 mA
Default output current	700 mA
Output current tolerance	±3 % [11]
Output current LEDset open	70 mA
Output current LEDset shorted	Not allowed
Output ripple current (100 Hz)	10 %
Output PSTLM	≤1
Output SVM	≤0.4
Nominal output power	75 W [12]
Maximum output power	75 W
Galvanic isolation	SELV

1) Additional fuse needed in DC operation
2) Permitted voltage range
3) Max. output power at 230 V_{AC}
4) Full Load/Half Load at 230V 50Hz
5) at 230 V, 50 Hz
6) Maximum
7) At 190 µs
8) Type B
9) Single pulse 10kV / 12 Ohm (1.2/50 µs)
10) @ 2 Ohm, acc. to EN61547
11) +/- 5% for LEDset down to 300mA
12) Max. 75% in DC operating mode

www.inventronicsglobal.com

support@inventronicsglobal.com

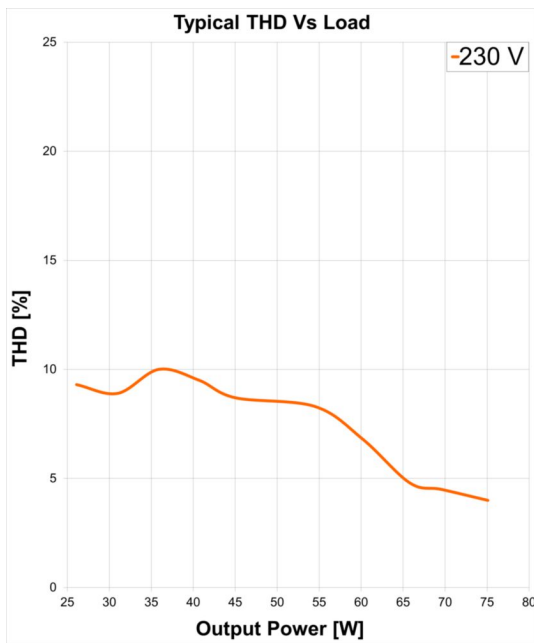## Typical Power Factor v Load
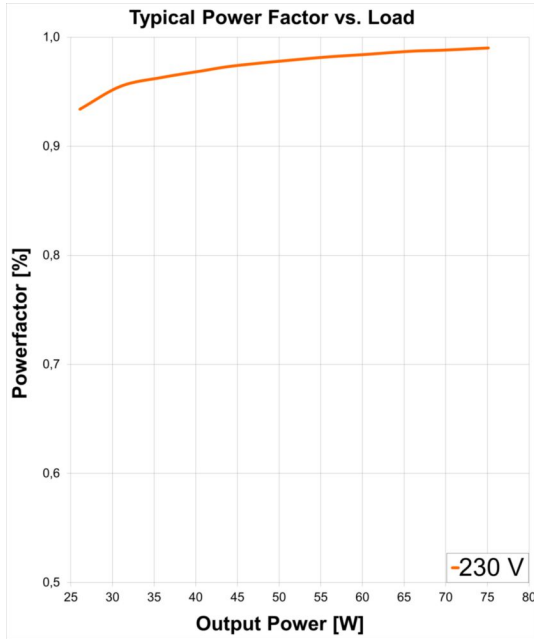
Typical Power Factor vs. Load OT DX 75 1A0 DIMA LT2 E
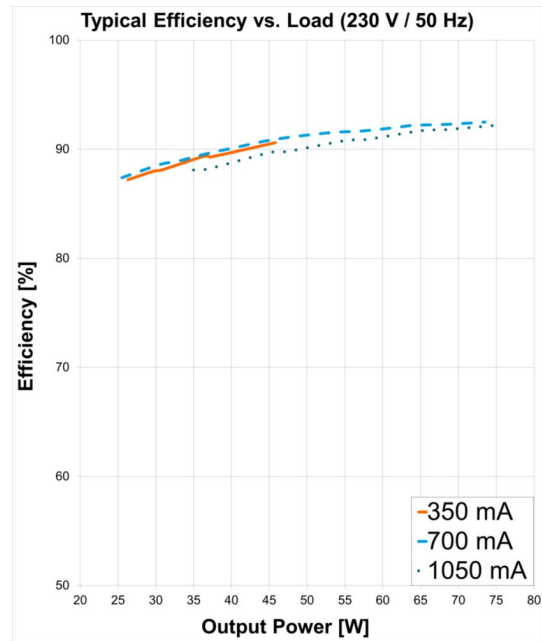
Operating Window
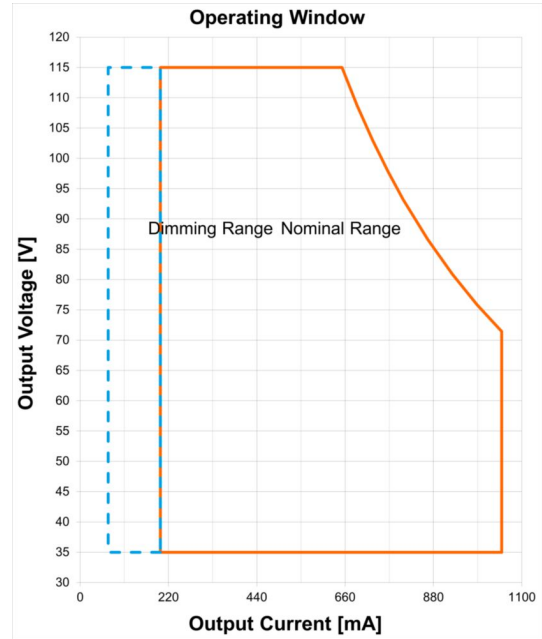
Operating Window OT DX 75/1A0 DIMA LT2 E
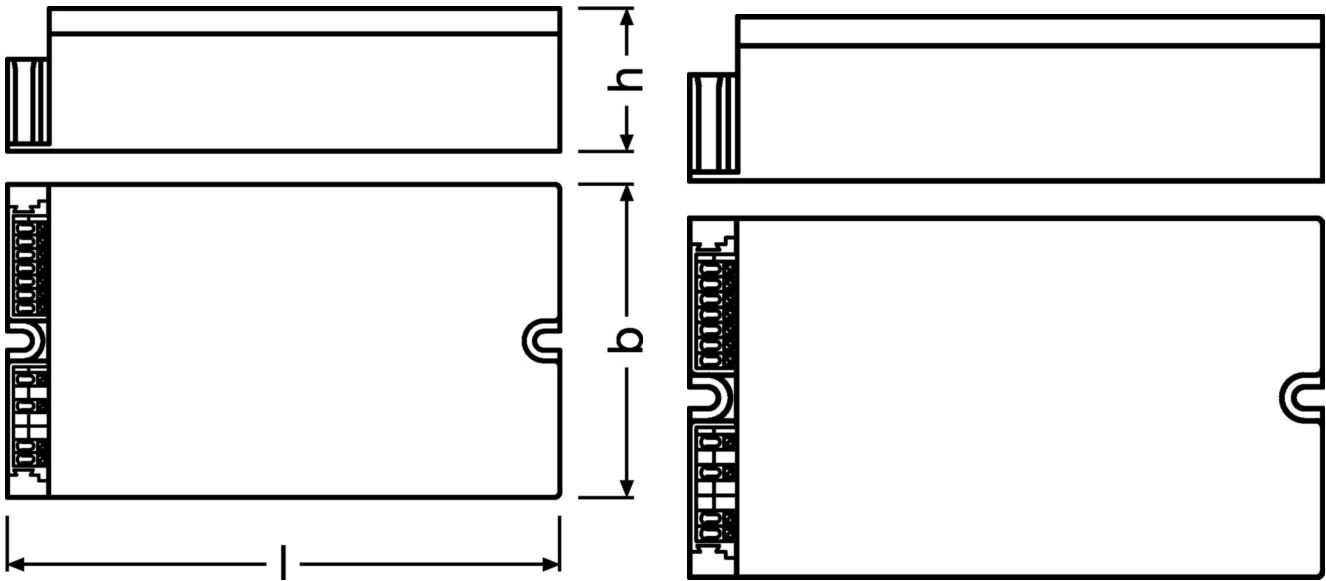
Typical THD v Load

Typical THD Vs Load OT DX 75 1A0 DIMA LT2 E

Typical Efficiency v Load 230 V 50 Hz

Typical Efficiency vs. Load (230 V 50 Hz) OT DX 75/1A0 DIMA LT2 E

support@inventronicsglobal.com

Dimensions & weight

Length	150.0 mm
Width	90.0 mm
Height	40.0 mm
Mounting hole spacing, length	134.0 mm
Mounting hole spacing, width	not relevant mm
Cable cross-section, input side	0.2…1.5 mm² [1]
Cable cross-section, output side	0.2…1.5 mm² [1]
Wire preparation length, input side	8.5…9.5 mm
Product weight	335.00 g

1) Solid/ Flexible Leads

Colors & materials

Casing material	Plastic

Temperatures & operating conditions

Ambient temperature range	-40…+55 °C
Maximum temperature at tc test point	85 °C
Max.housing temperature in case of fault	120 °C
Temperature range at storage	-25…85 °C
Permitted rel. humidity during operation	5…85 % [1]

1) Non condensing, absolute humidity: 36g/m³

Expected Lifetime

Product name				
OT DX 75/220…240/1A0 DIMA LT2 E	ECG ambient temperature [ta]	55	45	43
	Temperature at tc-point [°C]	85	75	73
	Lifetime [h]	50000	85000	100000

Lifespan

ECG lifetime	100000 h [1]

1) At T_{case} = 73°C at T_c point / 10% failure rate

Capabilities

Dimmable	Yes
Dimming interface	AstroDIM / DALI/DEXAL/D4i / StepDIM [1]
Dimming range	10…100 %
DALI-2 Diagnostic Data	Yes [2]
DALI-2 Energy Data	Yes [3]
Constant lumen function	Yes
LEDset	Yes
Max. cable length to lamp/LED module	2.0 m [4]
Suitable for fixtures with prot. class	I / II
Suitable for emergency lighting	Yes
Number of channels	1
Overheating protection	Yes
Overload protection	Yes
Short-circuit protection	Yes
Intended for no-load operation	No
No-load proof	Yes

1) StepDIM functionality with external component 'OT DX SD BOX' only

2) Acc. DALI part 253

3) Acc. DALI part 252

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

Programming

Programming device	DALI / NFC
Tuner4TRONIC	Yes
Tuner4TRONIC Field App	Yes

Programmable features

Emergency Mode	Yes
DALI-2 Luminaire Data	Yes [1]
Configuration Lock	Yes
AstroDIM	Yes
StepDIM	Yes [2]
MainsDIM	No
Driver Guard	Yes
Thermal Protection	Yes
Emergency Mode	Yes

1) Acc. DALI part 251
2) StepDIM functionality with external component 'OT DX SD BOX' only

Certificates & standards

Approval marks – approval	CE / ENEC / VDE / VDE-EMC / CCC / EL / DALI-2 / D4i / RCM
Standards	Acc. to EN 61347-1 / Acc. to EN 61347-2-13 / Acc. to EN 62384 / Acc. to EN 55015:2006 + A1:2007 + A2:2009 / Acc. to EN 61547 / Acc. to FCC 47 part 15 class B / Acc. to IEC 61000-3-2 / Acc. to IEC 61000-3-3 / Acc. to IEC 62386-101 / Acc. to IEC 62386-102 / Acc. to IEC 62386-207 / Acc. to IEC 62386-150 / Acc. to IEC 62386-250 / Acc. to IEC 62386-251, -252, -253
Type of protection	IP20
Protection class	I,II

Logistical data

Commodity code	85044083900

Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)	
Date of Declaration	24-03-2024
Primary Article Identifier	4052899999671
Declaration No. in SCIP database	In work

Additional product information

- Default output current is 700 mA without any resistor connected to the LEDset port. As soon as the driver detects one time a resistor value within the resistor range of 4,7 kOhm (1050 mA) and 24,9 kOhm (200 mA) for more than 3 s, the driver activates the LEDset2 mode.
- The driver withstands an input voltage of up to 300 V AC for a maximum of two hours. An output load shutdown can occur in case the supply voltage exceeds the input voltage range defined.
- Shut down of output load happens if the input voltage of the load is below the allowed minimum output voltage of the driver. The driver automatically tries to switch on the load cyclically.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded, as long as the input voltage of the load is within the declared output voltage range of the driver. In all other cases the driver may shut down the load.
- The driver is protected against temporary overheating by automatically reduction of the output current.
- Several external NTCs are supported for temperature protection of the LED module or luminaire. The type of NTC can be selected in the programming software in the temperature based mode.
  By default the resistor based mode is actived with following values: start derating: 6.3 kOhm, end derating 5.0 kOhm, shut off: 4.3 kOhm, derating level 50 %.
- If the dimming mode is changed via NFC while the driver is not powered, one additional power on/off cycle is needed before the dimming mode becomes active.
- The constant lumen feature is disabled by default.
- If any output level is below the physical min level, the physical min level will be used.
- The driver is intended for luminaire built-in use.
- Mind the polarity of the DALI lines. DA+ to DA+, DA- to DA- only.
- 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.

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899999671	OT DX 75/220…240/1A0 DIMA LT2 E	Shipping carton box 10 Pieces	385 x 300 x 125 mm	14.44 dm³	3691.00 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

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

Accessories Optional

Product description	Accessory name	Accessory code
OT DX 75/220…240/1A0 DIMA LT2 E	DALI magic	►4052899039551
OT DX 75/220…240/1A0 DIMA LT2 E	DALI magic	►4062172379328
OT DX 75/220…240/1A0 DIMA LT2 E	PRH101 -USB	►4055462165152
OT DX 75/220…240/1A0 DIMA LT2 E	CPR30 -USB	►4055462165169
OT DX 75/220…240/1A0 DIMA LT2 E	NFC Scanner by TERTIUM Technology	►4055462203571
OT DX 75/220…240/1A0 DIMA LT2 E	NFC Scanner by TERTIUM Technology	►4055462290281
OT DX 75/220…240/1A0 DIMA LT2 E	OT DX SD BOX	►4062172048002