

OPTOTRONIC Intelligent – DALI (non-isolated)

Linear constant current LED driver – Dimmable



Areas of application

- Linear lighting for office, education, industry, storage areas and retail
- Installation in emergency lighting systems according to IEC 61347-2-13, appendix J
- Suitable for luminaires of protection class I

Product family benefits

- Fully programmable via software (DALI Interface)
- Flexible current setting (LEDset2)
- Lifetime: up to 100,000 h (temperature at $T_c = 65^\circ\text{C}$, max. 10 % failure rate)
- High-quality dimming of 1...100 % by amplitude dimming (except 80 W versions)
- High quality of light thanks to <1% output ripple current
- Very high efficiency
- Very low standby power consumption: < 0.25 W
- Fulfill safety requirement due to overload, overtemperature, Hot Plug protection

Product family datasheet

Versatile scope of application due to OSRAM DALI Technology:

- Easy to use in corridors and restrooms because of three-level Corridor function
 - Touch DIM application: easy to control via pushbutton or sensor
 - Energy efficient Touch DIM operation due to automatic switch-off at sufficient residual light
 - 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
 - Luminaire information for easy maintenance
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Product family features

- Line frequency: 0 Hz | 50 Hz | 60 Hz
- Versatile DALI window driver up to 90 W due to flexible output characteristic
- Supply voltage: 220...240 V
- Available with output current range: up to 1,050 mA
- Constant Lumen Output (CLO)
- Integrated customizable thermal management (Driver Guard)
- DALI-2 certified (Part -101,-102 and -207)

Product family datasheet

Technical data

Electrical data

Product description	Nominal input voltage	Mains frequency	Input voltage AC	Input voltage DC	Current set		
OTi DALI 35/220...240/400 D LT2 L	220...240 V	0/50/60 Hz	198...264 V ¹⁾	176...276 V	DALI / LEDset / Programmable		
OTi DALI 60/220...240/550 D LT2 L	220...240 V	50...60 Hz	198...264 V ¹⁾	176...276 V	DALI / LEDset / Programmable		
OTi DALI 90/220...240/1A0 LT2 L	220...240 V	50...60 Hz	198...264 V ¹⁾	176...276 V	DALI / LEDset / Programmable		
Product description	Total harmonic distortion	Power factor λ	Efficiency in full-load		Device power loss	Inrush current	
OTi DALI 35/220...240/400 D LT2 L	< 10 %	038C...095 ²⁾	92 % ³⁾		4.0 W ⁴⁾	17 A ⁵⁾	
OTi DALI 60/220...240/550 D LT2 L	< 10 %	052C...097 ²⁾	92.5 % ³⁾		5.0 W ⁴⁾	25 A ⁹⁾	
OTi DALI 90/220...240/1A0 LT2 L	< 10 %	062C...099 ²⁾	94 % ³⁾		9.0 W ⁴⁾	25 A ⁹⁾	
Product description	Max. ECG no. on circuit breaker 10 A (B)	Max. ECG no. on circuit breaker 16 A (B)	Max. ECG no. on circuit breaker 25 A (B)	Surge capability (L/N-Ground)		Surge capability (L-N)	
OTi DALI 35/220...240/400 D LT2 L	18	28	43	2 kV		1 kV	
OTi DALI 60/220...240/550 D LT2 L	15	24	37	2 kV		1 kV	
OTi DALI 90/220...240/1A0 LT2 L	15	24	29	2 kV		1 kV	
Product description	Nominal output voltage	U-OUT (working voltage)	Nominal output current	Output current LEDset open			
OTi DALI 35/220...240/400 D LT2 L	54...240 V ⁶⁾	< 250 V	75...400 mA	35 mA			
OTi DALI 60/220...240/550 D LT2 L	54...240 V ¹⁰⁾	< 250 V	120...550 mA	60 mA			
OTi DALI 90/220...240/1A0 LT2 L	54...240 V ¹⁰⁾	< 250 V	250...1000 mA	125 mA			
Product description	Output current LEDset shorted		Default output current		Output current tolerance		
OTi DALI 35/220...240/400 D LT2 L	75 mA		35 mA ⁷⁾		±3 % ⁸⁾		
OTi DALI 60/220...240/550 D LT2 L	120 mA		60 mA ⁷⁾		±3 % ⁸⁾		
OTi DALI 90/220...240/1A0 LT2 L	250 mA		125 mA ⁷⁾		±3 % ⁸⁾		
Product description	Output ripple current (100 Hz)		Output PSTLM		Output SVM		Nominal output power
OTi DALI 35/220...240/400 D LT2 L	< 1 %		≤1		≤0.4		4...37 W
OTi DALI 60/220...240/550 D LT2 L	< 1 %		≤1		≤0.4		6.4...60 W
OTi DALI 90/220...240/1A0 LT2 L	< 1 %		≤1		≤0.4		13.5...90 W

Product family datasheet

Product description	Maximum output power	Galvanic isolation	Power loss in stand-by mode	Protective conductor current
OTi DALI 35/220...240/400 D LT2 L	37 W	Non isolated	<0.25 W	<0.5 mA
OTi DALI 60/220...240/550 D LT2 L	60 W	Non isolated	<0.25 W	<0.5 mA
OTi DALI 90/220...240/1A0 LT2 L	90 W	Non isolated	<0.25 W	<0.5 mA

- 1) Permitted voltage range
- 2) Full load at 230 V
- 3) at 230 V, 50 Hz
- 4) Maximum
- 5) At 170 µs
- 6) Maximum 350 V
- 7) LEDset deactivated
- 8) When use DALI
- 9) At 280 µs
- 10) Maximum 250 V

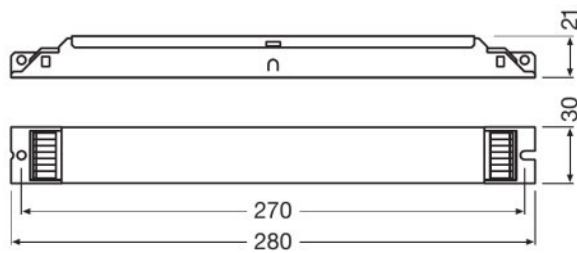
Dimensions & weight

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 35/220...240/400 D LT2 L	270.0 mm	20500 g	0.5...1.5 mm ² 1)	0.5...1.5 mm ² 1)	8.5...9.5 mm
OTi DALI 60/220...240/550 D LT2 L	270.0 mm	20500 g	0.5...1.5 mm ² 1)	0.5...1.5 mm ² 1)	8.5...9.5 mm
OTi DALI 90/220...240/1A0 LT2 L	270.0 mm	20500 g	0.5...1.5 mm ² 1)	0.5...1.5 mm ² 1)	8.5...9.5 mm

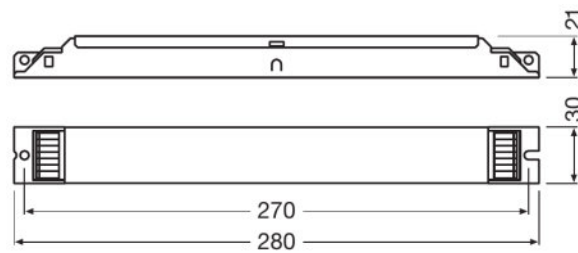
Product description	Wire preparation length, output side	Length	Height	Width
OTi DALI 35/220...240/400 D LT2 L	8.5...9.5 mm	2800 mm	210 mm	300 mm
OTi DALI 60/220...240/550 D LT2 L	8.5...9.5 mm	2800 mm	210 mm	300 mm
OTi DALI 90/220...240/1A0 LT2 L	8.5...9.5 mm	2800 mm	210 mm	300 mm

- 1) Solid or flexible leads

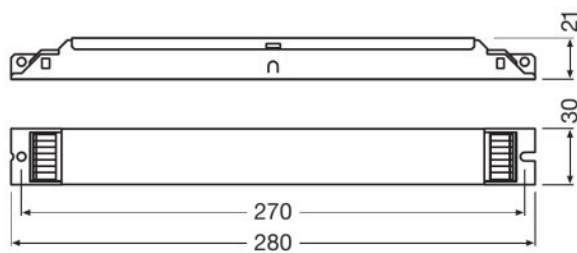
Product line drawing



OTi DALI 35/220...240/400 D LT2 L



OTi DALI 60/220...240/550 D LT2 L



OTi DALI 90/220...240/1A0 LT2 L

Product family datasheet

Colors & materials

Product description	Casing material
OTi DALI 35/220...240/400 D LT2 L	Metal
OTi DALI 60/220...240/550 D LT2 L	Metal
OTi DALI 90/220...240/1A0 LT2 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 DALI 35/220...240/400 D LT2 L	-25...+60 °C	75 °C	110 °C	-25...85 °C
OTi DALI 60/220...240/550 D LT2 L	-25...+60 °C	75 °C	110 °C	-25...85 °C
OTi DALI 90/220...240/1A0 LT2 L	-25...+50 °C	75 °C	110 °C	-25...85 °C

Product description	Permitted rel. humidity during operation
OTi DALI 35/220...240/400 D LT2 L	5...85 % ¹⁾
OTi DALI 60/220...240/550 D LT2 L	5...85 % ¹⁾
OTi DALI 90/220...240/1A0 LT2 L	5...85 % ¹⁾

¹⁾ Maximum 56 days/year at 85 %

Lifespan

Product description	ECG lifetime
OTi DALI 35/220...240/400 D LT2 L	50000 / 100000 h ¹⁾
OTi DALI 60/220...240/550 D LT2 L	50000 / 100000 h ¹⁾
OTi DALI 90/220...240/1A0 LT2 L	50000 / 100000 h ¹⁾

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

Additional product data

Product description	Encapsulated
OTi DALI 35/220...240/400 D LT2 L	No
OTi DALI 60/220...240/550 D LT2 L	No
OTi DALI 90/220...240/1A0 LT2 L	No

Product family datasheet

Capabilities

Product description	Programming interface	Dimmable	Dimming interface	Dimming range
OTi DALI 35/220...240/400 D LT2 L	DALI, LEDset	Yes	DALI-2 / Touch DIM / Touch DIM Sensor	1...100 % ¹⁾
OTi DALI 60/220...240/550 D LT2 L	DALI, LEDset	Yes	DALI-2 / Touch DIM / Touch DIM Sensor	1...100 % ¹⁾
OTi DALI 90/220...240/1A0 LT2 L	DALI, LEDset	Yes	DALI-2 / Touch DIM / Touch DIM Sensor	1...100 % ¹⁾

Product description	Dimming method	Overheating protection	Overload protection
OTi DALI 35/220...240/400 D LT2 L	Full analogue dimming	Automatic reversible	Automatic reversible
OTi DALI 60/220...240/550 D LT2 L	Full analogue dimming	Automatic reversible	Automatic reversible
OTi DALI 90/220...240/1A0 LT2 L	Full analogue dimming	Automatic reversible	Automatic reversible

Product description	Short-circuit protection	No-load proof	Intended for no-load operation	Max. cable length to lamp/LED module
OTi DALI 35/220...240/400 D LT2 L	Automatic reversible	Yes	No	2.0 m ²⁾
OTi DALI 60/220...240/550 D LT2 L	Automatic reversible	Yes	No	2.0 m ²⁾
OTi DALI 90/220...240/1A0 LT2 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 DALI 35/220...240/400 D LT2 L	I	Yes	Push terminal	Push terminal
OTi DALI 60/220...240/550 D LT2 L	I	Yes	Push terminal	Push terminal
OTi DALI 90/220...240/1A0 LT2 L	I	Yes	Push terminal	Push terminal

Product description	DALI-2 Diagnostic Data	DALI-2 Energy Data	Number of channels
OTi DALI 35/220...240/400 D LT2 L	Yes	Yes	1
OTi DALI 60/220...240/550 D LT2 L	Yes	Yes	1
OTi DALI 90/220...240/1A0 LT2 L	Yes	Yes	1

¹⁾ For maximum nominal output current

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

Programming

Product description	Programming device
OTi DALI 35/220...240/400 D LT2 L	DALI magic
OTi DALI 60/220...240/550 D LT2 L	DALI magic
OTi DALI 90/220...240/1A0 LT2 L	DALI magic

Product family datasheet

Programmable features

Product description	DALI-2 Luminaire Data	TouchDIM + Sensor
OTi DALI 35/220...240/400 D LT2 L	Yes	Yes
OTi DALI 60/220...240/550 D LT2 L	Yes	Yes
OTi DALI 90/220...240/1A0 LT2 L	Yes	Yes

Certificates & standards

Product description	Approval marks – approval	Standards	Type of protection
OTi DALI 35/220...240/400 D LT2 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 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386	IP20
OTi DALI 60/220...240/550 D LT2 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 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386	IP20
OTi DALI 90/220...240/1A0 LT2 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 55015/Acc. to EN 61547/Acc. to EN 61000-3-2/Acc. to EN 62384/Acc. to EN 62386	IP20

Logistical data

Product description	Commodity code
OTi DALI 35/220...240/400 D LT2 L	85044083900
OTi DALI 60/220...240/550 D LT2 L	850440829000
OTi DALI 90/220...240/1A0 LT2 L	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 35/220...240/400 D LT2 L	14-04-2023	4052899957053 4052899494220 4062172082129	Lead
OTi DALI 60/220...240/550 D LT2 L	14-04-2023	4052899188662 4052899315884 4052899494206 4062172082167	Lead
OTi DALI 90/220...240/1A0 LT2 L	29-03-2024	4052899160071 4052899494268 4062172082327	Lead

Product description	CAS No. of substance 1	Safe Use Instruction	Declaration No. in SCIP database
OTi DALI 35/220...240/400 D LT2 L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	c0ca0b71-5ac6-417f-9827-9680b780d66c da689a87-0d1c-4d98-a413-b6ea5ac6a358 3562b80d-1294-4a10-813c-aadd897a8d2f
OTi DALI 60/220...240/550 D LT2 L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	d8f69d0a-873d-4c9b-b472-095ce690d3dd abf40d9e-61fc-4cb0-bcd2-15633934146d e06d8873-1ba2-4a16-a452-97f8720ce340
OTi DALI 90/220...240/1A0 LT2 L	7439-92-1	The identification of the Candidate List substance is sufficient to allow safe use of the article.	37466044-cb51-47c6-b384-ad6e70220fa7 7f1d2749-5d00-4b3a-bce3-755576cdf1f

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

Product family datasheet

	Certificates OTI DALI OT FIT D LT2 L CB DE1 58970 040320
	Certificates OT ENEC 40038085 010322
	Certificates LED drivers EMC 40011668 300922
	Declarations of conformity EATON(CEAG)-Conformity declaration AN00948 OTI DALI 35220-240400 D LT2 L
	Declarations of conformity INOTEC-Conformity declaration AN00948 OTI DALI 35220-240400 D LT2 L
	Declarations of conformity 727247_EC OTi
	Declarations of conformity OTi DALI D LT2 L UK DoC 4281086 180221
	Declarations of conformity OTI DALI D LT2 L CE 3667898 210921
	Declarations of conformity EATON(CEAG)-Conformity declaration AM00139_OTiDALI35_220_240_400_D_LT2_L
	Declarations of conformity INOTEC- Conformity declaration AM00139_OTiDALI35_220_240_400_D_LT2_L
	CAD data OTI DALI D LT2 L IGS 270220
	CAD data OTI DALI D LT2 L STEP 270220
	CAD Data 2-dim OTI DALI D LT2 L CAD2PDF 270220
	CAD data 3-dim OTI DALI D LT2 L CAD3PDF 270220
	Certificates 539639_CD Test Approval
	Declarations of conformity EATON(CEAG)-Conformity declaration AN00950 OTI DALI 60220-240550 D LT2 L
	Declarations of conformity INOTEC-Conformity declaration AN00950 OTI DALI 60220-240550 D LT2 L
	Declarations of conformity EATON(CEAG)-Conformity declaration AM00138_OTiDALI60_220_240_550_D_LT2_L
	Declarations of conformity INOTEC- Conformity declaration AM00138_OTiDALI60_220_240_550_D_LT2_L
	CAD data 3-dim 505454_CAD data OTi DALI 60220-240550 D LT2 L
	CAD data PDF 505460_CAD data OTi DALI 60220-240550 D LT2 L
	Certificates 358995_CB Test Certificate OTi DALI 90220-2401A0 LT2 L
	Declarations of conformity EATON(CEAG)-Conformity declaration AN00952 OTI DALI 90220-2401A0 D LT2 L

Product family datasheet

	Declarations of conformity INOTEC-Conformity declaration AN00952 OTi DALI 90220-2401A0 D LT2 L
	Declarations of conformity EATON(CEAG)-Conformity declaration AM00141_OTiDALI90_220_240_1A0_D_LT2_L
	Declarations of conformity INOTEC- Conformity declaration AM00141_OTiDALI90_220_240_1A0_D_LT2_L
	CAD data 370051_CAD File OTi DALI 90220-2401A0 LT2 L
	CAD data 370053_CAD Daten OTi DALI 90220-2401A0 LT2 L
	CAD data 3-dim 370052_CAD Daten OTi DALI 90220-2401A0 LT2 L
	CAD data PDF 370054_CAD File OTi DALI 90220-2401A0 LT2 L

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
4052899494220	OTi DALI 35/220...240/400 D LT2 L	Shipping carton box 20	305 mm x 161 mm x 104 mm	5.11 dm ³	4277.00 g
4052899188662	OTi DALI 60/220...240/550 D LT2 L	Shipping carton box 20	303 mm x 159 mm x 101 mm	4.87 dm ³	4296.00 g
4052899494206	OTi DALI 60/220...240/550 D LT2 L	Shipping carton box 20	305 mm x 161 mm x 104 mm	5.11 dm ³	4277.00 g
4052899494268	OTi DALI 90/220...240/1A0 LT2 L	Shipping carton box 20	305 mm x 161 mm x 104 mm	5.11 dm ³	4277.00 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.