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Product datasheet

OSRAM

IT DALI 20/220...240/1A0 E

ICUTRONIC - DALI (AstroDIM) IP20 | Constant current LED drivers



Product family features

- Supply voltage: 220...240 V
- AstroDim functionality
- Constant Lumen Output (CLO)
- Available with different wattage: 20 W, 40 W, 75 W, 110 W, 150 W, 200 W
- Output current range 350...1050 mA
- DALI-2 certified (Part 251, 252, 253)
- DALI dimming (min.10%)

Product family benefits

- Versatile DALI driver due to flexible output characteristic
- High surge protection: up to 10 kV (single pulse or more)
- Long lasting and high reliability
- Fully programmable via T4T software (DALI / AstroDIM / Constant Lumen)
- 5 years guarantee
- Great flexibility due to wide operating temperature range of up to -40...60 °C (+55°C for some products)
- Lifetime: up to 100,000 h (depending on T_C temperature, max. 10 % failure rate)
- High efficiency
- High-quality amplitude dimming

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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

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Technical data

Electrical data

Nominal voltage	220…240 V
Input voltage AC	198…264 V
Nominal current	0.10 A [1)]
Mains frequency	50/60 Hz
Power factor λ	0.78C…0.99 [2)]
Total harmonic distortion	< 10 % [3)]
Device power loss	4.0 W [4)]
Networked standby power	<0.50 W [5)]
Inrush current	27 A [6)]
Max. ECG no. on circuit breaker 10 A (B)	11 [7)]
Max. ECG no. on circuit breaker 16 A (B)	18 [7)]
Max. ECG no. on circuit breaker 25 A (B)	28 [7)]
Surge capability (L/N-Ground)	10 kV [8)]
Surge capability (L-N)	6 kV [9)]
Nominal output power	20 W
Maximum output power	20 W
Efficiency in full-load	88 % [5)]
Nominal output current	350…1050 mA [10)]
Default output current	700 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	< ±5 % [11)]
Output PSTLM	≤1
Output SVM	≤0.4
Minimum output current	70 mA [12)]
Galvanic isolation	SELV
Nominal output voltage	15…29 V
U-OUT (working voltage)	60 V
Max. no. of ECGs on 16A MCB with EBN-OS	100

1) Vin 230v 50Hz

2) Full load at 230 V/50 Hz

3) At full load, 230 V, 50 Hz / see graphs

4) At Full load, 230 V, 50 Hz

5) at 230 V, 50 Hz

6) Max, th = 260µs

7) Type B

8) EQUI @ 12 Ohm acc. to EN 61547

9) @ 2 Ohm, acc. to EN61547

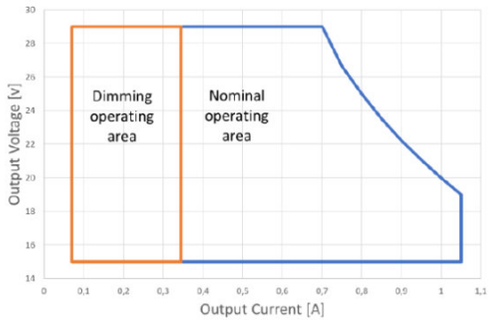
10) Default 700 mA; 200…1050 mA adjustable

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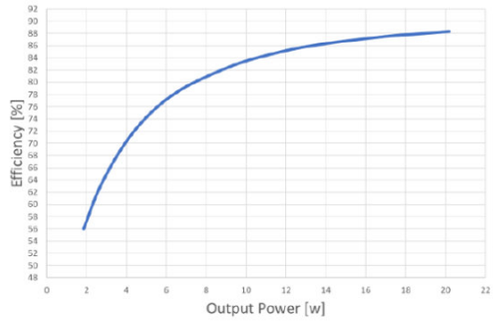
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11) Ripple / average @ 100 Hz

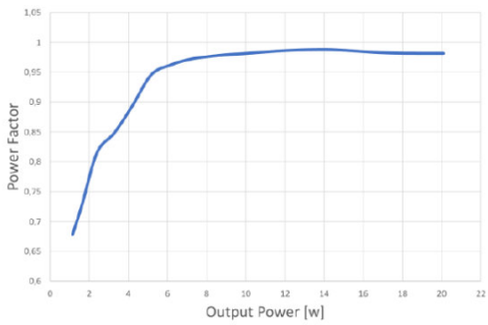
12) Physical Minimum Dimming Current



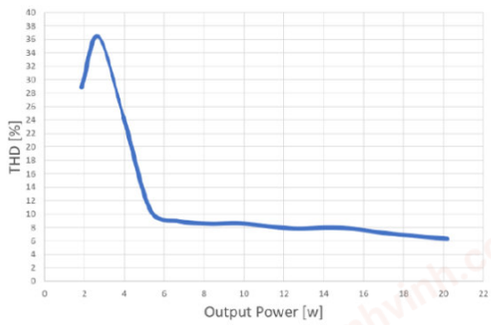
IT DALI 20 220-240 1A0 E Operating Window



IT DALI 20 220-240 1A0 E Typical Efficiency vs. Load



IT DALI 20 220-240 1A0 E Typical Power Factor vs. Load



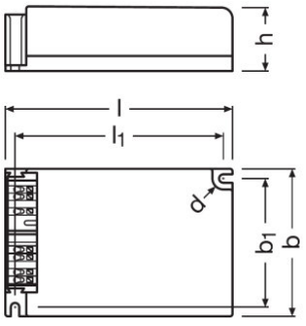
IT DALI 20 220-240 1A0 E Typical THD vs Load

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Dimensions & weight



Length	103.1 mm
Width	67.0 mm
Height	29.5 mm
Mounting hole spacing, length	94.0 mm
Mounting hole spacing, width	58.0 mm
Product weight	135.00 g
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

[1] Flexible / Solid leads

Temperatures & operating conditions

Ambient temperature range	-40…+60 °C
Temperature range at storage	-25…80 °C
Maximum temperature at tc test point	75 °C [1]
Max.housing temperature in case of fault	120 °C
Permitted rel. humidity during operation	5…85 % [2]

[1] Measured on tc point indicated on the product label.

[2] Non-condensing

Lifespan

ECG lifetime	50000 / 100000 h [1]

[1] Tc = 65°C, 0.2% / 1,000 h failure rate / Tc = 55°C, 0.1% / 1,000 h failure rate

Capabilities

Dimmable	Yes
Dimming interface	DALI-2 / AstroDIM
Dimming range	10…100 %

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Suitable for fixtures with prot. class	I / II
Constant lumen function	Programmable
NTC input	No
Short-circuit protection	Yes
No-load proof	Yes
Intended for no-load operation	No
Max. cable length to lamp/LED module	2.0 m [1]
Overload protection	Automatic reversible
LEDset	No
Number of channels	1
DALI-2 Energy Data	Yes [2]
DALI-2 Diagnostic Data	Yes [3]

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

[2] Acc. DALI part 252

[3] Acc. DALI part 253

Programming

Box programming	No
Tuner4TRONIC	Yes
Tuner4TRONIC Field App	No
Programming device	DALI

Programmable features

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

[1] Acc. DALI part 251

Certificates & standards

Type of protection	IP20
Standards	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
Approval marks – approval	CE / CCC / EAC / RCM / VDE / VDE-EMC / UKCA / DALI-2 / ENEC

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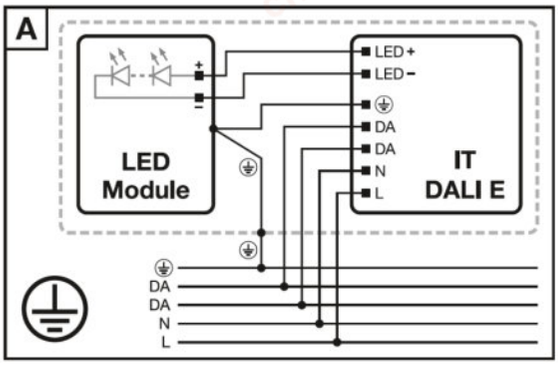
Logistical data

Commodity code	85044083900

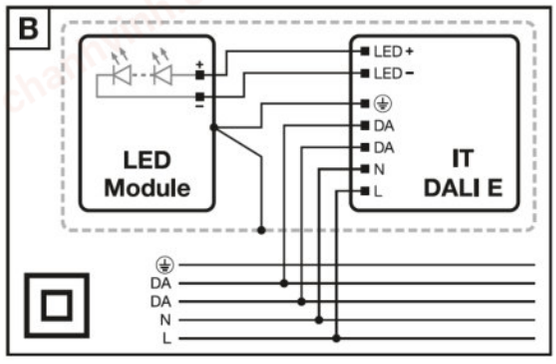
Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)	
Date of Declaration	11-05-2023
Primary Article Identifier	4052899620254
Candidate List Substance 1	Lead
CAS No. of substance 1	7439-92-1
Safe Use Instruction	The identification of the Candidate List substance is sufficient to allow safe use of the article.
Declaration No. in SCIP database	00184bee-3ad1-42d7-8fdf-51d1dca7a38d

Wiring Diagram



IT DALI 220-240 1A0 E Wiring Diagram



IT DALI 220-240 1A0 E Wiring Diagram

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Additional product information

- 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 switches into protection mode when output voltage exceeds limit and return to normal when the fault condition is removed.
- The driver automatically reduces the output current in case the maximum allowed output power is exceeded.
- 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.
- The EQUI pin shall be connected to the heat sink of the LED module to improve the surge withstand capability of the system and EMI in critical luminaires.
- 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.

Download Data

	File
	User instruction User Instruction
	Certificates OT VDE ENEC 40050684 290923
	Certificates IT DALI 1A0 E CB DE1 64544 170221
	Certificates CCC certificate of IT DALI 20 220-240 1A0 E
	Certificates OT EMC 40038827 300922
	Declarations of conformity IT DALI CE 4279760 120121
	CAD data IT DALI 20 40 E STEP 250821

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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.

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899620254	IT DALI 20/220...240/1A0 E	Shipping carton box 20	345 mm x 216 mm x 86 mm	6.41 dm^3	2931.00 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.

References / Links

* For more information on the multi-level guarantee and the terms and conditions of the guarantee visit https://
- www.inventronics-light.com/multilevel-guarantees

Disclaimer

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