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OSRAM

product - technical datasheet

IT DALI 150/220-240/1A0 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 input voltage	220…240 V
Mains frequency	50/60 Hz
Input voltage AC	198…264 V
Total harmonic distortion	< 10 % [1)]
Power factor λ	0.86C…0.99 [2)]
Efficiency in full-load	92.5 % [3)]
Device power loss	12.5 W [4)]
Inrush current	69 A [5)]
Max. ECG no. on circuit breaker 10 A (B)	6 [6)]
Max. ECG no. on circuit breaker 16 A (B)	10 [6)]
Surge capability (L/N-Ground)	10 kV [7)]
Surge capability (L-N)	6 kV [8)]
Nominal output voltage	110...214 V
U-OUT (working voltage)	310 V
Nominal output current	350…1050 mA [9)]
Default output current	700 mA
Output current tolerance	±5 %
Output ripple current (100 Hz)	< ±5 % [10)]
Output PSTLM	≤1
Output SVM	≤0.4
Nominal output power	150 W
Maximum output power	150 W
Galvanic isolation	basic

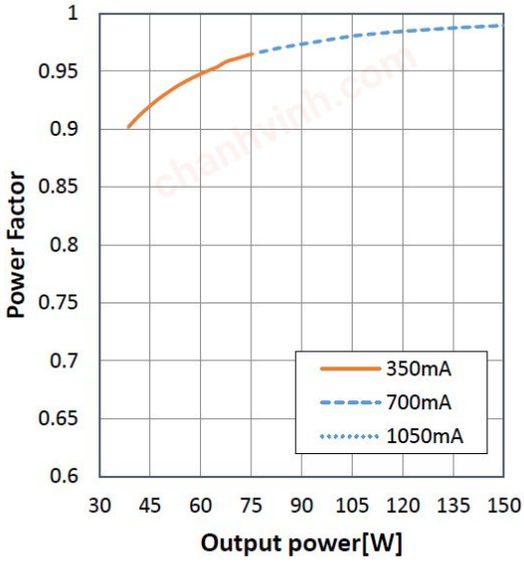
1) At full load, 230 V, 50 Hz / see graphs
2) Full load at 230 V / 50 Hz
3) at 230 V, 50 Hz
4) At Full load, 230 V, 50 Hz
5) Max, th = 200µs
6) Type B
7) Single pulse, EQUI @ 12 Ohm acc. to EN 61547
8) @ 2 Ohm, acc. to EN61547
9) Default 700 mA; 200...1050 mA adjustable
10) Ripple / average @ 100 Hz

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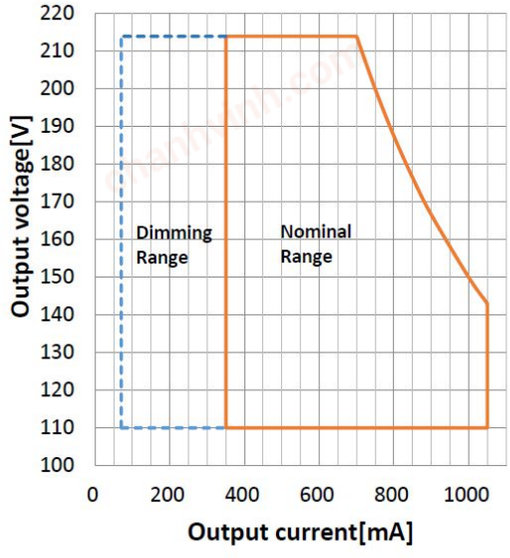
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Typical Power Factor v Load



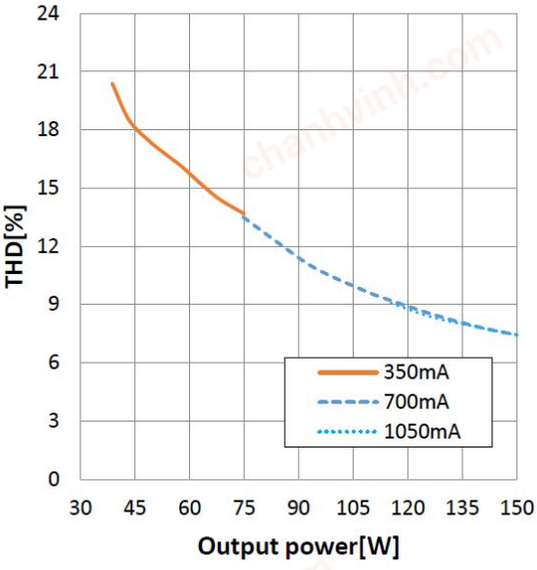
IT DALI 150 220-240 1A0 E Typical Power Factor vs. Load

Operating Window



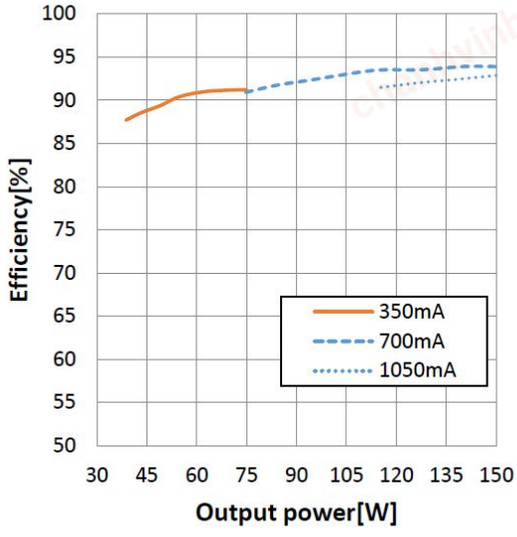
IT DALI 150 220-240 1A0 E Operating Window

Typical THD v Load



IT DALI 150 220-240 1A0 E Typical THD vs Load

Typical Efficiency v Load 230 V 50 Hz



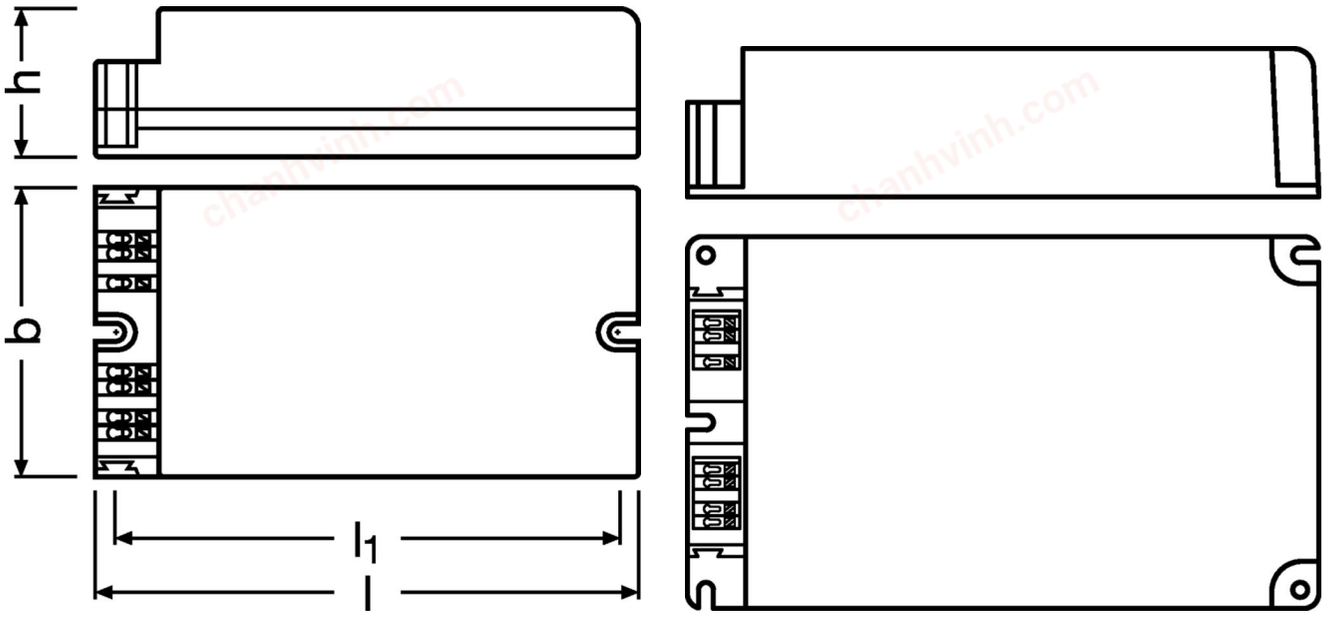
IT DALI 150 220-240 1A0 E Typical Efficiency vs. Load

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Dimensions & weight



Length	150.0 mm
Width	90.0 mm
Height	40.0 mm
Mounting hole spacing, length	134.0 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
Wire preparation length, output side	8.5…9.5 mm
Product weight	780.00 g

1) Flexible / Solid leads

Colors & materials

Casing material	Plastic

Temperatures & operating conditions

Ambient temperature range	-40…+55 °C
Maximum temperature at tc test point	85 °C [1)]
Max.housing temperature in case of fault	120 °C
Temperature range at storage	-25…80 °C
Permitted rel. humidity during operation	5…85 % [2)]

1) Measured on tc point indicated on the product label.
2) Non-condensing

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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

Capabilities

Dimmable	Yes
Dimming interface	AstroDIM / DALI-2
Dimming range	10…100 %
DALI-2 Diagnostic Data	Yes [1)]
DALI-2 Energy Data	Yes [2)]
Constant lumen function	Programmable
LEDset	No
Max. cable length to lamp/LED module	2.0 m [3)]
Suitable for fixtures with prot. class	I / II
Type of connection, input side	Terminal
Type of connection, output side	Terminal
Number of channels	1
Overheating protection	Yes
Overload protection	Automatic reversible
Short-circuit protection	Yes
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
Tuner4TRONIC	Yes
Tuner4TRONIC Field App	No
Box programming	No

Programmable features

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

1) Acc. DALI part 251

Certificates & standards

Approval marks – approval	CCC / CE / RCM / EAC / UKCA / DALI-2 / VDE / VDE-EMC / ENEC
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
Type of protection	IP20
Protection class	I,II

Logistical data

Commodity code	85044083900

Environmental information

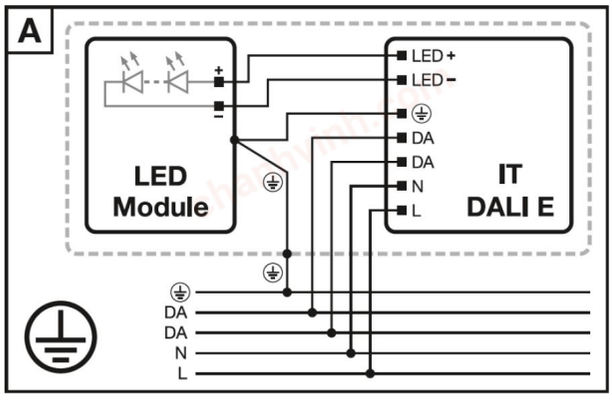
Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)	
Date of Declaration	04-06-2024
Primary Article Identifier	4052899620292
Declaration No. in SCIP database	In work

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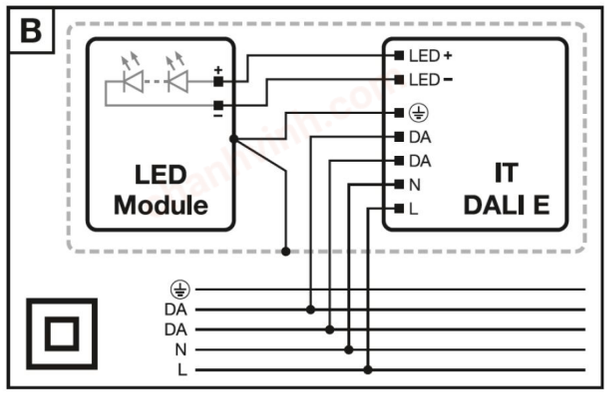
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Wiring Diagram



IT DALI 220-240 1A0 E Wiring Diagram



IT DALI 220-240 1A0 E Wiring Diagram

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.

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Download Data

File		
Certificates	PDF	►OT VDE ENEC 40050684 290923
Certificates	PDF	►CCC certificate of IT DALI 150 220-240 1A0 E
CAD data	Compressed	►IT DALI 150 E STEP 250821
Mandatory Publications	PDF	►IT DALI E 4310604 CE 191021
Mandatory Publications	PDF	►IT DALI E 4310605 UK DoC 180621
User instruction	PDF	►User Instruction

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
4052899620292	IT DALI 150/220-240/1A0 E	Shipping carton box 10 Pieces	385 x 300 x 125 mm	14.44 dm³	8141.00 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

Accessories Optional

Product description	Accessory name	Accessory code
IT DALI 150/220-240/1A0 E	DALI magic	►4062172379328
IT DALI 150/220-240/1A0 E	DALI magic	►6977078996907

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