

## IT DALI 40/220-240/1A0 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



## 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

## Technical data

### Electrical data

Max. ECG no. on circuit breaker 10 A (B)	12 <sup>1)</sup>
Max. ECG no. on circuit breaker 16 A (B)	19 <sup>1)</sup>
Maximum output power	40 W
Minimum output current	70 mA <sup>2)</sup>
Nominal output current	350...1050 mA <sup>3)</sup>
Nominal output power	40 W
Nominal output voltage	29...57 V
Nominal input voltage	220...240 V
Input voltage AC	198...264 V
Device power loss	6.5 W <sup>4)</sup>
Efficiency in full-load	90.5 % <sup>5)</sup>
Inrush current	28 A <sup>6)</sup>
Power factor $\lambda$	0.92C...0.99 <sup>7)</sup>
Mains frequency	50/60 Hz
Surge capability (L-N)	6 kV <sup>8)</sup>
Surge capability (L/N-Ground)	10 kV <sup>9)</sup>
U-OUT (working voltage)	60 V
Output current tolerance	$\pm 5$ %
Output ripple current (100 Hz)	$< \pm 5$ % <sup>10)</sup>
Total harmonic distortion	$< 10$ % <sup>11)</sup>
Default output current	700 mA

1) Type B

2) Physical Minimum Dimming Current

3) Default 700 mA; 200...1050 mA adjustable

4) At Full load, 230 V, 50 Hz

5) at 230 V, 50 Hz

6) Max,  $t_h = 240\mu s$

7) Full load at 230 V / 50 Hz

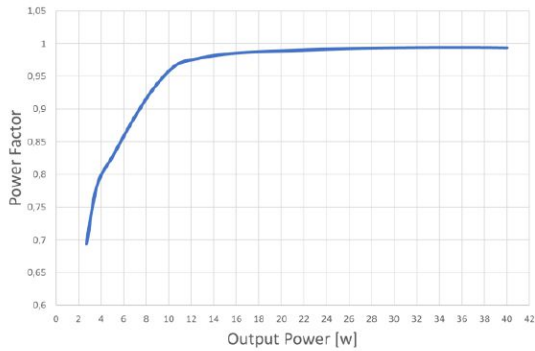
8) @ 2 Ohm, acc. to EN61547

9) EQUI @ 12 Ohm acc. to EN 61547

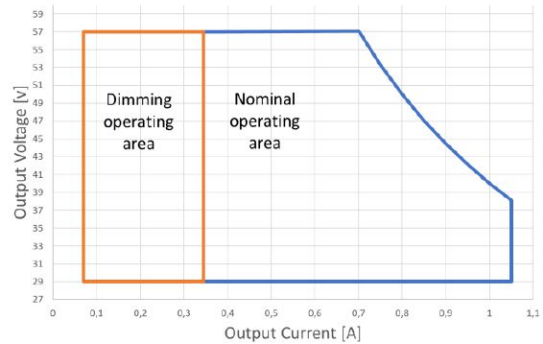
10) Ripple average at 100 Hz

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

## Typical Power Factor v Load



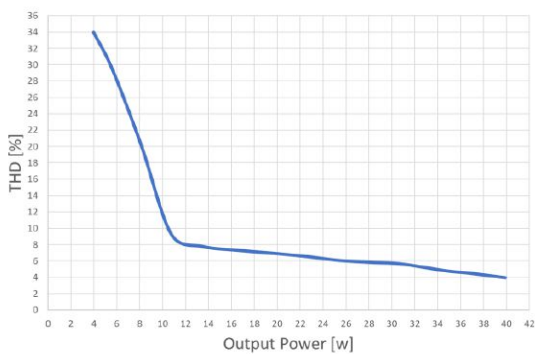
## Operating Window



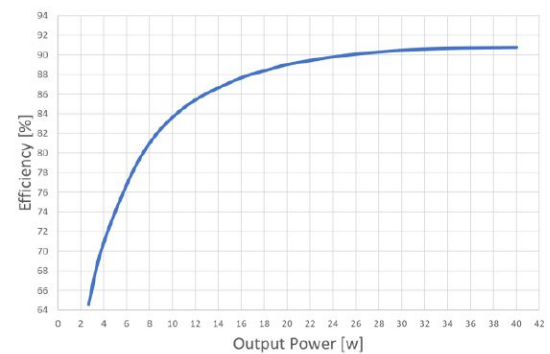
IT DALI 40 220-240 1A0 E Typical Power Factor vs. Load

IT DALI 40 220-240 1A0 E Operating Window

## Typical THD v Load



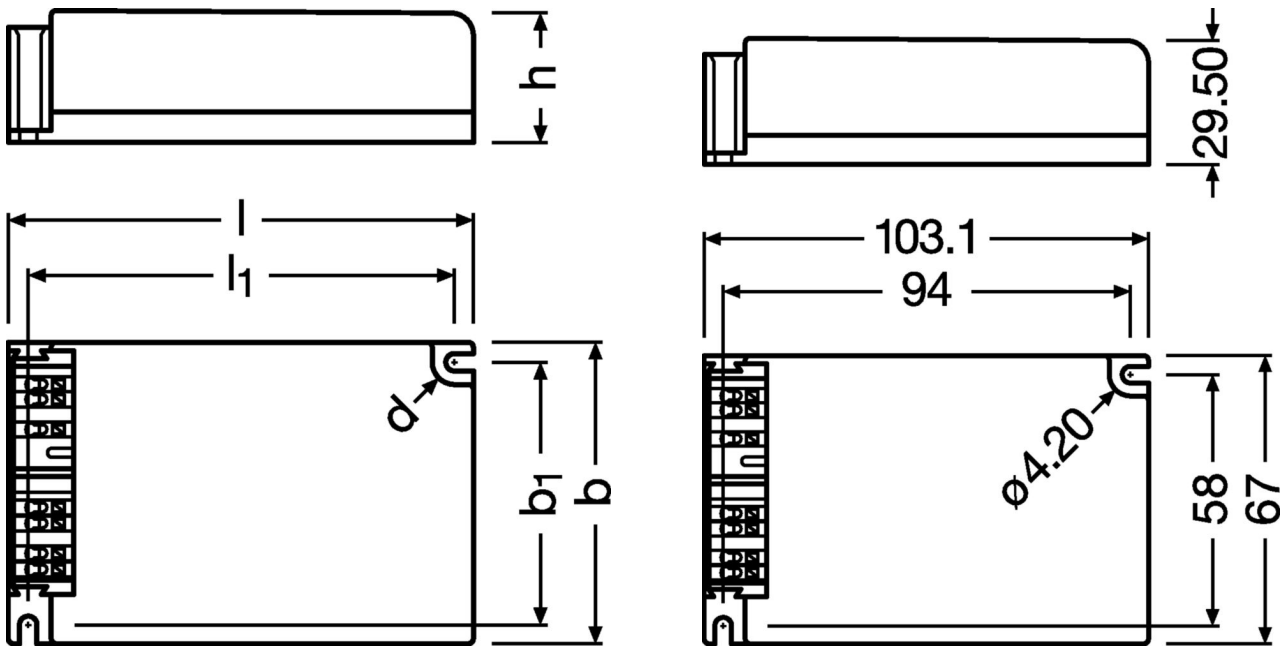
## Typical Efficiency v Load 230 V 50 Hz



IT DALI 40 220-240 1A0 E Typical THD vs Load

IT DALI 40 220-240 1A0 E Typical Efficiency vs. Load

## Dimensions & weight



Product weight	140.00 g
Length	103.1 mm
Height	29.5 mm
Width	67.0 mm
Cable cross-section, input side	0.2...1.5 mm <sup>2</sup> <sup>1)</sup>
Cable cross-section, output side	0.2...1.5 mm <sup>2</sup> <sup>1)</sup>
Mounting hole spacing, length	94.0 mm
Mounting hole spacing, width	58.0 mm
Wire preparation length, input side	8.5...9.5 mm
Wire preparation length, output side	8.5...9.5 mm

1) Flexible / Solid leads

## Colors & materials

Casing material	Plastic
-----------------	---------

## Temperatures & operating conditions

Ambient temperature range	-40...+60 °C
Max.housing temperature in case of fault	120 °C
Maximum temperature at tc test point	85 °C <sup>1)</sup>
Permitted rel. humidity during operation	5...85 % <sup>2)</sup>
Temperature range at storage	-25...85 °C

1) Measured on tc point indicated on the product label.

2) Non-condensing

## Lifespan

<b>ECG lifetime</b>	50000 h / 100000 h <sup>1)</sup>
---------------------	----------------------------------

1)  $T_c = 75^\circ\text{C}$ , 0.2% / 1,000 h failure rate /  $T_c = 65^\circ\text{C}$ , 0.1% / 1,000 h failure rate

## Capabilities

<b>Max. cable length to lamp/LED module</b>	2.0 m <sup>1)</sup>
<b>Number of channels</b>	1
<b>Dimmable</b>	Yes
<b>Dimming interface</b>	AstroDIM / DALI-2
<b>Dimming range</b>	10...100 %
<b>Overload protection</b>	Automatic reversible
<b>Overheating protection</b>	Yes
<b>Short-circuit protection</b>	Yes
<b>Suitable for fixtures with prot. class</b>	I / II
<b>Type of connection, input side</b>	Terminal
<b>Type of connection, output side</b>	Terminal
<b>Constant lumen function</b>	Programmable
<b>LEDset</b>	No
<b>No-load proof</b>	Yes

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

## Programming

Box programming	No
-----------------	----

## Programmable features

AstroDIM	Yes
Configuration Lock	Yes
DALI-2 Luminaire Data	Yes <sup>1)</sup>
Driver Guard	No
Emergency Mode	No
MainsDIM	No
StepDIM	No

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	CCC / CE / EAC / RCM / DALI-2 / VDE / VDE-EMC / UKCA / ENEC

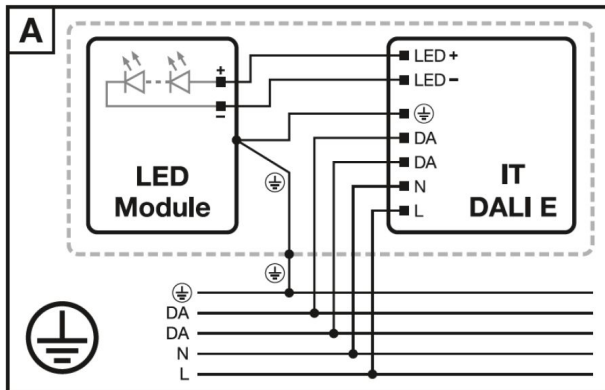
## Logistical data

Commodity code	85044083900
----------------	-------------

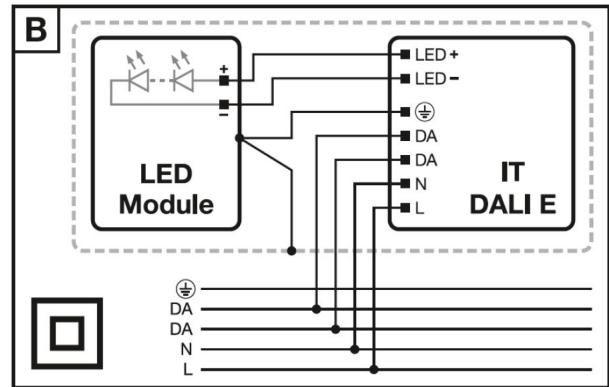
## Environmental information

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACH)	
Date of Declaration	08-07-2024
Primary Article Identifier	4052899620261
Declaration No. in SCIP database	In work
SCIP_STATUS	In work
SCIP_ID	

## Wiring Diagram



IT DALI 220-240 1A0 E Wiring Diagram



IT DALI 220-240 1A0 E Wiring Diagram

### 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.



## 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		
Certificates	PDF	▶ OT VDE ENEC 40050684 160724
Certificates	PDF	▶ CCC certificate of IT DALI 40 220-240 1A0 E
CAD data	Compressed	▶ IT DALI 20 40 E STEP 250821
Mandatory Publications	PDF	▶ IT DALI CE 4279760 120121
Mandatory Publications	PDF	▶ IT DALI E UK DoC 4437133 250123
User instruction	PDF	▶ User Instruction

## Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4052899620261	IT DALI 40/220-240/1A0 E	Shipping carton box 20 Pieces	345 x 216 x 86 mm	6.41 dm <sup>3</sup>	151.55 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 40/220-240/1A0 E	DALI magic	▶ 6977078996907
IT DALI 40/220-240/1A0 E	DALI magic	▶ 6977078997416

## Disclaimer

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