CUPOWER

ID ELNCB 80/230/050-550 DALI NFC CCT H21

Art. 167920

Product features

- Built-in non isolated adjustable power LED driver
- Supports DALI-2, push DIM
- Current adjustment via NFC
- Color temperature adjustable
- Flicker-free LED driver
- Supports i-Data function (DALI part 251, 252, 253)
- Output current 50...550 mA
- Max. output power 80 W
- DC emergency
- For luminaires with protection class I
- 5 years warranty

Product specifications

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Output current	Input voltage	Output voltage	Efficiency @ full load	Current accuracy	Power factor	Dimension L x W x H (mm)
50...550 mA	220…240 Vac 220…240 Vdc	50…220 Vdc	94%	± 5%	0.95	238 x 30 x 21

Electrical specifications

Mains voltage supply

Rated input voltage range	220…240 Vac; performance range
Max. input voltage range	198...264 Vac; operational safety range
Rated frequency range	0/50/60 Hz
Performance/Operational safety	47...63 Hz
Max. input current	0.42 A @ 230 Vac & 0.42 A @ 230 Vdc

Battery operation

DC voltage range	220...240 Vdc; performance range
Max. DC voltage range	176…280 Vdc; operational safety range

Protection against voltage peaks

Withstand voltage	I/p-FG: 1.5 kVac, < 5 mA 60 sec; I/p-DA: 1.5 kVac, < 5 mA 60 sec; DA-FG: 1.5 kVac, < 5 mA 60 sec
Mains surge immunity	L-N: 1 kV, L/N-FG: 2 kV per IEC 61000-4-5
Control interface surge immunity	DA-DA: 1 kV, DA-FG: 2 kV per IEC 61000-4-5

Total harmonic distortion (THD)

At rated input voltage range @ full load	≤ 10%

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Output data

Output current tolerance	100...550 mA ± 5% at rated input voltage range
Output current tolerance	50...99 mA ± 8% at rated input voltage range
No load output voltage	≤ 250 Vdc
Ripple output current	5% (ripple = peak/average total 100 Hz)
Output PstLM	≤ 1 at full load @ rated input voltage
Output SVM	≤ 0.4 at full load @ rated input voltage
DC emergency level	Current output decreased to 15% (programmable range: 1%...100%)

Protection functions output side

Overvoltage protection	The output voltage is less than or equal to 250 Vdc
Overpower protection	The output power is less than or equal to 84 W
Short circuit protection & Over voltage protection	Short circuit protection and overvoltage protection are designed to turn off the out put and cannot be automatically restored. After removing the short circuit, the outp ut can be restored by one of the following two operations: • After receiving DALI instruction off, turn on the light by dimming instruction. • Restart the driver: Power on the driver five seconds after the power failure.

Dimming operation and interface

Dimming mode	DALI-2, push dimming
Dimming method	Amplitude dimming
Dimming current range	1%~100% (0.5...550 mA)
Standby power consumption	≤ 0.3 W

Connection terminals

Connection terminal type	45° push in terminal
Wire cross section	Input wire: 0.5…1.5 mm²; output wire: 0.2…1.5 mm²
Wire stripping length	8…9 mm

Degree of protection

Protection rating	IP20

Operating data

Output current range	NFC control adjusts the current: 50...550 mA
Default current	50 mA
Output voltage range	50…220 Vdc
Noise level	< 20 dB, at full load @ 100 cm distance

Circuit breaker / Inrush current

MCB loading quantity	Inrush current Ipeak: 29.0 A	Inrush current Twidth: 236 µs			
	MCB type	B10	C10	B16	C16
	Units	15	20	24	33

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Supplementary instructions

- The luminaire manufacturer is responsible for measuring and verifying the EMI compliance of the complete luminaire, as the level of radio interference will vary depending on the luminaire construction. Especially primary and secondary cable lengths and their routing may have a significant effect on radio interference.
- For the push DIM function, please follow our instructions, which can be downloaded from www.cupower.com.

Installation instruction

- Install the LED driver in the direct neighborhood of other CUPOWER products.
- The LED driver contains an antenna for wireless communication with other CUPOWER products. Operation of the antenna should not be disrupted.
- Do not mount the LED driver inside a metal housing or directly next to a large metal object.
- Some glass and plastic materials influence the operation of an antenna.
- The protection of the built-in drive is carried out by means of the luminaire housing.
- Contact CUPOWER in case of doubt via: https://www.cupower.com/.

Environmental specifications

Operating temperature	-20…+55°C
Storage temperature	-25…+85°C
Working humidity	10%…90%
Store humidity	5%…95%
Lifetime	at Tc 85°C: 50,000 hrs; at Tc 75°C: 100,000 hrs @ 230Vac
Maximum Tc temperature	85°C

Safety & EMC compliance

ENEC+CE
EN 61347-1:2015/A1:2021
EN 61347-2-13:2014/A1:2017
EN IEC 62384:2020
EN IEC 55015:2019/A11:2020
EN IEC 61547:2023
EN IEC 61000-3-2:2019/A2:2024
EN 61000-3-3:2013/A2:2021
EN 300 330 V2.1.1:2017
EN 62479:2010
EN 50663:2017
EN 301 489-1 V2.2.3:2019
EN 301 489-3 V2.3.2:2023

CCC

SAA
AS 61347.2.13:2018
AS/NZS 61347.1:2016 Amd 1:2018

DALI-2 Acc. to EN 62386
Acc. to IEC 62386-101:Ed2
Acc. to IEC 62386-102:Ed2
Acc. to IEC 62386-207:Ed1
Acc. to IEC 62386-251:Ed2
Acc. to IEC 62386-252:Ed2
Acc. to IEC 62386-253:Ed2

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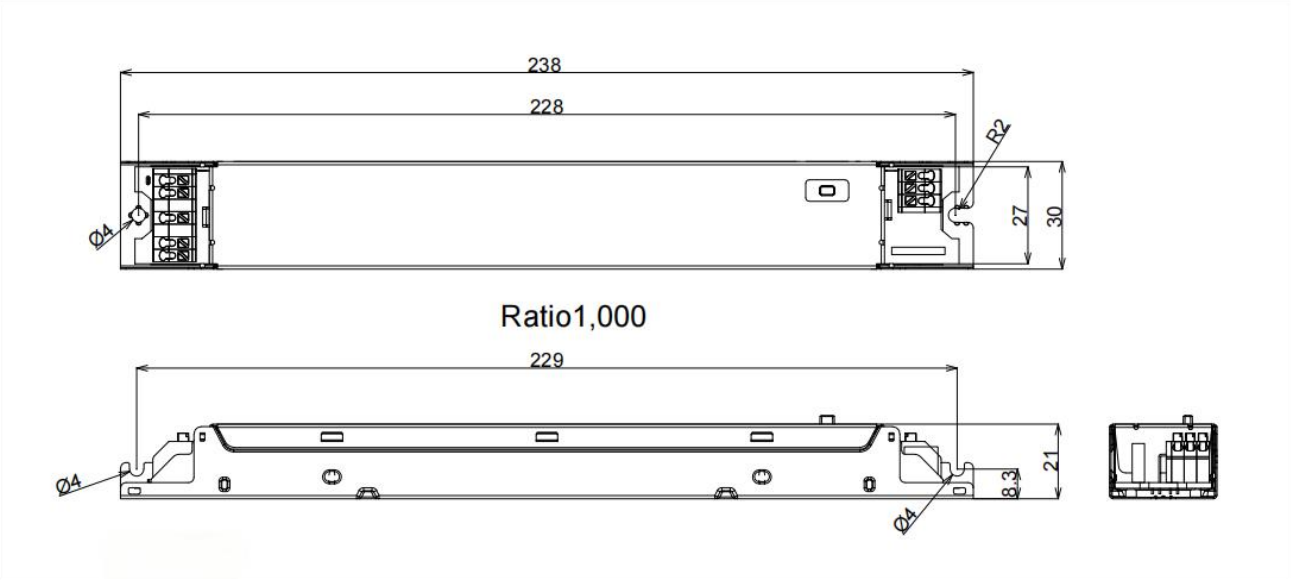
Dimensions

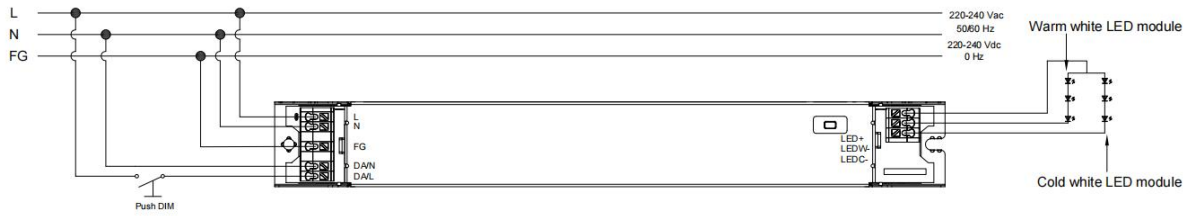
Housing dimensions	
Length (L)	238 mm
Width (W)	30 mm
Height (H)	21 mm

For all dimensions: values in mm; tolerances: ± 0.5 mm

Packaging details	
Packing units	20 pcs
Carton size	260 x 130 x 130 mm
Carton weight	4.0 kg
Product weight	0.170 kg



Wiring diagram



- All connections must be as short as possible to ensure good EMI performance.
- The luminaire wire should keep a certain distance from the LED power supply and other wires (5…10 cm is preferred).
- No secondary switches are allowed.
- Incorrect wiring can damage the LED.
- The wire must be well protected against short circuit.
- The outputs of drivers cannot be in paralleled.

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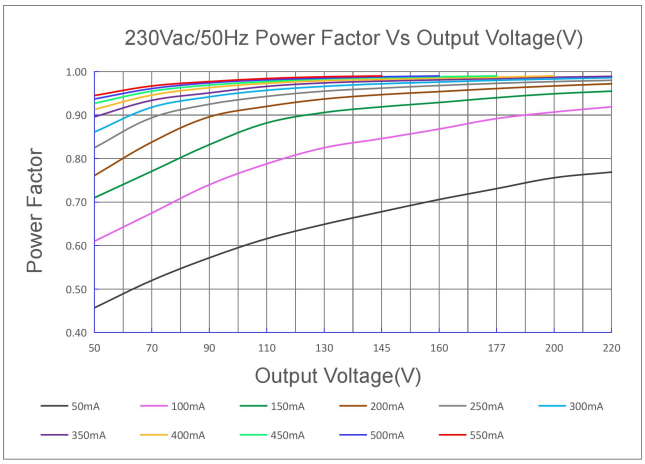
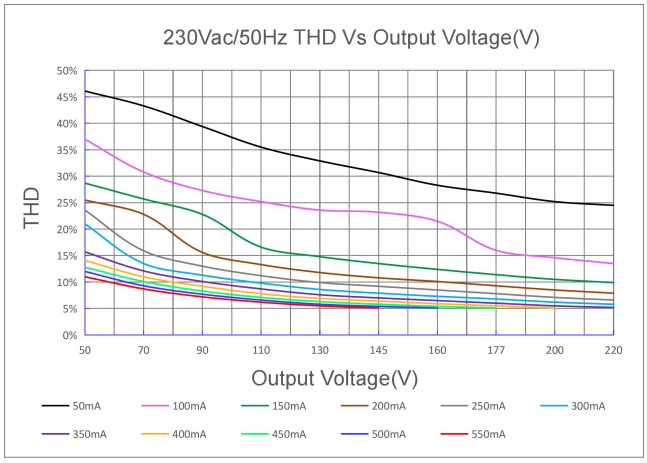
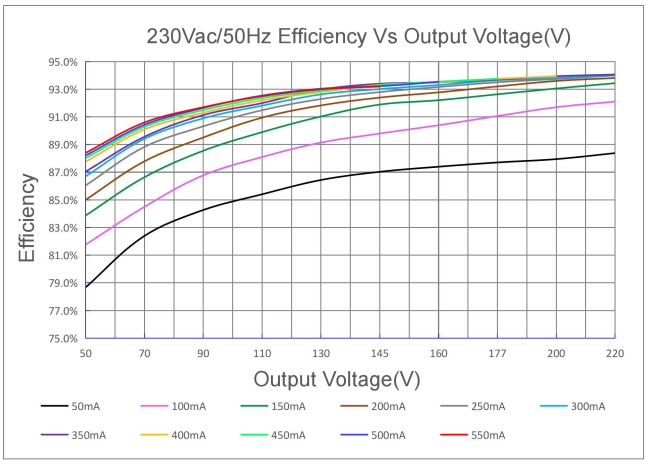
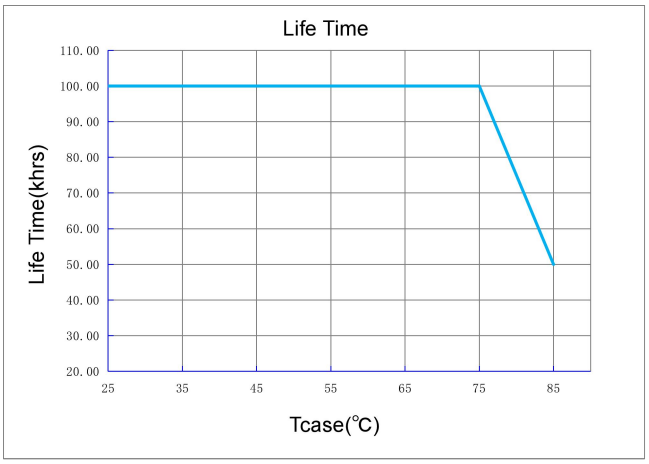
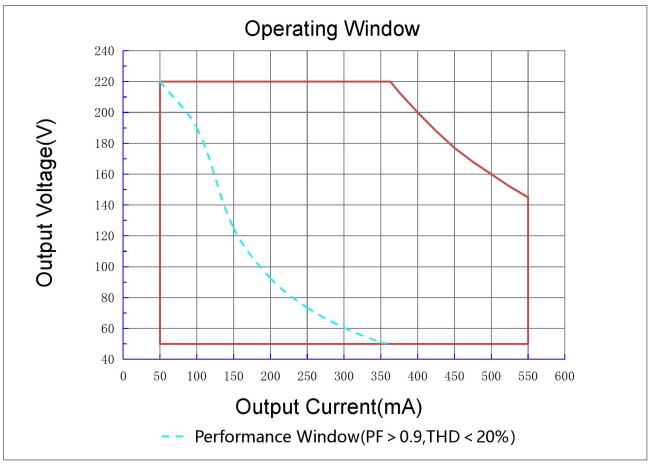
Technical information











It's important to set the output current (AOC value) according to the LED voltage and make sure the power is within 80 W + 5%.

Example of AOC settings

V_LED (Vdc)	AOC max	Pout (W)
145	550 mA	79.7
160	500 mA	80
177	450 mA	79.6
200	400 mA	80
220	363 mA	79.8

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