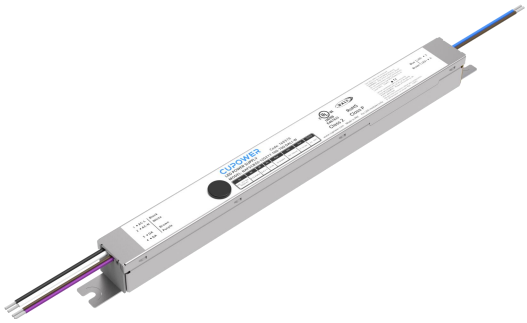
CUPOWER

NAFSCB30-120277-100-700 DALI-W

Art. 168378

Product features

- Built-in isolated adjustable power LED driver
- Supports DALI-2
- Supports i-Data function (DALI part 251, 252, 253)
- Output current 100…700 mA
- Max. output power 30 W
- Flicker-free
- Dimming range 0.1%...100%
- Current output default value 100%
- For luminaires with protection class I



Product specifications

168378 NAFSCB30-120277-100-700 DALI-W

Output current	Input voltage	Output voltage	Efficiency @ full load	Current accuracy	Power factor
100…700 mA	120…277 Vac	15…52 Vdc	88% (@120V) 89% (@277V)	± 5%	0.9 (Output Power > 15 W)

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Electrical specifications

Mains voltage supply

Rated input voltage range	120…277 Vac; performance range
Max. input voltage range	108...305 Vac; operational safety range
Rated frequency range	50/60 Hz
Performance/Operational safety	47...63 Hz
Max. input current	0.32 A @ 120 Vac

Protection against voltage peaks

Withstand voltage	I/p-O/p: 1.6 kVac, < 5 mA 60 s, I/p-earth: 1.6 kVac, < 5 mA 60 s, O/p-earth: 0.5 kVac, < 5 mA 60 s
Mains surge immunity	L-N 1 kV, L/N-earth 2 kV per IEC 61000-4-5, 2.5 kV ring wave

Total harmonic distortion (THD)

At rated input voltage range @ full load	≤ 15%

Hunan Xiezhen Electronics Co., Ltd.
Block A&B, Building 11, Innovation Park Linyi Road,
Bailutang Town Suxian District, Chenzhou, Hunan - China

CUPOWER Europe GmbH
Ahornweg 5a
58675 Hemer - Germany

CUPOWER North America, Inc.
655 Raco Dr. Suite A,
Lawrenceville, GA 30046 - USA

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Output data

Output current tolerance	± 5% at rated input voltage performance range
No load output voltage	≤ 60 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

Protection functions output side

Overvoltage protection	The output voltage is less than or equal to 60 V
Overpower protection	The output power is less than or equal to 35 W
Short circuit protection	Hiccup mode. Protection device will trigger when short circuit and will auto recover after the fault mode is removed.

Dimming operation and interface

Dimming mode	DALI-2
Dimming method	Amplitude dimming
Dimming current range	0.1%...100% (0.7...700 mA)

Wiring

Main input wire	UL1332, 18 AWG, 300 V, 200℃, black L, white N, wire exposed 5.9 ± 0.39 in (150 ± 10 mm), tinplating length 0.39 ± 0.04 in (10 ± 1 mm).
Main output wire	UL1332, 20 AWG, 300 V, 200℃, brown LED+, blue LED-, wire exposed 5.9 ± 0.39 in (150 ± 10 mm), tinplating length 0.39 ± 0.04 in (10 ± 1 mm).
DALI control input wire	UL1332, 22 AWG, 300 V, 200℃, purple DALI, wire exposed 5.9 ± 0.39 in (150 ± 10 mm), tinplating length 0.39 ± 0.04 in (10 ± 1 mm).

Degree of protection

Protection rating	IP20

Operating data

Output current range	100…700 mA (programmable)
Default output current	100 mA
Output voltage range	15…52 Vdc
Noise level	< 20 dB, at full load @ 100 cm distance

Circuit breaker / Inrush current

MCB loading quantity	Inrush current Ipeak: 12.9 A			Inrush current Twidth: 116 µs	
	MCB type	B10	C10	B16	C16
	Units	26	26	42	42

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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.
- The driver can be programmed by plugging the dimming wire into the programmer. When ordering drivers, make sure you order the appropriate programmer.
- If the dimming depth is set too deeply, please make sure that all the LED bulbs are in sync to prevent the situation where some LED bulbs fail to light up properly at lower brightness levels.

Environmental specifications

Operating temperature	-20… +50°C
Storage temperature	-25… +85°C
Working humidity	10%…90%
Store humidity	5%…95%
Lifetime	at Tc 80°C: 50,000 hrs @ performance range (0.2% / 1,000 h failure rate)
Maximum Tc temperature	85°C

Safety & EMC compliance

UL	FCC	
UL8750	/	
CLASS P		
CSA C22.2 NO.250.13		
CLASS 2		

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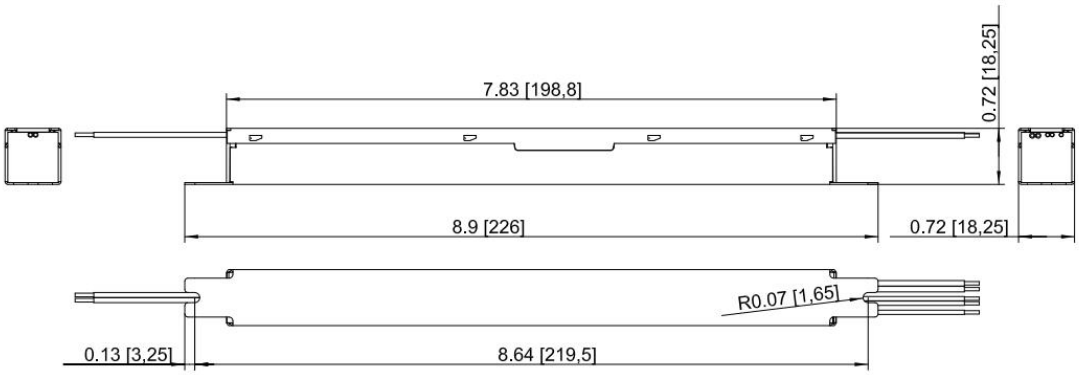
Dimensions

Housing dimensions	
Length (L)	8.90 in (226 mm)
Width (W)	0.72 in (18.25 mm)
Height (H)	0.72 in (18.25 mm)
For all dimensions: values in in/mm; tolerances: ±0.5mm	

Packaging details	
Packing units	50 pcs
Carton size	15.04 x 9.05 x 6.81 in (382 x 230 x 173mm)
Carton weight	6.2 kg
Product weight	0.105 kg



- 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 circuits.

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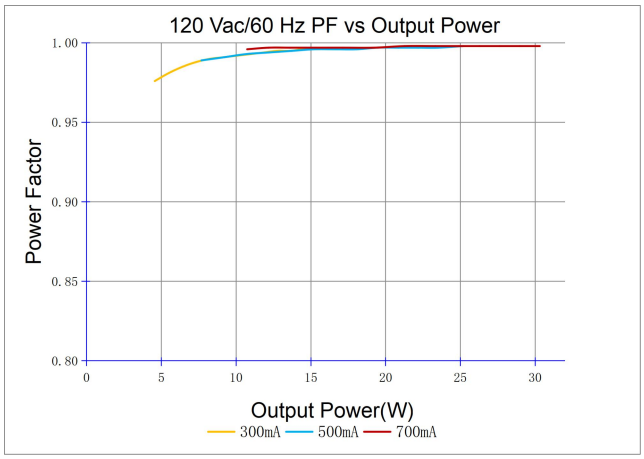
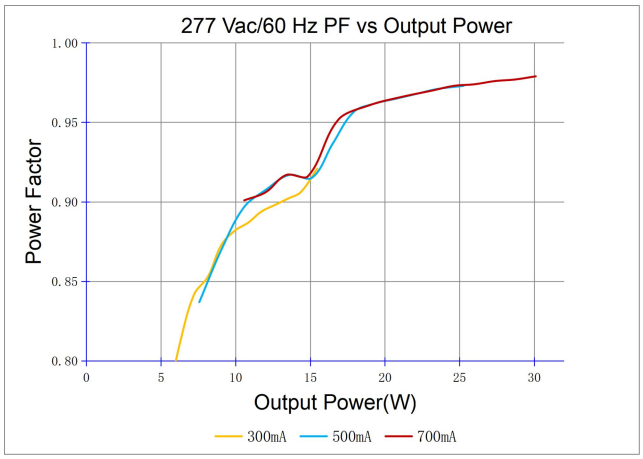
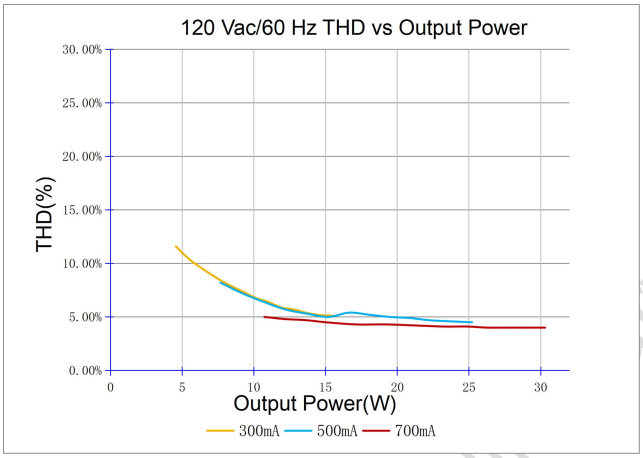
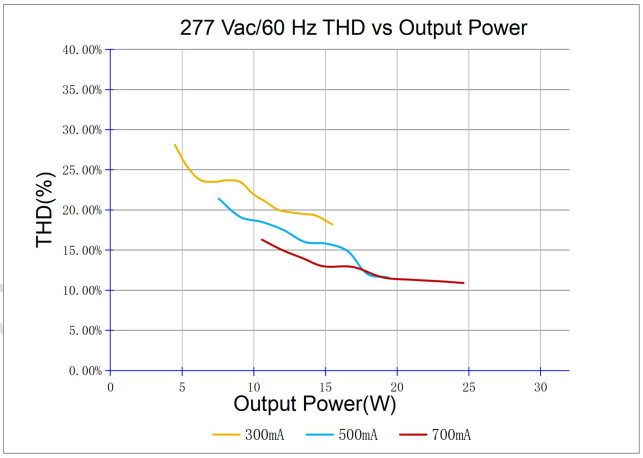
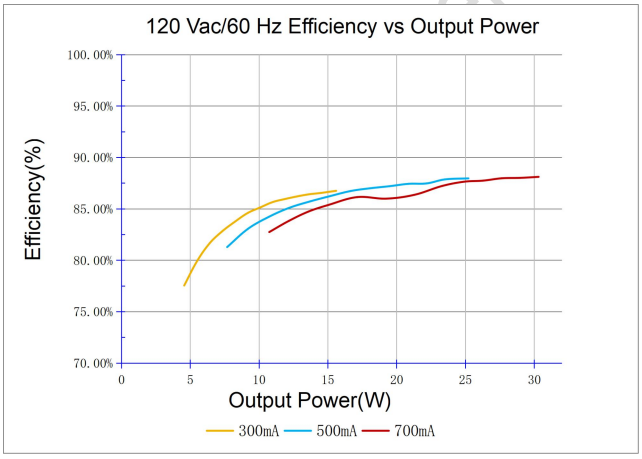
Technical information

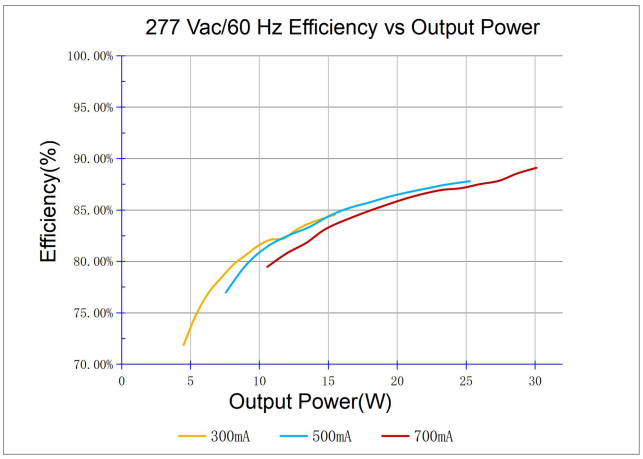












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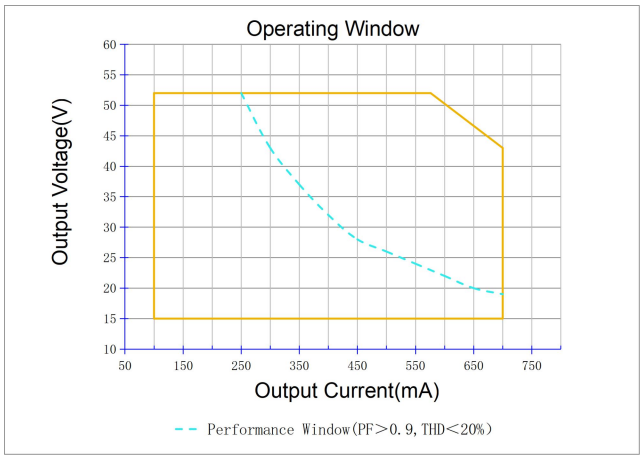

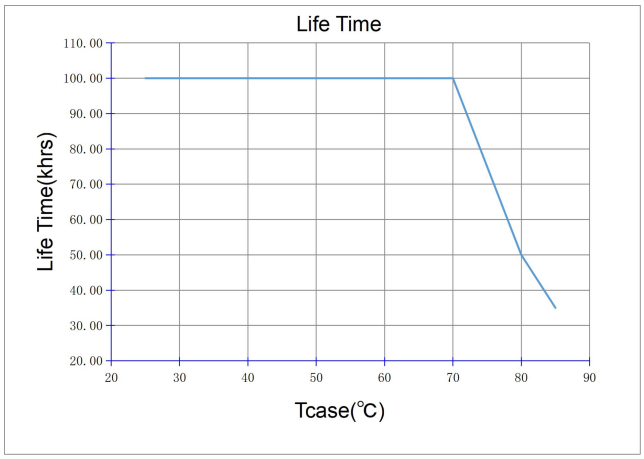

at Tc 75°C (0.2% / 1,000 h failure rate)

It's important to set the output current (AOC value) according to the LED voltage and make sure the power is within 30 W + 5%.

Example of AOC settings

V LED (Vdc)	AOC max	Pout (W)
43	700 mA	30.1
50	600 mA	30
52	600 mA	31.2

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