

Product features

- Built-in isolated adjustable power LED driver
- Supports DALI-2
- Supports i-Data function (DALI part 251, 252, 253)
- Output current 600...1200 mA
- Max. output power 50 W
- Flicker-free
- Dimming range 0.1%...100%
- Current output default value 100%
- For luminaires with protection class I



Class P c



Product specifications

168385 NAFSCB50-120277-600-1200 DALI-W

Output current	Input voltage	Output voltage	Efficiency @ full load	Current accuracy	Power factor
600...1200 mA	120...277 Vac	15...52 Vdc	90% (typical)	± 5%	0.9 (Output Power > 27 W)

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	0.5 A @ 120 Vac

Protection against voltage peaks

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

Total harmonic distortion (THD)

At rated input voltage range @ full load	≤ 15%
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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

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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 55 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 (The voltage at the DALI port is less than 25V)
Dimming method	Amplitude dimming
Dimming current range	0.1%...100% (1.2...1200 mA)

Wiring

Main input wire	UL1332, 18 AWG, 300 V, 200°C, 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°C, brown LED+, blue LED-, wire exposed 5.9 ± 0.39 in (150 ± 10 mm), tinplating length 0.39 ± 0.04 in (10 ± 1 mm).
DIM control input wire	UL1332, 22 AWG, 300 V, 200°C, purple DA, brown DA, 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
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Operating data

Output current range	600...1200 mA (programmable)
Default output current	1200 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: 21.6 A			Inrush current Twidh: 133 µs	
	MCB type	B10	C10	B16	C16
	Units	16	16	26	26

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 inserting one end of the programmer into the drive and the other end into the USB port of the computer. The driver does not need to be powered on during the programming process. When ordering drivers, make sure you order the appropriate programmer.

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	90°C

Safety & EMC compliance

UL	FCC	DALI-2 Acc. to EN 62386
UL8750	/	Acc. to IEC 62386-101:Ed2
CLASS P		Acc. to IEC 62386-102:Ed2
CSA C22.2 NO.250.13		Acc. to IEC 62386-207:Ed1
UL1310-CLASS 2		Acc. to IEC 62386-251:Ed2
		Acc. to IEC 62386-252:Ed2
		Acc. to IEC 62386-253:Ed2

Dimensions

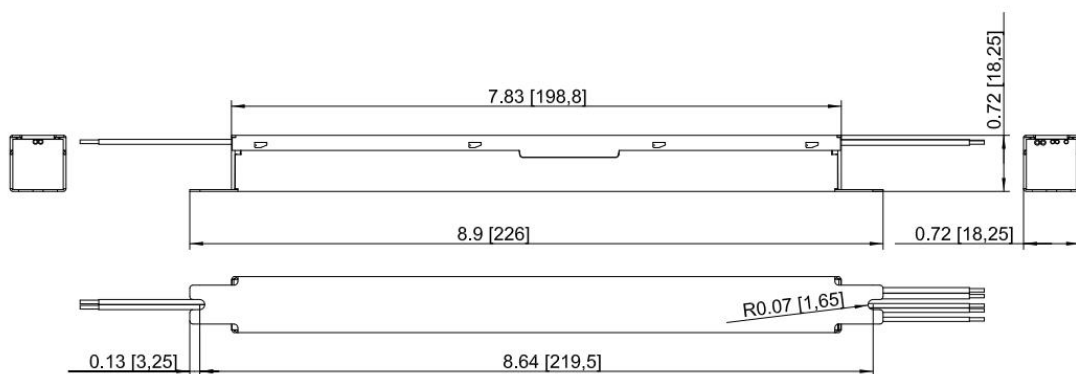
Housing dimensions

Length (L)	8.90 in (226.0 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: ± 0.5 mm

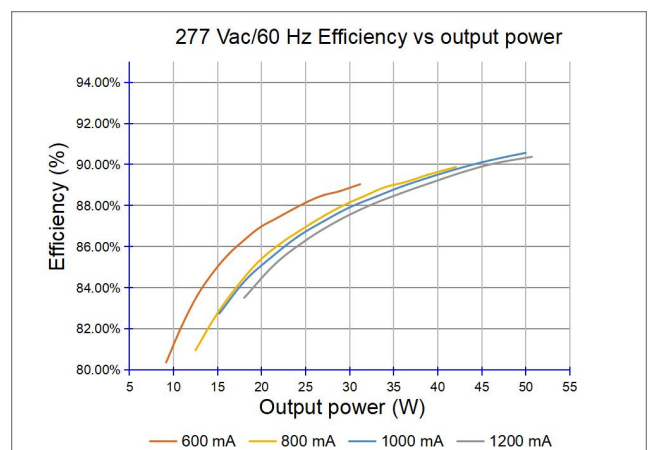
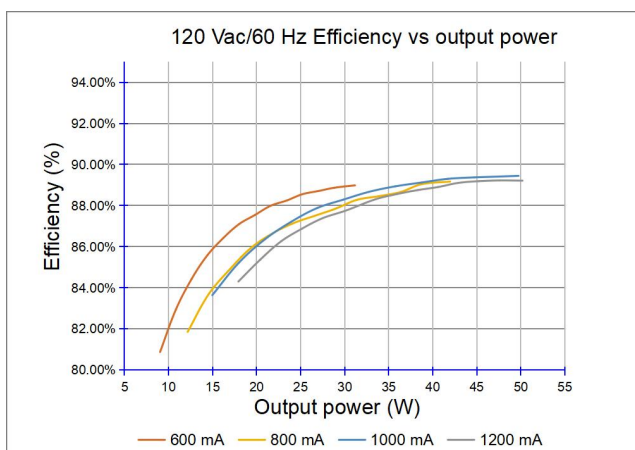
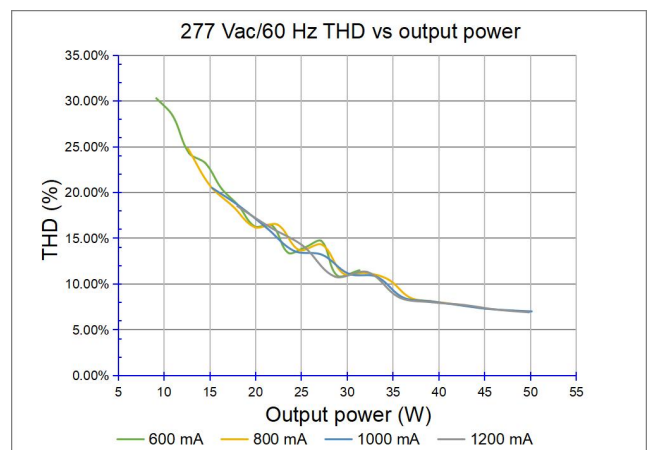
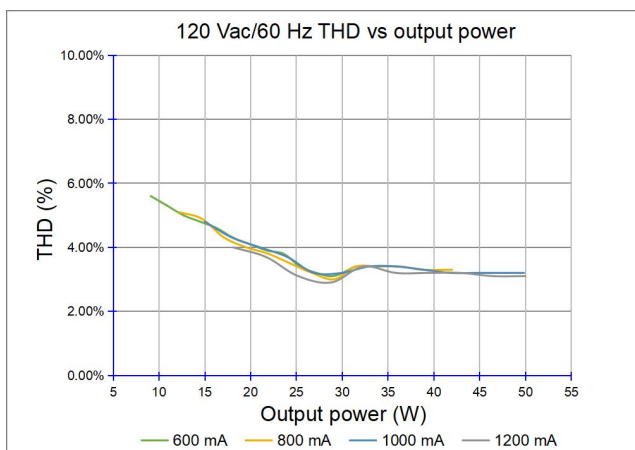
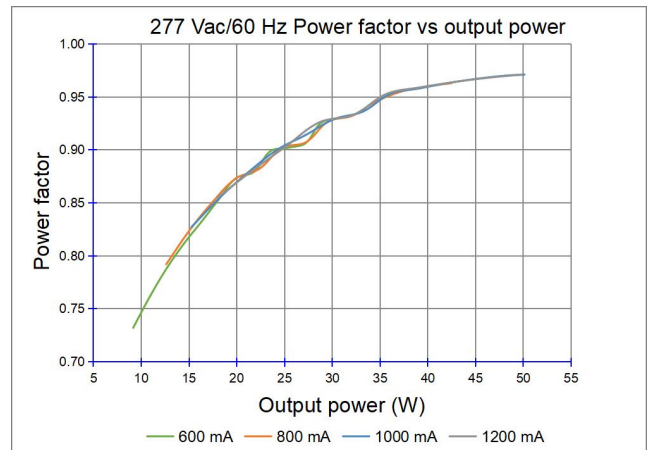
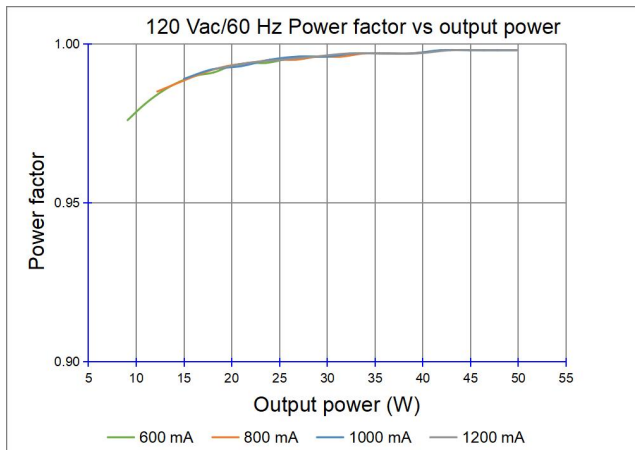
Packaging details

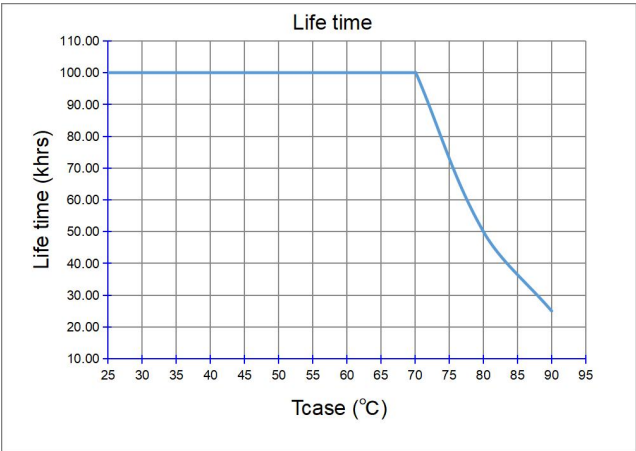
Packing units	50 pcs
Carton size	12.60 x 9.72 x 6.81 in (320 x 247 x 173 mm)
Carton weight	7.7 kg
Product weight	0.135 kg



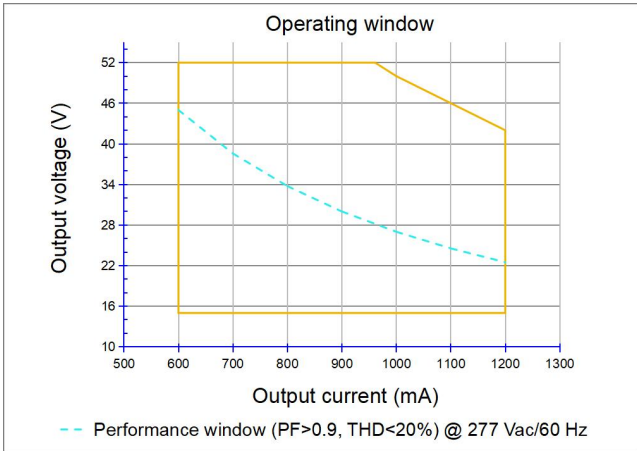
- All connections must be as short as possible to ensure good EMI performance.
- The luminaire wire should keep a certain distance from the LED power supply and other wires (5...10 cm is preferred).
- No secondary switches are allowed.
- Incorrect wiring can damage the LED.
- The wire must be well protected against short circuits.

Technical information





at Tc 80°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 50 W + 5%.

Example of AOC settings

V LED (Vdc)	AOC max	Pout (W)
42	1200 mA	50.4
50	1000 mA	50
52	961 mA	50