

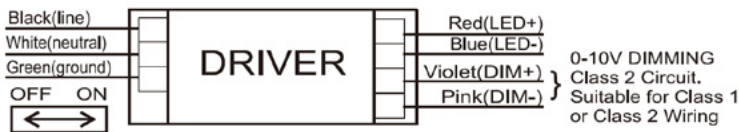


Advance CertaDrive Indoor Point LED drivers are designed to meet basic lighting needs. These drivers are offered with specific voltage-current settings and are, thus, optimized with specifications that are appropriately suited for the application, making LED conversion affordable.

Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency@ Max Load and 70°C Case	Max Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protection (Ring Wave, KV)	Envir. Protection Rating	Dimming	Dimming Range	Minimum Output Current (A)	Driver Type
120	12	24-42	0.275/ 0.25A	84	Life: 75° UL: 90°	0.125	14.9	<20%	>0.9	2.5	UL damp & dry	0-10V Analog Class 1 and 2 Wiring	3% ~ 100%	0.0075	Constant Current
277		Class 2 Output		84		0.056									

Wiring Diagram



Switch position default = OFF

OFF	0.25
ON	0.275

WARNING:

Install in accordance with national and local electrical codes. Use 18 AWG Solid Copper Wire Rated $\geq 90^\circ\text{C}$. Strip Wire 3/8". For Class 2 Wiring, Use 20 AWG-16 AWG.

The field-wiring leads or push-in terminals shall be fully enclosed.

USE ONLY WITHIN AN ENCLOSURE.

GROUNDING:

Driver case must be grounded.



CertaDrive SM Point

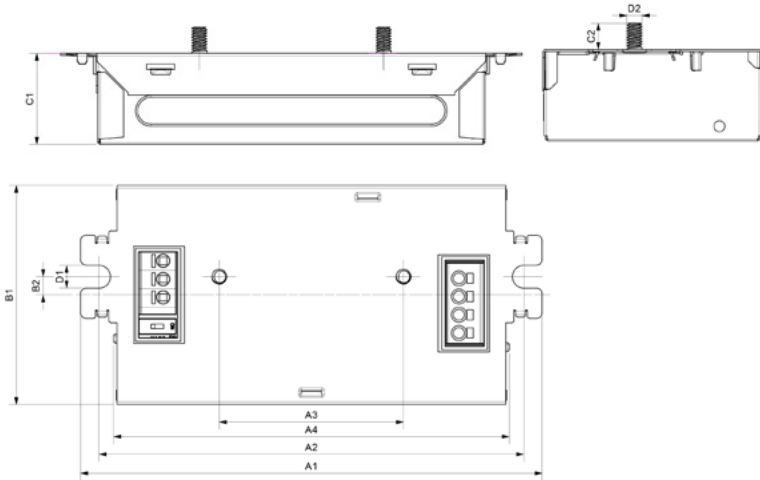
CI012C028V042CDM1(bottom entry)

CI012C028V042CDD1(side entry)

12W 0.275/0.25A 42V 0-10V 120-277V

Mechanical Diagram

CI012C028V042CDM1 (bottom entry)



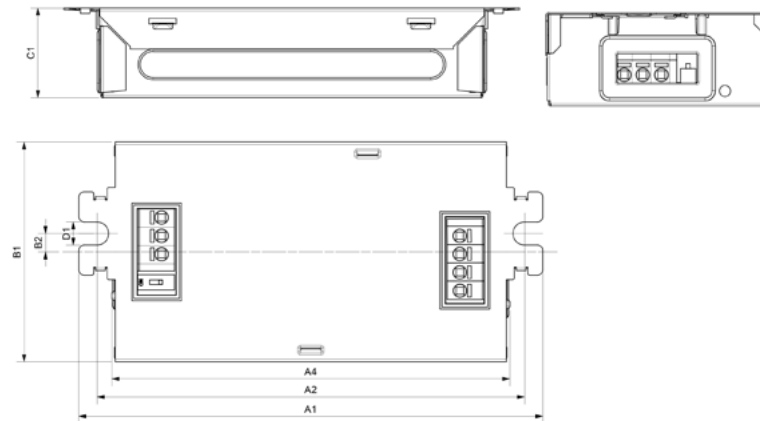
Enclosure

CI012C028V042CDM1 (bottom entry)

Item	In(mm)	Tolerance (mm)
Overall length (A1)	4.98 (126.6)	+/-1.0
Mounting Length (A2)	4.59 (116.6)	+/-0.5
Mounting Length (A3)	1.99 (50.6)	+/-0.5
Case Length (A4)	4.28 (108.6)	+/-0.5
Case Width (B1)	2.37 (60.1)	+/-0.5
Mounting Hole Distance(B2)	0.20 (5.0)	+/-0.5
Case Height (C1)	0.98 (24.9)	+/-1.0
Stud Height (C2)	0.28 (7.2)	+/-0.5
Mounting Hole Diameter (D1)	0.25 (6.3)	+/-0.3
Stud Diameter (D2)	#8-32	N/A

Mechanical Diagram

CI012C028V042CDD1 (side entry)



Enclosure

CI012C028V042CDD1 (side entry)

Item	In(mm)	Tolerance (mm)
Overall Length (A1)	4.98 (126.6)	+/-1.0
Mounting Length (A2)	4.59 (116.6)	+/-0.5
Case Length (A4)	4.28 (108.6)	+/-0.5
Case Width (B1)	2.37 (60.1)	+/-0.5
Mounting Hole Distance(B2)	0.20 (5.0)	+/-0.5
Case Height (C1)	0.98 (24.9)	+/-1.0
Mounting Hole Diameter (D1)	0.25 (6.3)	+/-0.3

CertaDrive SM Point

CI012C028V042CDM1(bottom entry)

CI012C028V042CDD1(side entry)

12W 0.275/0.25A 42V 0-10V 120-277V

Features

- 50,000+ hour lifetime¹
- Excellent thermal performance
- High power factor & low THD²
- Compatible with Philips Fortimo downlight modules

Benefits

- SmartMate style housing enables easy design-in with excellent thermal performance
- Allows operability in indoor (low-bay) ambient conditions
- Suitable for commercial indoor applications

Application

- Indoor downlight applications
- Office areas
- Retail centers
- Wall sconces and ceiling surface luminaires

Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

Product Data

Order Information	
Full Product Code	CI012C028V042CDM1(bottom entry) 12NC: 929002767713 (Mid-Pack, 16pcs/Box) CI012C028V042CDD1(side entry) 12NC: 929002767813 (Mid-Pack, 16pcs/Box)
Line Frequency	50/60Hz
Min. Mains Voltage Operational	108 Vac
Max. Mains Voltage Operational	305 Vac
Output Information	
Maximum Open Circuit Voltage	60Vdc, Class 2 output
Output Current Ripple (ripple = peak to average / average)	30% max @ max lout
Output Current Tolerance (at maximum output current)	<8% ²
Protections	Short Circuit, Open Circuit Protection for LED + and LED -
Over Voltage Protection	46V+/- 4V, Hiccup Mode Protection
Features	
0-10V Dimming	See dim curve for detail.
Environment & Approbation	
Operating Ambient Temp. Range	-20°C to +40°C
Max Case Temperature (Tcase) ³	90°C, Tcase Life: 75°C
Agency Approbations	UL8750, UL1310, cUL, Class P(UL, cUL) NOM
Electromagnetic Compliance	FCC Title 47 Part 15 Class B, FCC Title 47 Part 15 Class A for 277Vac
Audible Noise	<24dB Class A
Weight	0.364Lbs / 0.165kgs

1. Advance CertaDrive LED drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTBF modeling.
2. Note: power factor (PF) and total harmonic distortion (THD) may deviate under adverse mains voltage conditions outside nominal operation. Output current (I_{out}) variation includes effects of line and load regulation, temperature variation and component tolerances.
3. For Tc point location, please refer to the Advance CertaDrive design-in guide.

CertaDrive SM Point

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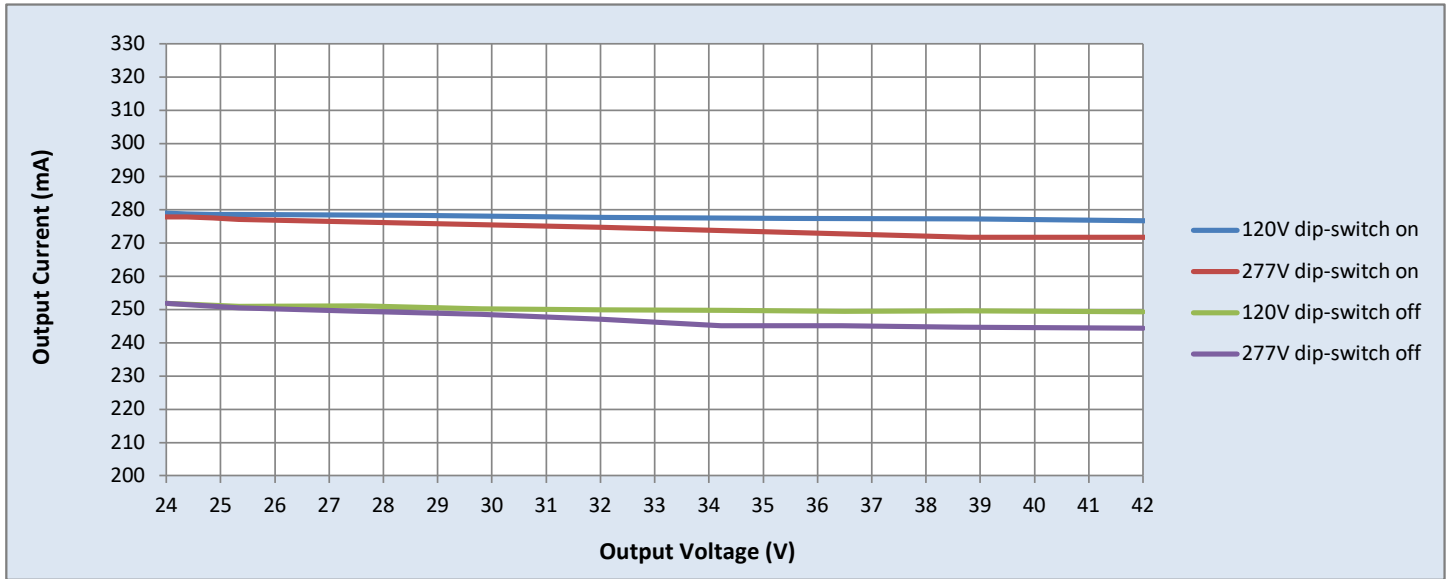
CI012C028V042CDD1(side entry)

12W 0.275/0.25A 42V 0-10V 120-277V

Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

Iout Vs. Vout



1. Factory default output current is 0.25A

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Electrical Specifications

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0-10V Dimming Curve

Dimming source current from the driver: 100-250µA (@ 1<Vdim<8V)

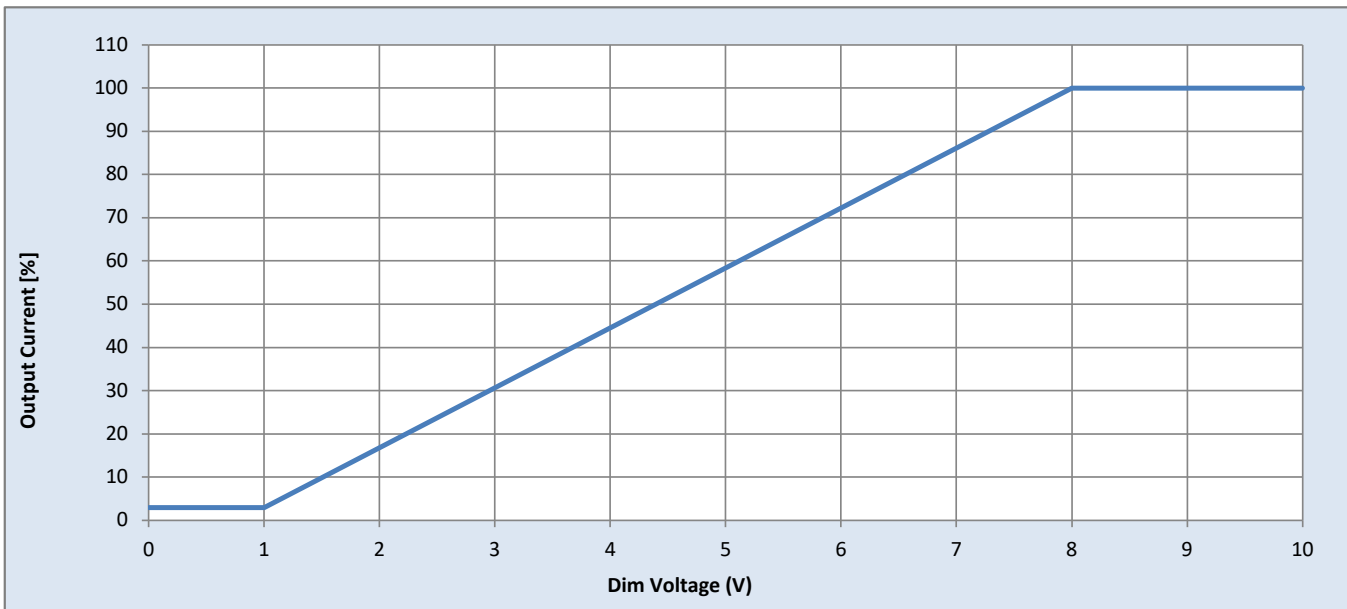
Minimum dim level: 3% of Iout

Maximum output voltage on the dimming wires: 12V

Leaking current of dimming leads: 0.01mA, recommended max number of control circuits in parallel, refer to Design in Guide.

Approved Dimmer List

Manufacturer	Manufacturer Part Number
Lutron	Visit www.lutron.com
Leviton	IllumaTech IP7 series
Advance	Sunrise - SR1200ZTUNV



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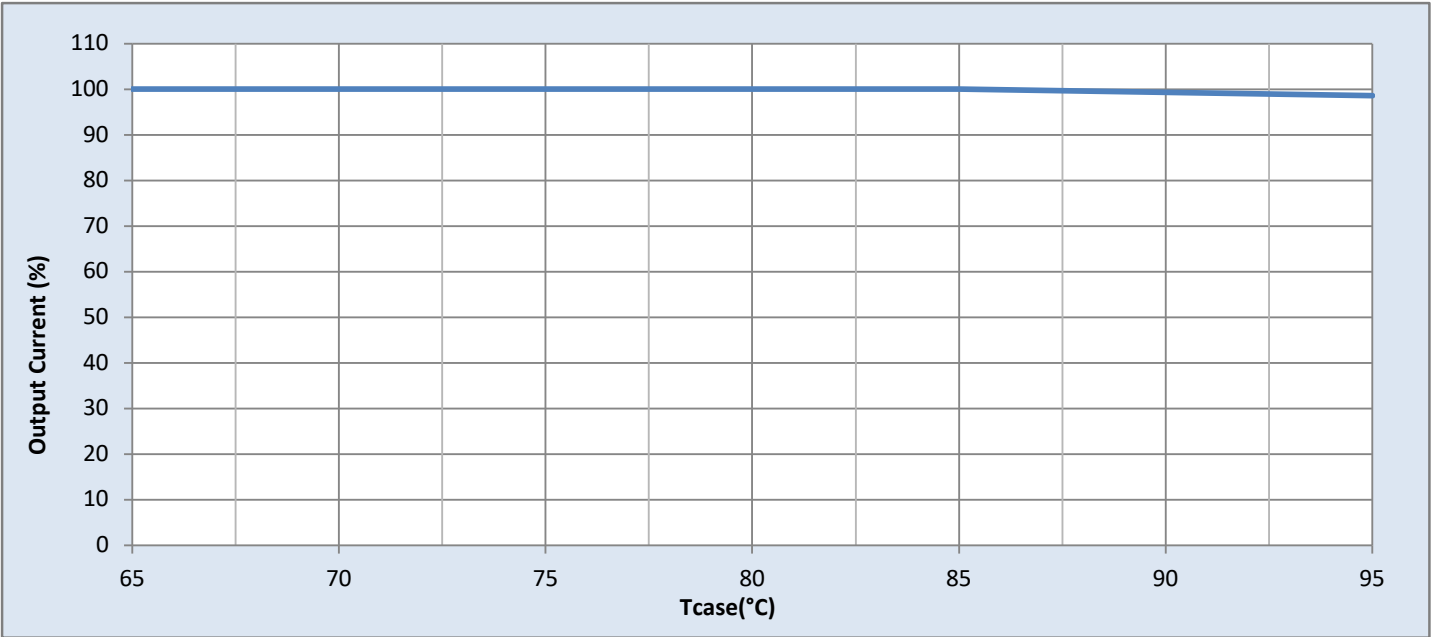
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Electrical Specifications

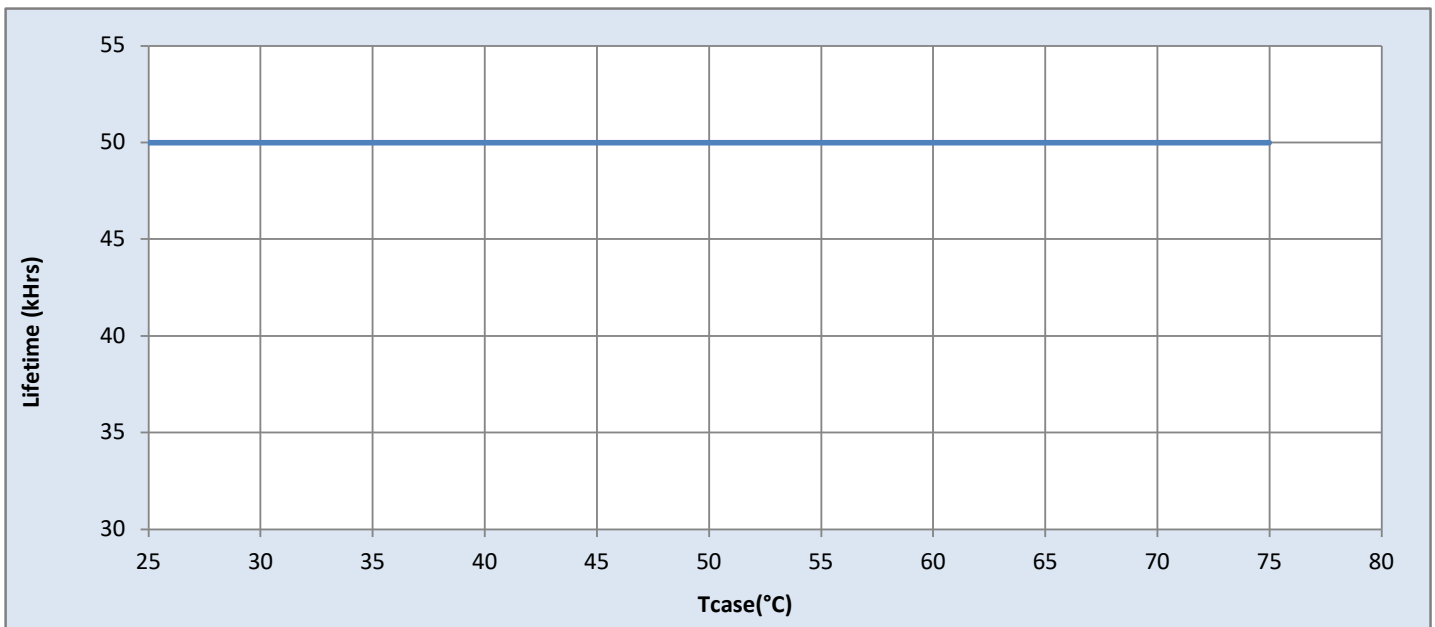
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Output Current Vs. Driver Case Temperature



Note: There is $\pm 5^\circ\text{C}$ tolerance on the driver case temperature.

Driver Lifetime Vs. Driver Case Temperature



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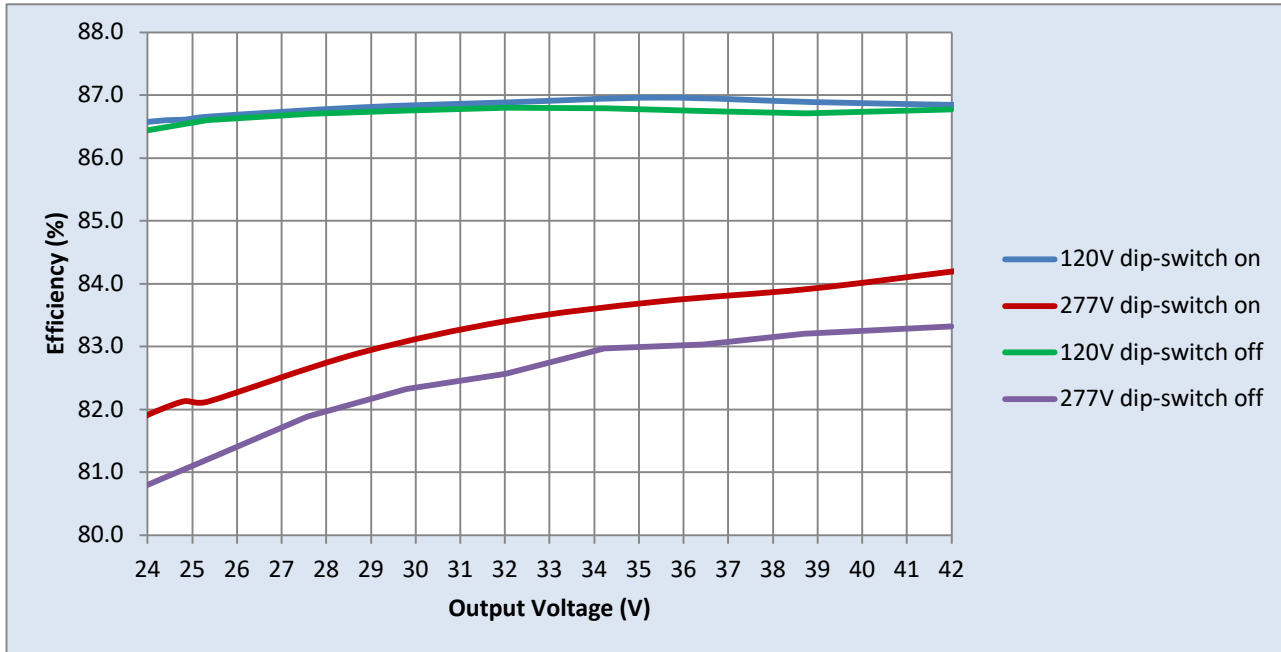
CI012C028V042CDD1(side entry)

12W 0.275/0.25A 42V 0-10V 120-277V

Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Efficiency Vs. Output Voltage



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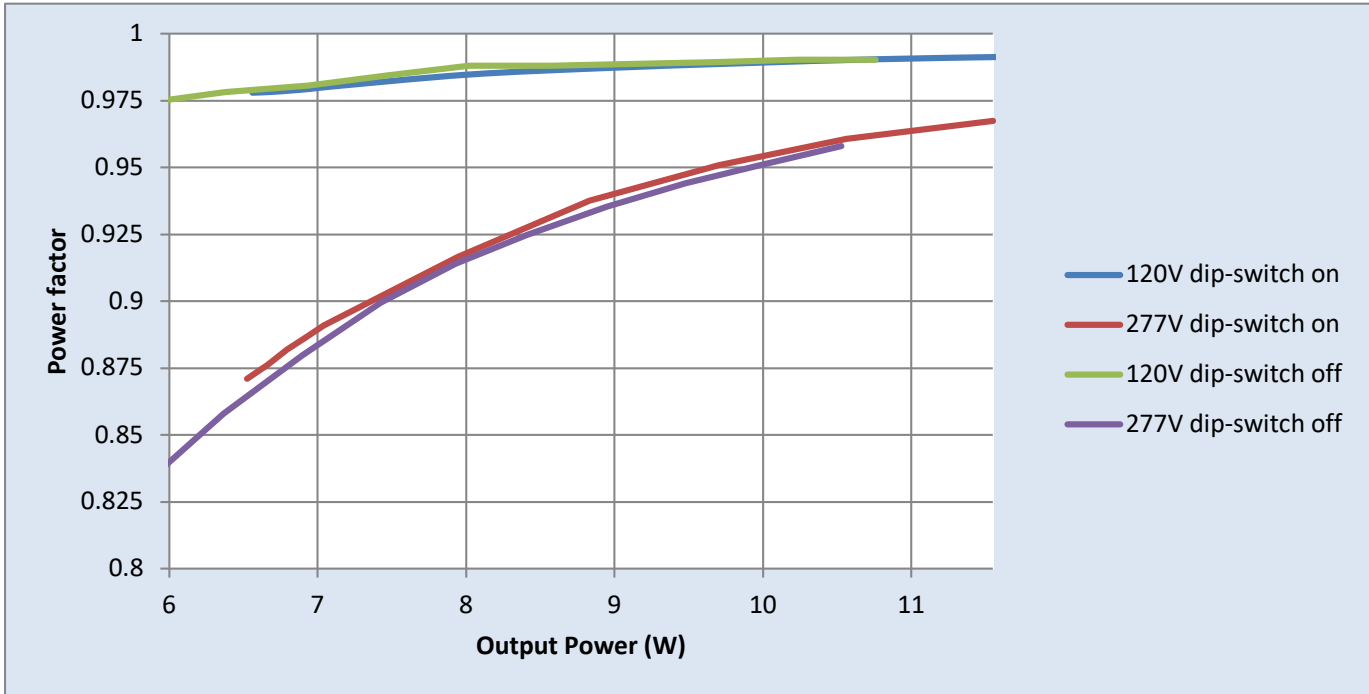
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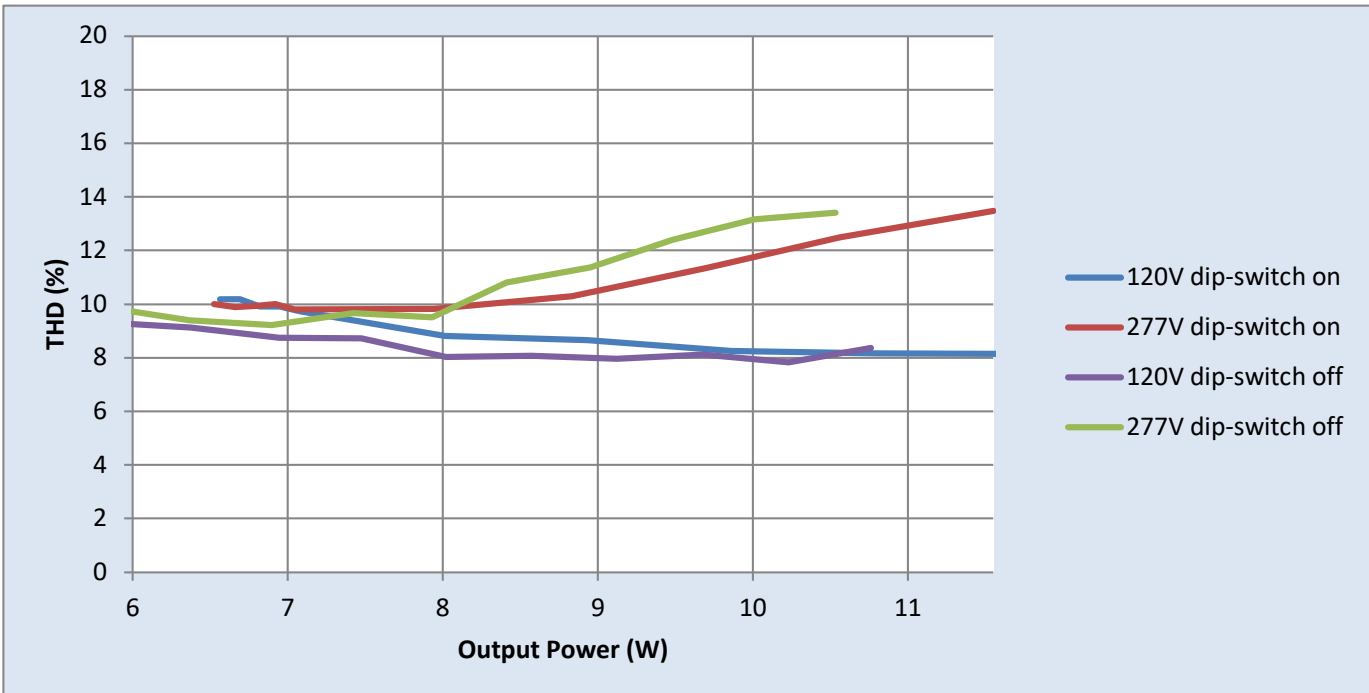
Performance Characteristics

Based on measurements on a typical sample at 75°C case. The accuracy of the measurements is within the tolerance of the measurement instruments.

Power Factor Vs. Output Power



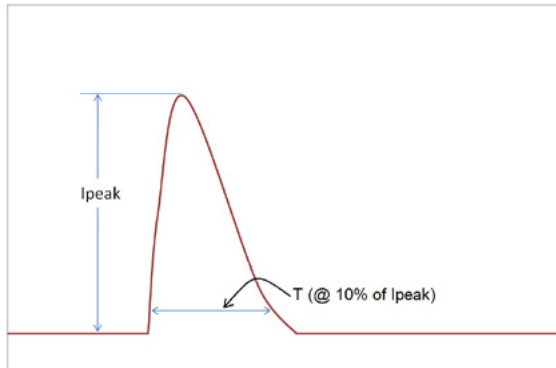
Total Harmonic Distortion (THD) Vs. Output Power



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Inrush Current Info



Vin	Ipeak	T (@ 10% of Ipeak)
120 Vrms	4.96A	8.92μS
277 Vrms	11.68A	9.16μS

Inrush current is measured at peak of the corresponding line voltage. Source impedance per NEMA 410.

Lightning Surge Info

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)
100 kHz Ring Wave (w/t 30Ω)	2.5kV	2.5kV

Isolation

Isolation	Input	Output	0-10V	Enclosure
Input	-	2xU+1kV	2xU+1kV	2xU+1kV
Output	2xU+1kV	-	2xU+1kV	500V
0-10V	2xU+1kV	2xU+1kV	-	2xU+1kV
Enclosure	2xU+1kV	500V	2xU+1kV	-

U = Max Input voltage



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