

**PHILIPS
ADVANCE**

LED Driver

Xitanium

77W 120-277V 3.2A
XI077C320V024FNS1



**RoHS
COMPLIANT**



Intertek
Class P
Conforms to UL STD 8750
Certified to CAN/CSA STD
C22.2 No. 250.13

Class P
LED class 2 output
For Dry and Damp Location

The Philips Advance Xitanium portfolio provides high-performance and reliable driver solutions for lighting applications. The Xitanium LED drivers with both constant voltage (CV) and constant current (CC) mode are compatible with respective loads and allow the user to utilize the same driver for CV and CC applications. The drivers provide general illumination for outdoor applications, including LED signs and canopy lights. They can also be used in indoor CV applications such as strip and bar lights or under-cabinet lighting, ambient lighting and low-bay and high-bay industrial lighting.

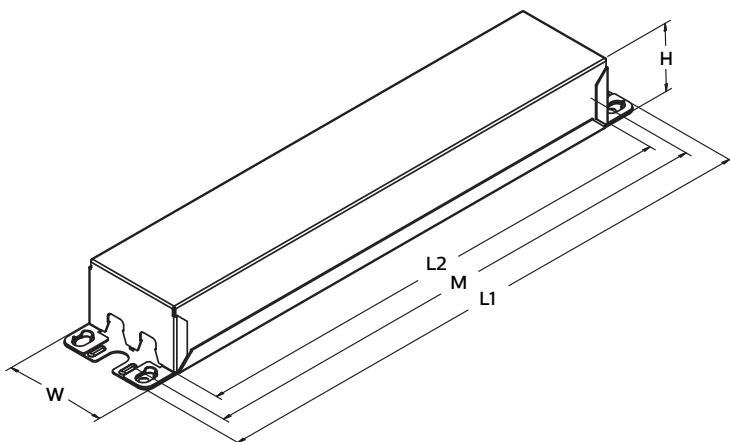
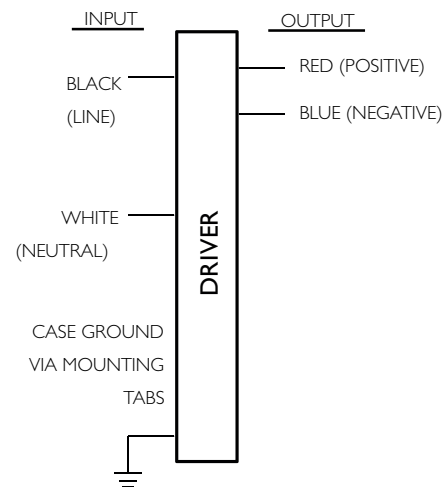
Specifications

| Input Voltage (Vac) | Output Power (W) | Output Voltage (V) | Output Current (A) | Efficiency@ Max. Load and 75°C Case | Max. Case Temp. (°C) | Input Current (A) | Max. Input Power (W) | THD @ Max. Load (%) | Power Factor @ Max. Load | Surge Protection (Combi-Wave, KV) | Envir. Protection Rating |
|---------------------|------------------|--------------------|--------------------|-------------------------------------|----------------------|-------------------|----------------------|---------------------|--------------------------|-----------------------------------|---------------------------|
| 120 | 77 | 12-24 CC Mode | 3.2 | 86.5 | 85°C | 0.74 | 90 | <10% | >0.95 | 4 | UL damp & dry and Type HL |
| 277 | | | | 88.3 | | 0.32 | | | | | |

Enclosure

| | In. (mm) |
|---------------------|--------------|
| Case Length (L2) | 8.34 (211.7) |
| Case Width (W) | 1.70 (43.1) |
| Case Height (H) | 1.12 (28.5) |
| Mounting Length (M) | 8.89 (225.8) |
| Overall Length (L1) | 9.45 (240) |

Wiring Diagram



Xitanium 77W 3.2A

Features

- 50,000+ hour lifetime¹
- Excellent thermal performance
- Can be used in constant current (CC) or constant voltage (CV) mode²

Benefits

- Enables long life luminaire designs
- Allows luminaire designs for a wide range of ambient environments

Application

- Area
- Roadway
- Ambient, bar and strip lights
- Exterior and canopy lighting

Electrical Specifications

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

Product Data

| Order Information | |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Full Product Code | XI077C320V024FNS1M (Mid-Pack, 20pcs/Box) 12NC: 929001708113 |
| Line Frequency | 50/60Hz |
| Min. Mains Voltage Operational | 108 Vac |
| Max. Mains Voltage Operational | 305 Vac |
| Output Information | |
| Maximum Open Circuit Voltage | 24Vdc |
| Output Current Ripple (in CC mode) (ripple = peak to average / average) | 15% max. @ max. Iout Low frequency (≤ 120 Hz) content <5% |
| Output Current Tolerance (at maximum output current) | <5% |
| CV Mode Load Type | Designed for passive as well as active CV mode loads |
| CV Mode Load Range (@ ~ 23.5V) | 0.1 - 3.2Adc |
| Protections | Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback |
| CV and CC Mode | Driver can operate in both CC and CV mode, based on the type of load connected to the driver. |
| Environment & Approbation | |
| Operating Ambient Temp. Range | -40°C to +55°C |
| Max. Case Temperature (Tcase) | 85°C |
| Agency Approbations | UL 8750, CSA 250.13 Class P |
| Electromagnetic Compliance | FCC Title 47 Part 15 Class A |
| Audible Noise | <24dB Class A |
| Weight | 1.4 Lbs / 0.63 kgs |

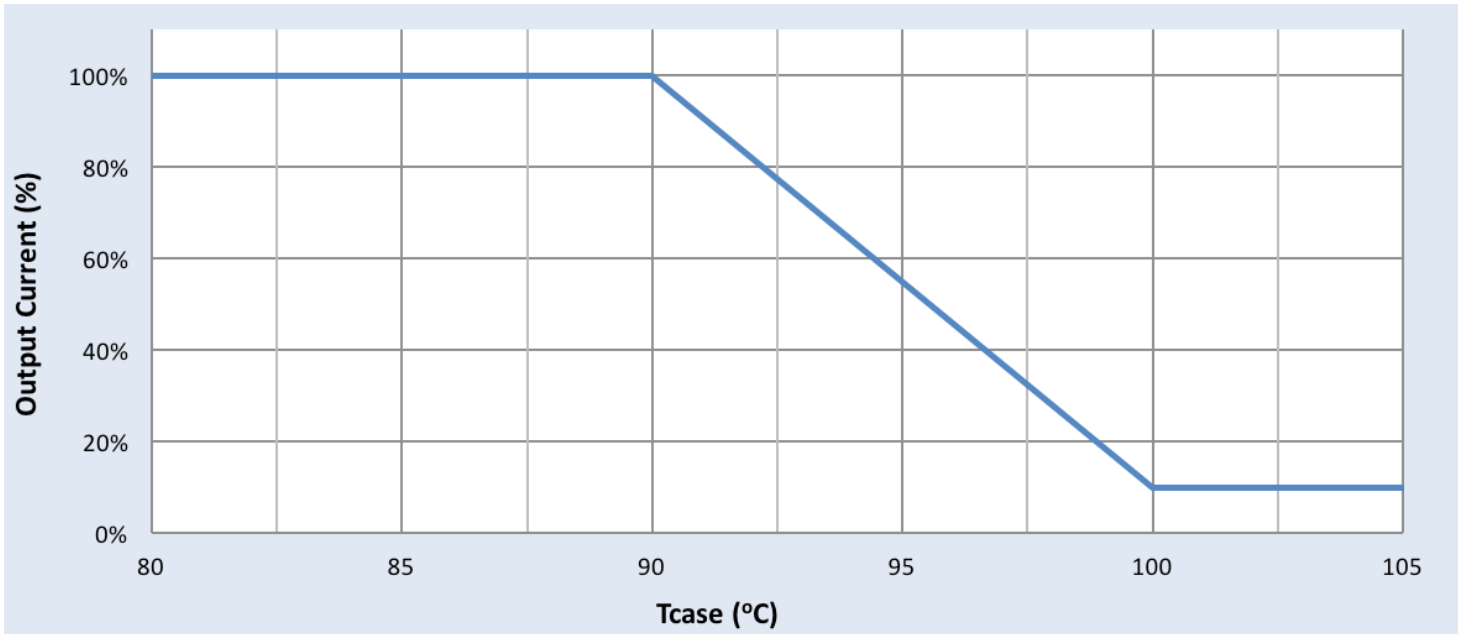
1. Philips Advance Xitanium LED drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTTF modeling.
2. For active constant voltage (CV) loads, operation with desired CV loads must be verified for the load range specified in the end application.

Xitanium 77W 3.2A

Electrical Specifications

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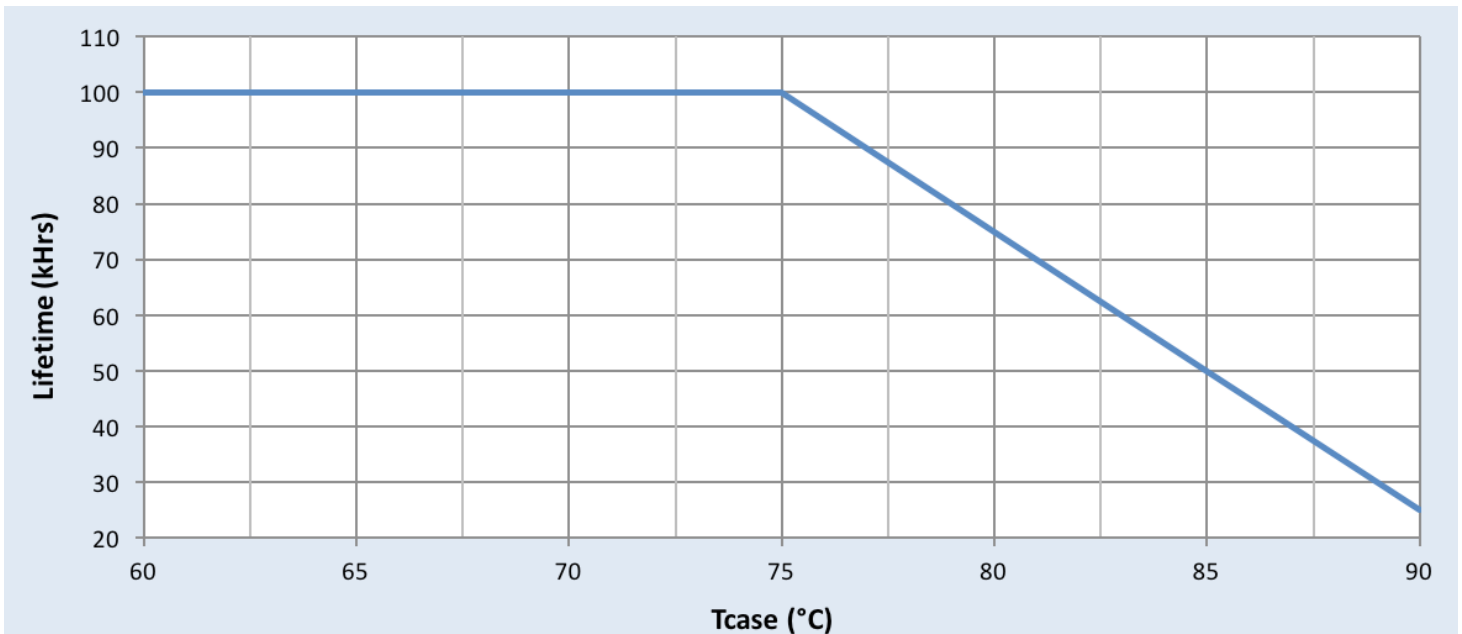
Output Current Vs. Driver Case Temperature



Note

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

Driver Lifetime Vs. Driver Case Temperature

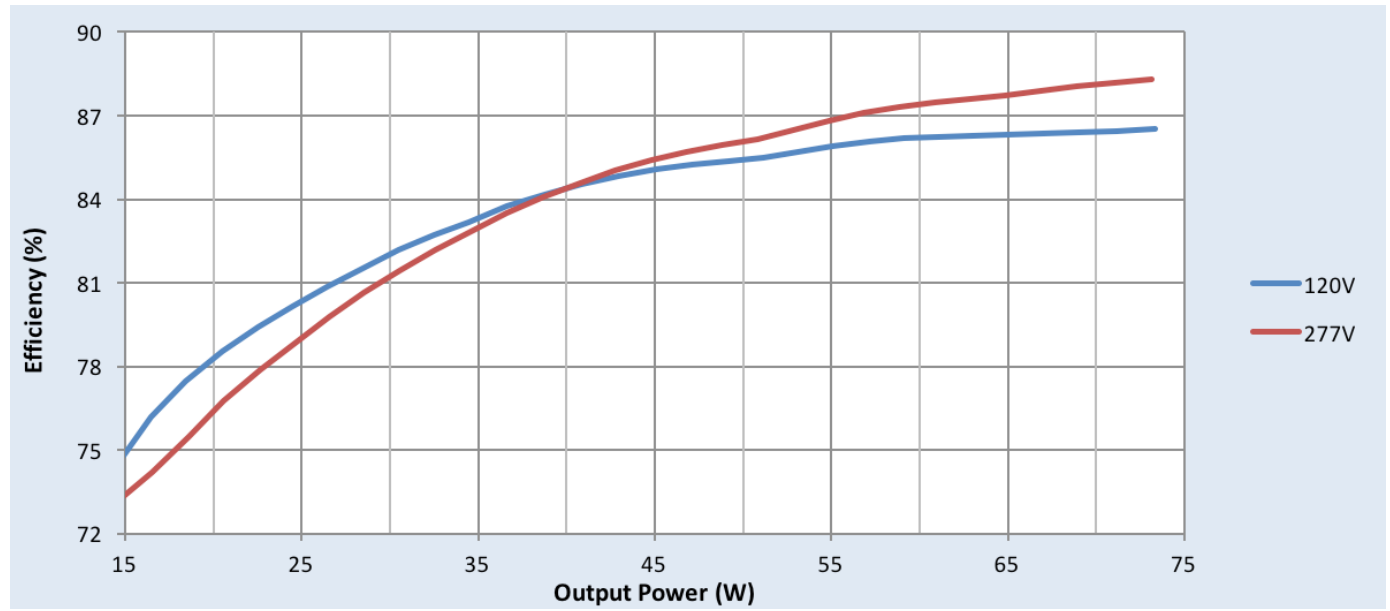


Xitanium 77W 3.2A

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

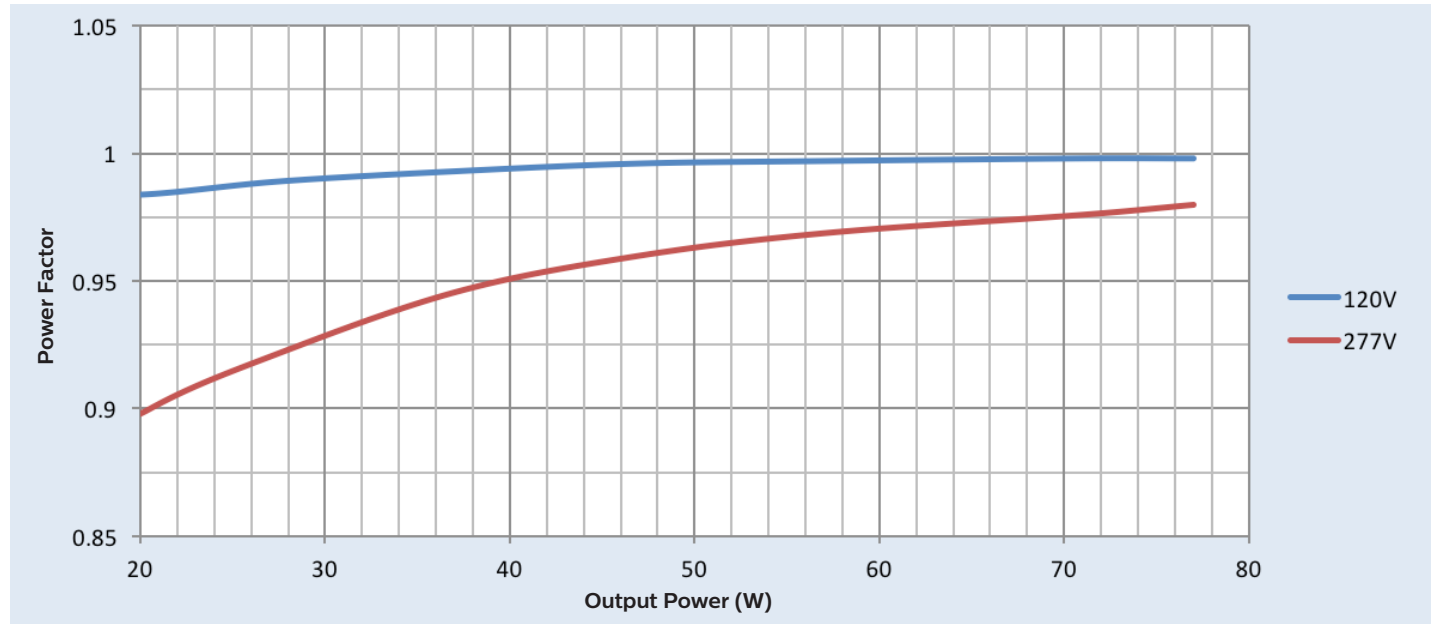


Xitanium 77W 3.2A

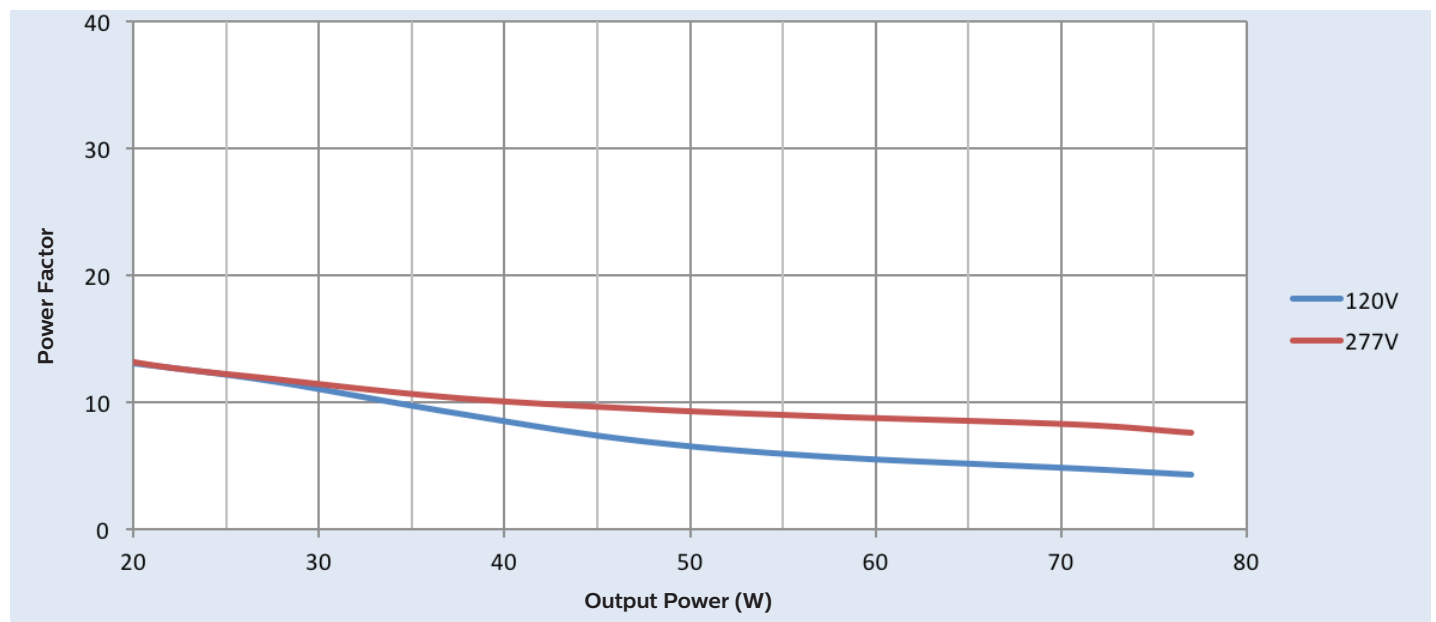
Performance Characteristics

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Power Factor Vs. Output Power

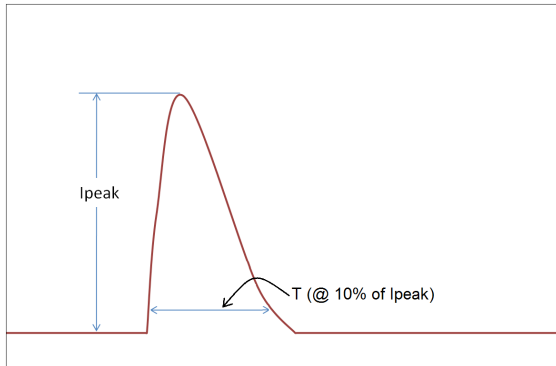


Total Harmonic Distortion (THD) Vs. Output Power



Xitanium 77W 3.2A

Inrush Current Info



| Vin | Ipeak | T (@ 10% of Ipeak) |
|----------|-------|--------------------|
| 120 Vrms | 27.7A | 187.5μS |
| 277 Vrms | 87A | 178μS |

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) |
|------------------------------------|-------------------------|-------------------------------|
| 1.2/50μs Combination Wave (w/t 2Ω) | 4kV | 4kV |

Isolation

| Isolation | Input | Output | Enclosure |
|-----------|---------|---------|-----------|
| Input | NA | 2xU+1kV | 2xU+1kV |
| Output | 2xU+1kV | NA | 500 |
| Enclosure | 2xU+1kV | 500 | NA |

U = Max. input voltage

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