

**PHILIPS
ADVANCE**



LED Driver

Xitanium

95W 1.0-2.75A 54V 0-10V INT
XI095C275V054DNF5



Philips Advance Xitanium Downlight LED Drivers are designed to give OEMs ultimate flexibility. With the drivers' wide operating windows and current adjustability, luminaire manufacturers can easily design luminaires with lumen levels appropriate for high-bay and office applications.

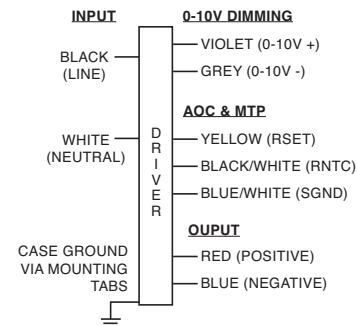
Specifications

| Input Voltage (Vac) | Output Power (W) | Output Voltage Range (V) | Output Current (A) | Efficiency@ Max Load and 70°C Case | Max Case Temp. (°C) | Input Current (Arms) | Max. Input Power (W) | THD @ Max Load (%) | Power Factor @ Max Load | Surge Protection (Ring Wave, KV) | Envir. Protection Rating |
|---------------------|------------------|--------------------------|--------------------|------------------------------------|---------------------|----------------------|----------------------|--------------------|-------------------------|----------------------------------|--------------------------|
| 120 | 95 | 27 - 54 | 1.0 – 2.75 | 90 | 90°C | 0.9 | 107 | <10% | >0.95 | >6 | UL damp and dry |
| 277 | | | | 92 | | 0.4 | | <15% | | | |

Enclosure

| | In. (mm) |
|-----------------|--------------|
| Case Length | 8.44 (214.0) |
| Case Width | 2.35 (59.3) |
| Case Height | 1.48 (37.3) |
| Mounting Length | 2.0 (50.8) |
| Overall Length | 9.47 (240.5) |

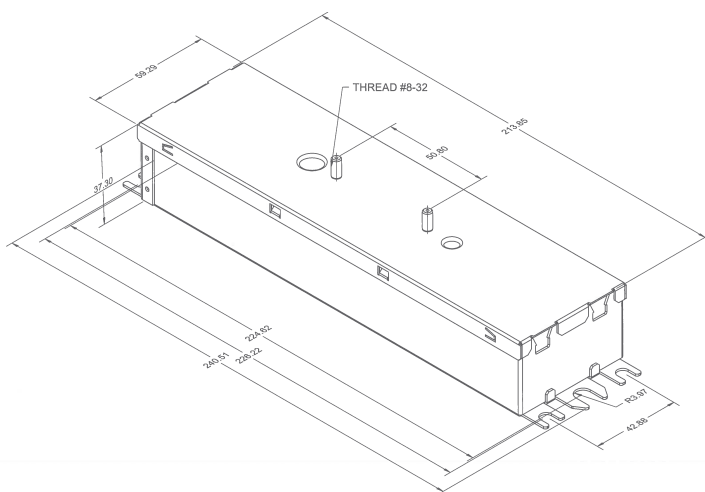
Wiring Diagram



Input and output use lead-wires.

Lead-wires are 18AWG 105C/600V solid copper per UL1452.

Lead Length outside enclosure: 260mm (±30mm) on all wires.



| Dimming | Dimming Range | Minimum Output Current (A) |
|-----------------------------------|---------------|----------------------------|
| 0-10V Analog Class 2 Wiring | 5% ~ 100% | 0.05 |

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Features

- UL Class 2 output with Adjustable Output Current
- Housing with high thermal capabilities
- Bottom stud mounting

Benefits

- Flexibility and ease of design via adjustable drive current and low voltage output
- Allows luminaire designs for high ambient temperatures
- Allows for easy junction box mounting

Application

- Indoor downlight applications
- Office
- Retail

Electrical Specifications

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

Product Data

| Order Information | |
|---|---|
| Full Product Code | XI095C275V054DNF5M (Mid-Pack, 10pcs/Box) |
| Line Frequency | 50/60Hz |
| Min. Mains Voltage Operational | 108V |
| Max. Mains Voltage Operational | 305V |
| Output Information | |
| Maximum Open Circuit Voltage | <60Vdc |
| Output Current Ripple (ripple = peak to average / average) | 15% max @ max lout Low frequency (≤ 120 Hz) content <5% |
| Output Current Tolerance (In the performance window) | <5% |
| Protections | Short Circuit, Open Circuit Protection for LED + and LED – and Temperature Foldback |
| Features | |
| 0-10V Dimming | 150 μ A source current from driver. See dim curve for detail. |
| AOC (Adjustable Output Current) | 1000mA to 2750mA via external resistor (refer to graph and notes) |
| MTP (Module Temperature Protection) | Current cutback (refer to specifications) |
| Environment & Approbation | |
| Operating Ambient Temp. Range | -35°C to +60°C |
| Max Case Temperature (Tcase) | 90°C |
| Environmental Protection Rating | UL dry and damp |
| Agency Approbations | UL8750, UL1310, UL935, CSA-C22.2 No. 250.13-12, CSA C22.2 No. 223 |
| Electromagnetic Compliance | FCC Title 47 Part 15 Class A |
| Audible Noise | <24dB Class A |
| Weight | 1.77 Lbs / 0.80 kgs |

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0-10V Dimming Curve

Dimming source current from the driver: 150µA (@ 0<Vdim<8V)

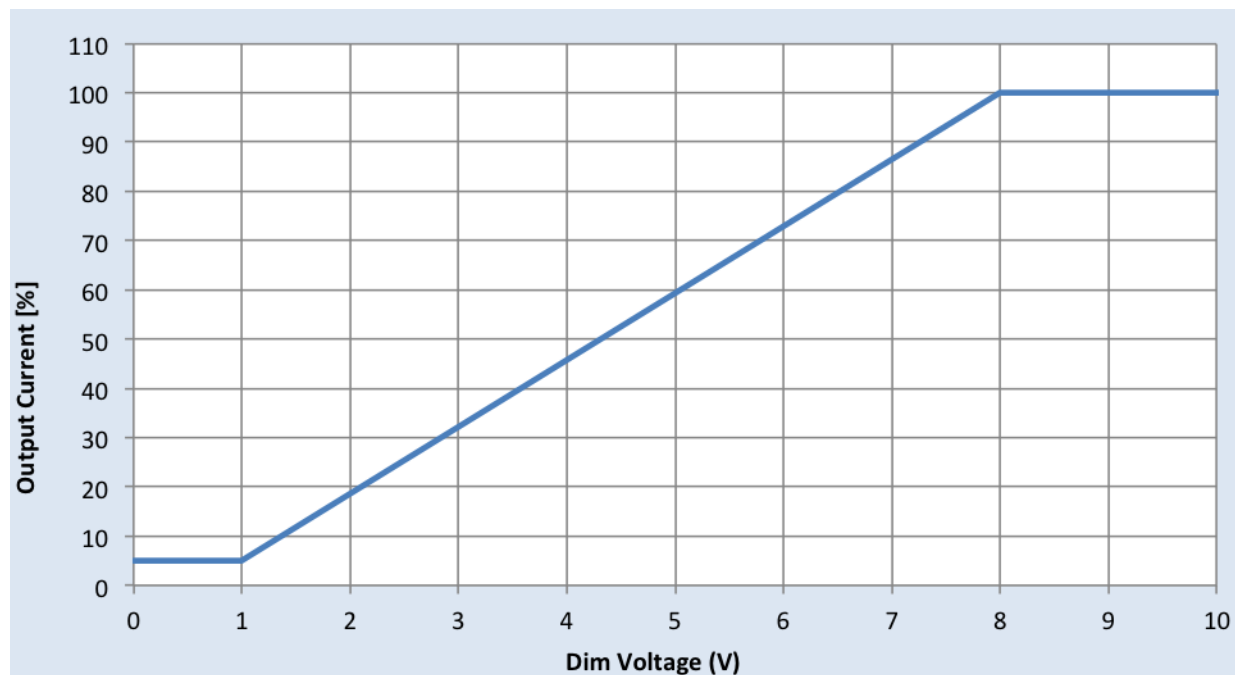
LED Current Tolerance at 2750mA ≤ 5% over temperature and component variations

Minimum Dim Level: 5% of Iout (minimum 50mA)

Maximum output voltage on the dimming wires: 13V

Approved Dimmer List

| Manufacturer | Manufacturer Part Number |
|--------------|--|
| Lutron | Visit www.lutron.com/advance for a list of dimmers (Mark VII) that will work with this driver. |
| Leviton | IllumaTech IP7 series |
| Philips | Sunrise - SR1200ZTUNV |



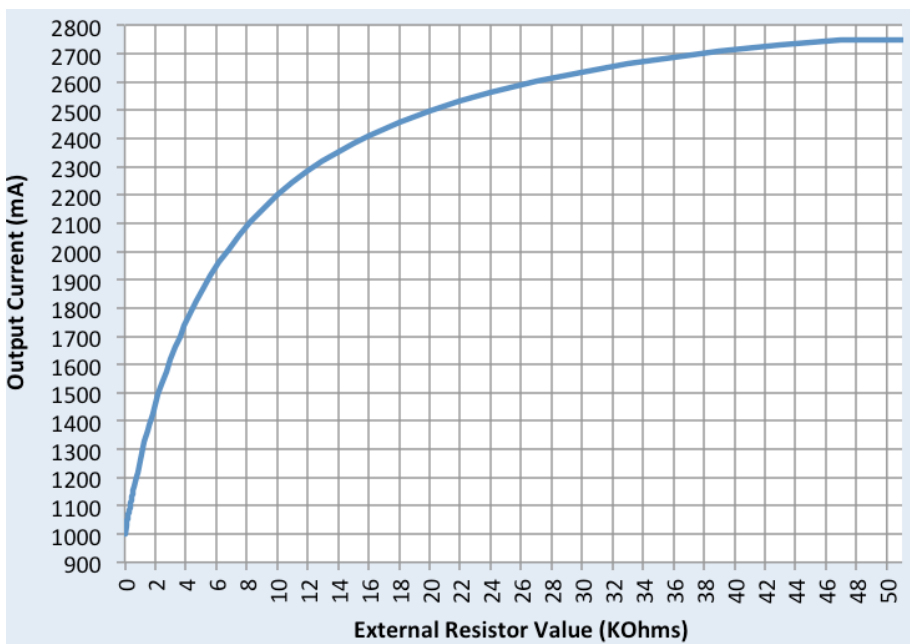
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AOC (Adjustable Output Current) Settings (Rset)

| Rset (Ohms) | Current (mA) | Rset (Ohms) | Current (mA) |
|-------------|--------------|-------------|--------------|
| 0 | 1000 | 2400 | 1528 |
| 100 | 1029 | 2700 | 1575 |
| 110 | 1032 | 3000 | 1619 |
| 120 | 1035 | 3300 | 1661 |
| 130 | 1038 | 3600 | 1700 |
| 150 | 1044 | 3900 | 1737 |
| 160 | 1047 | 4300 | 1783 |
| 180 | 1052 | 4700 | 1826 |
| 200 | 1058 | 5100 | 1865 |
| 220 | 1064 | 5600 | 1912 |
| 240 | 1069 | 6200 | 1962 |
| 270 | 1077 | 6800 | 2008 |
| 300 | 1086 | 7500 | 2057 |
| 330 | 1094 | 8200 | 2102 |
| 360 | 1102 | 9100 | 2153 |
| 390 | 1110 | 10000 | 2199 |
| 430 | 1121 | 11000 | 2244 |
| 470 | 1131 | 12000 | 2284 |
| 510 | 1142 | 13000 | 2321 |
| 560 | 1154 | 15000 | 2383 |
| 620 | 1170 | 16000 | 2410 |
| 680 | 1185 | 18000 | 2458 |
| 750 | 1202 | 20000 | 2499 |
| 820 | 1218 | 22000 | 2534 |
| 910 | 1239 | 24000 | 2564 |
| 1000 | 1260 | 27000 | 2603 |
| 1100 | 1282 | 30000 | 2635 |
| 1200 | 1304 | 33000 | 2663 |
| 1300 | 1325 | 36000 | 2686 |
| 1500 | 1366 | 39000 | 2707 |
| 1600 | 1386 | 43000 | 2730 |
| 1800 | 1424 | 47000 | 2750 |
| 2000 | 1460 | >47000 | 2750 |
| 2200 | 1495 | | |



Driver will default to 2750mA when Rset is left open.

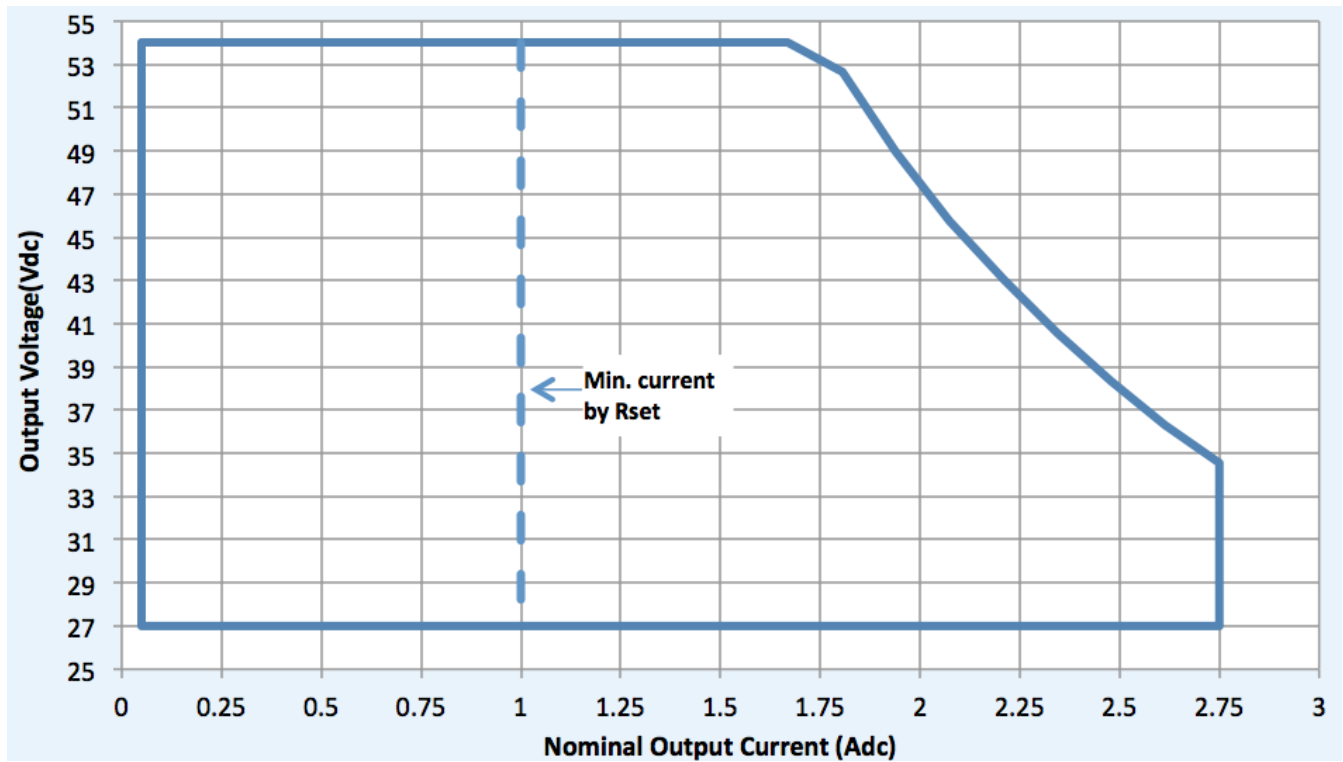
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Operating Window

XI095C275V054DNF5

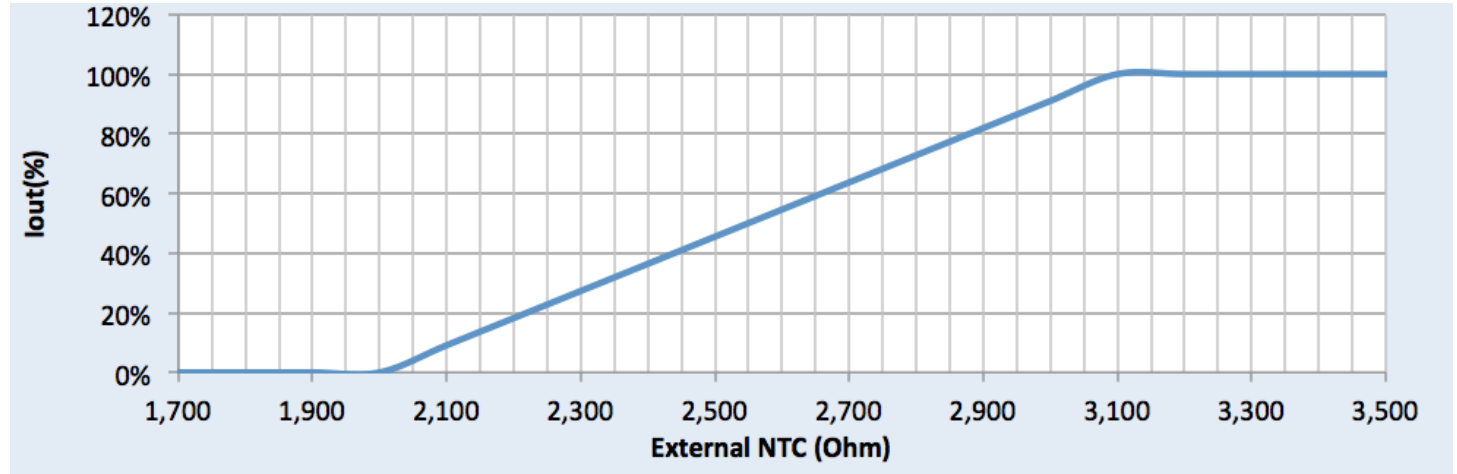


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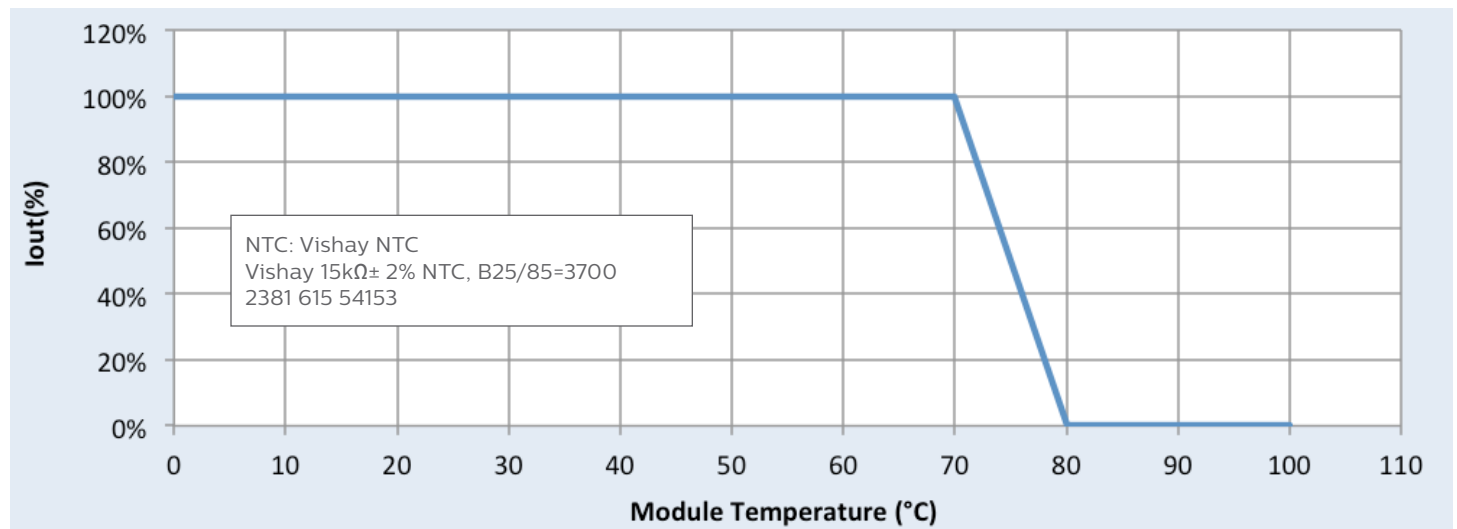
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Output Current Vs. External NTC Resistance



Output Current Vs. LED Module Temperature using 15kohm NTC

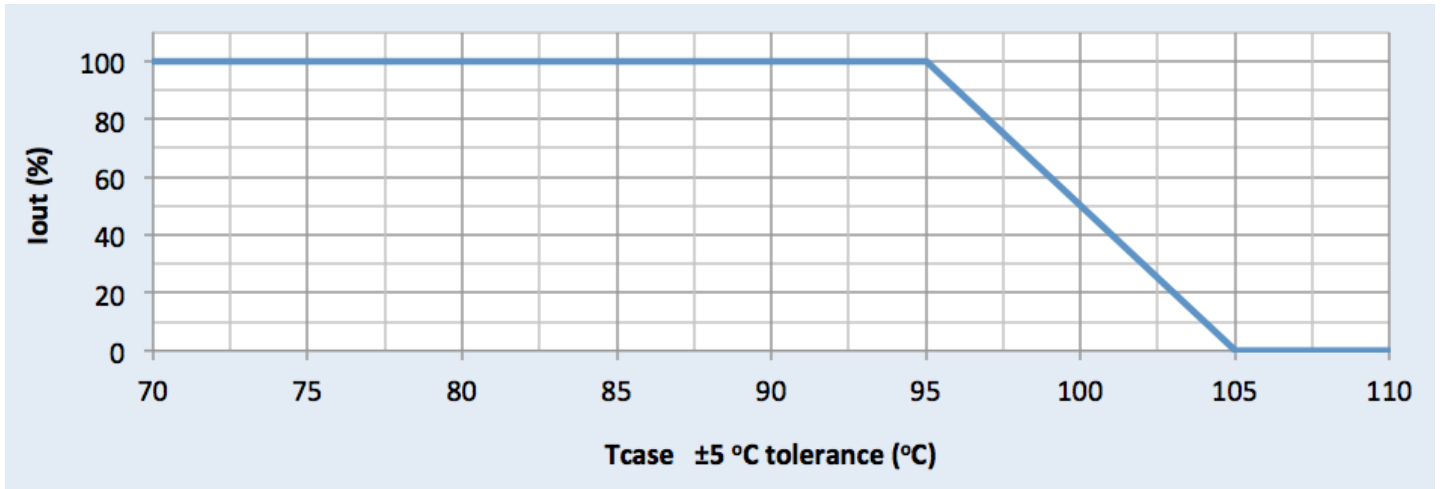


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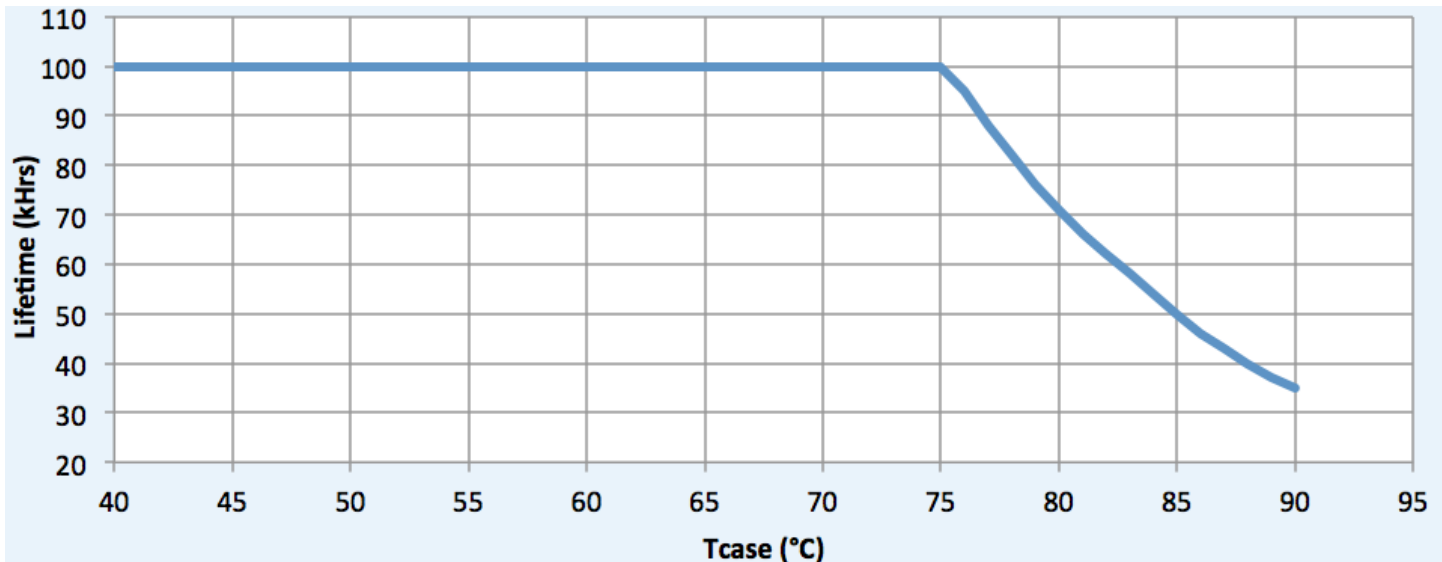
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Output Current Vs. Driver Case Temperature



Driver Lifetime Vs. Driver Case Temperature

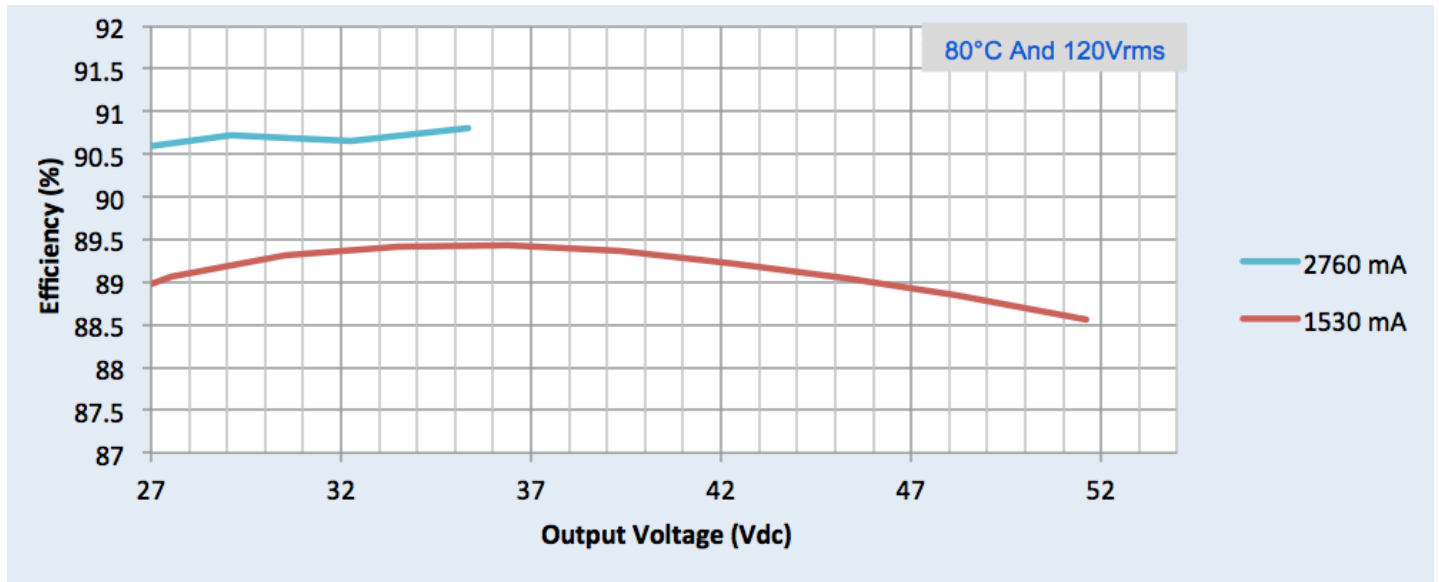


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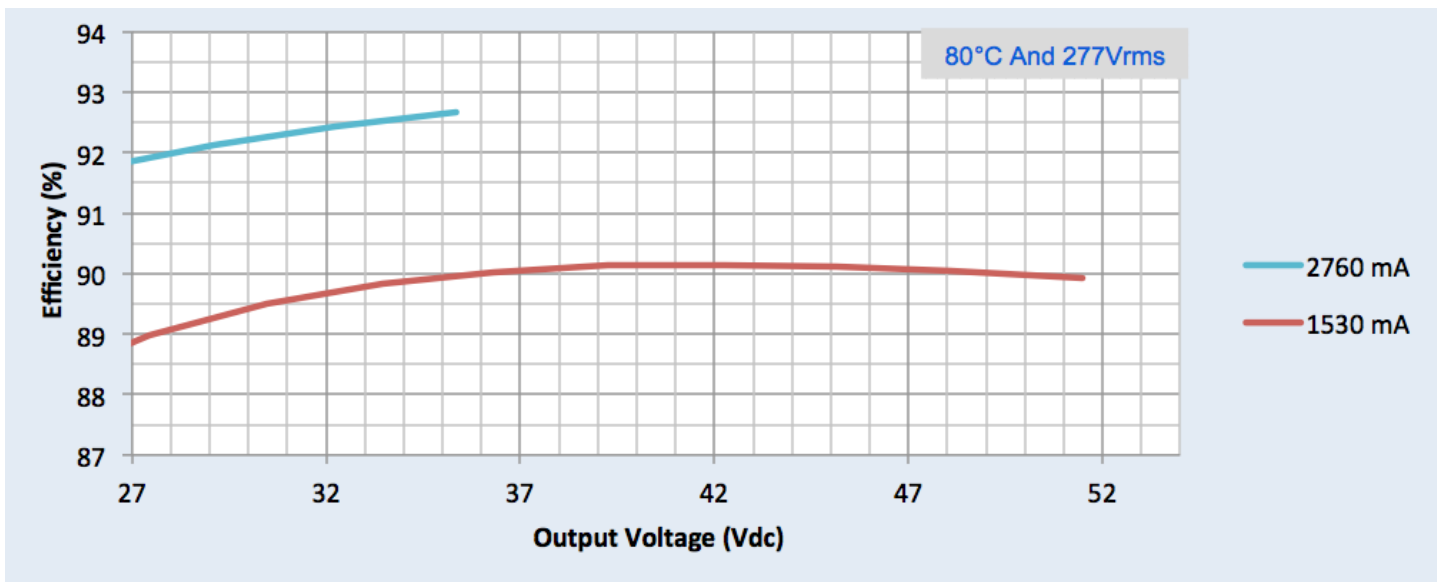
Performance Characteristics

Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

Efficiency Vs. Output Voltage at 120Vac



Efficiency Vs. Output Voltage at 277Vac

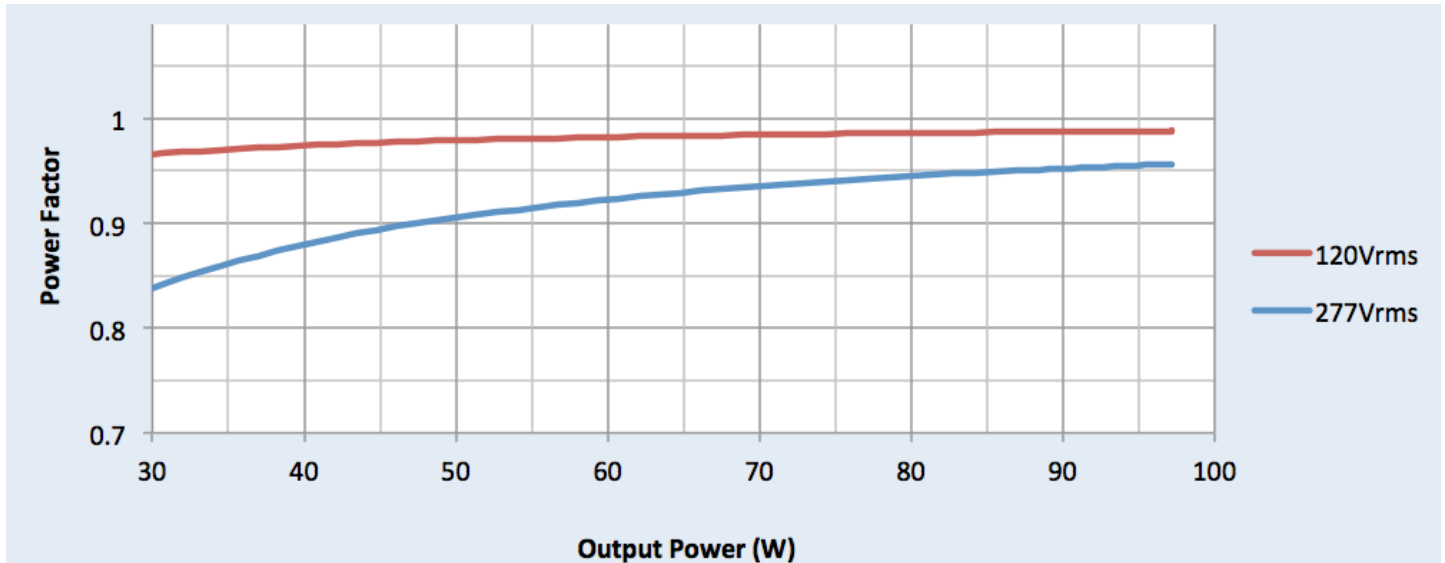


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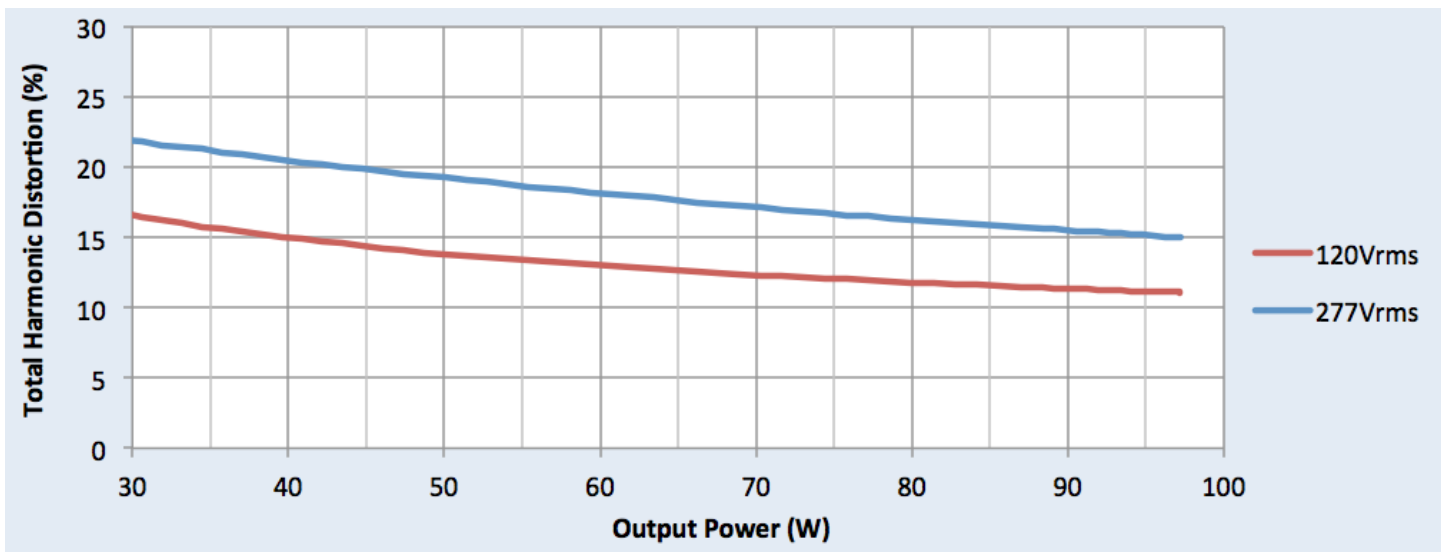
Performance Characteristics

Based on measurements on a typical sample. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

Power Factor Vs. Output Power

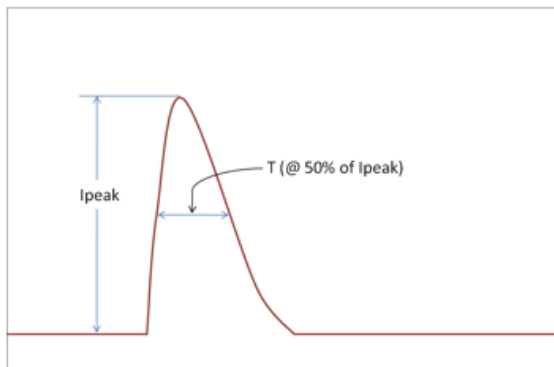


Total Harmonic Distortion (THD) Vs. Output Power



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Inrush Current Info



| Vin | Ipeak | T (@ 50% of Ipeak) |
|----------|-------|--------------------|
| 120 Vrms | 50A | 142µS |
| 277 Vrms | 116A | 138µS |

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 30α) | 6kV | 6kV |
| 1.2/50µs - 8/20µs Combination Wave (w/t 2Ω) | 3kV | 3kV |

Isolation

| Isolation | Input | Output | 0-10V (Class 2) | Enclosure |
|-----------------|---------|---------|-----------------|-----------|
| Input | NA | 2xU+1kV | 2.5KVac | 2xU+1kV |
| Output | 2xU+1kV | NA | 2.5KVac | 500V |
| 0-10V (Class 2) | 2.5KVac | 2.5KVac | NA | 500V |
| Enclosure | 2xU+1kV | 500V | 500V | NA |

U = Max input voltage

UL Conditions of Acceptability

Please contact your Philips representative for a copy of the latest UL Conditions of Acceptability (COA).

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