

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium Round Shape High Bay LED Drivers WL Independent

Xi 150W 0.52-0.84A WL RI129S

9290 034 03080

The Xitanium Round Shape High Bay LED Drivers are designed to deliver highly reliable and efficient LED drivers in industrial applications. They are long-lasting and require low maintenance. The Wideline family is an upgraded portfolio with purpose to provide more stable and reliable industry drivers to OEM customers and end-users. The product could withstand input voltage 100-277Vac anywhere around the world and ensure 100% performance from 200-254Vac.

Benefits

- Reliable and robust design, capable of withstanding the harsh industrial operating conditions
- Wide flexibility by adjusting output current and compact housing
- Long lifetime, fitting with high bay industrial applications
- Peace of mind, backed by a 5-year warranty from a company you can trust

Features

- 100-277V input voltage
- Independent/IP65 rated
- Adjustable output current
- High ambient temperature rating, up to 60°C
- Approbation: CE, ENEC, CB, CCC, UKCA, RCM
- 50,000 hours lifetime

Application

- Highbay industrial lighting
- Warehouse lighting
- Big-box retail store lighting

Electrical input data

| Specification item | Value | Unit | Condition |
|-----------------------------|-----------|-----------------|--|
| Rated input voltage range | 200...254 | V _{ac} | Performance range |
| Rated input voltage | 230 | V _{ac} | |
| Rated input frequency range | 50...60 | Hz | Performance range |
| Rated input current | 0.69 | A | @ rated output power @ rated input voltage |
| Rated input power | 157 | W | @ rated output power @ rated input voltage |
| Power factor | 0.95 | | @ rated output power @ rated input voltage |
| Total harmonic distortion | 10 | % | @ rated output power @ rated input voltage |
| Efficiency | 95 | % | @ rated output power @ rated input voltage @ max. U _{out} |
| Input voltage AC range | 85...305 | V _{ac} | Operational range |
| Input frequency AC range | 47...63 | Hz | Operational range |

Electrical output data

| Specification item | Value | Unit | Condition |
|--------------------------------------|------------------|-----------------|---------------------------------|
| Regulation method | Constant Current | | |
| Output voltage | 160...260 | V _{dc} | |
| Output voltage max. | 300 | V | Maximum output voltage (rms) |
| Output current | 0.52...0.84 | A | |
| Output current tolerance ± | 5 | % | |
| Output current ripple LF | ≤ 5 | % | Ripple = peak / average, < 3kHz |
| Output current ripple HF | ≤ 5 | % | |
| Output P _{st} ^{LM} | ≤ 0.1 | | In entire operating window |
| Output SVM | ≤ 0.1 | | In entire operating window |
| Output power | 83...150 | W | |
| Rated output power | 150 | W | |

Electrical data controls input

| Specification item | Value | Unit | Condition |
|--------------------|-------|------|-----------|
| Control method | Fixed | | |

Wiring and Connections

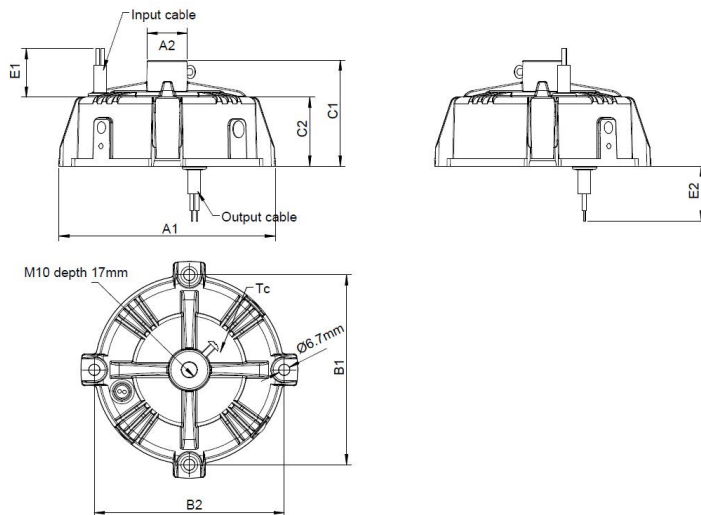
| Specification item | Value | Unit | Type |
|---------------------------|--------|-----------------------|--|
| Input wire cross-section | 1 / 17 | mm ² / AWG | 3x 1.0mm ² stranded wires, waterproof cable |
| Output wire cross-section | 1 / 17 | mm ² / AWG | 2x 1.0mm ² stranded wires, waterproof cable |
| Maximum cable length | 2 | m | Total length of wiring including LED module, one way |

Insulation

| Insulation per IEC61347-1 | Input | Output | Ground |
|---------------------------|-------|--------|--------|
| Input | | Non | Basic |
| Output | Non | | Basic |
| Ground | Basic | Basic | |

Dimensions and weight

| Specification item | Value | Unit | Tolerance (mm) |
|-----------------------------|-------|------|----------------|
| Length (A1) | 129 | mm | |
| Mounting hole distance (A2) | 24 | mm | |
| Width (B1) | 113 | mm | |
| Width (B2) | 113 | mm | |
| Height (C1) | 68 | mm | |
| Height (C2) | 46 | mm | |
| Input cable length (E1) | 300 | mm | |
| Output cable length (E2) | 300 | mm | |
| Weight | 740 | gram | |



Logistical data

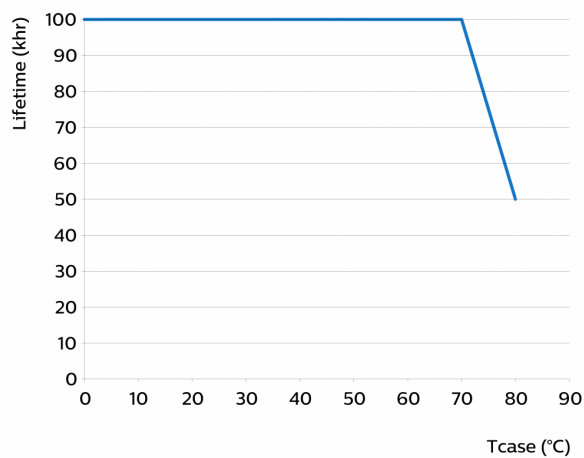
| Specification item | Value |
|--------------------|------------------------------|
| Product name | Xi 150W 0.52-0.84A WL RI129S |
| Logistic code 12NC | 9290 034 03080 |
| Pieces per box | 10 |

Operational temperatures and humidity

| Specification item | Value | Unit | Condition |
|---------------------|-----------|------|---|
| Ambient temperature | -40...+60 | °C | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max | 80 | °C | Maximum temperature measured at T _{case} -point |
| Tcase-life | 70 | °C | Measured at T _{case} -point |
| Relative humidity | 10...90 | % | Non-condensing |

Lifetime

| Specification item | Value | Unit | Condition |
|--------------------|--------|-------|--|
| Driver lifetime | 50,000 | hours | Measured temperature at Tcase-point is Tcase-max. Maximum failures = 10% |



Storage temperature and humidity

| Specification item | Value | Unit | Condition |
|---------------------|-----------|------|----------------|
| Ambient temperature | -40...+85 | °C | |
| Relative humidity | 5...95 | % | Non-condensing |

Programmable features

| Specification item | Available | Default setting | Condition |
|-------------------------------------|-----------|-----------------|-----------|
| Set Adjustable Output Current (AOC) | | 520 mA | |

Features

| Specification item | Value | | Condition |
|---|-------|--|----------------------|
| Open load protection | Yes | | Automatic recovering |
| Short circuit protection | Yes | | Automatic recovering |
| Hot wiring | No | | |
| Suitable for fixtures with protection class | I | | per IEC60598 |
| Overtemperature protection | Yes | | Automatic recovering |

Inrush current

| Specification item | Value | Unit | Condition |
|--------------------------|-------|------|---|
| Inrush current | 39 | A | Input voltage 230V |
| Inrush peak width | 330 | μs | Input voltage 230 V, measured at 50% height |
| Drivers / MCB 16A type B | ≤ 9 | pcs | Indicative value |



Please refer to the driver design in guide if you use other MCB-types.

Driver touch current / protective conductor current

| Specification item | Value | Unit | Condition |
|---|-------|--------|---|
| Typical Protective Conductor Current (ins. Class I) | 2 | mA rms | Acc. IEC60598-1. LED module contribution not included |

Surge immunity

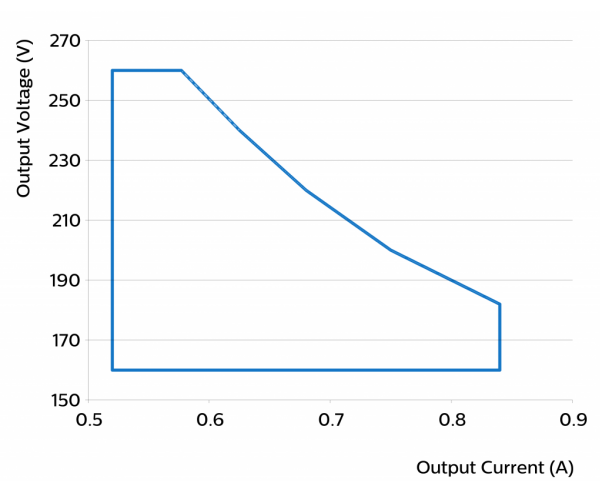
| Specification item | Value | Unit | Condition |
|-----------------------------------|-------|------|---|
| Mains surge immunity (diff. mode) | 4 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 4 | kV | Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us |

Application Info

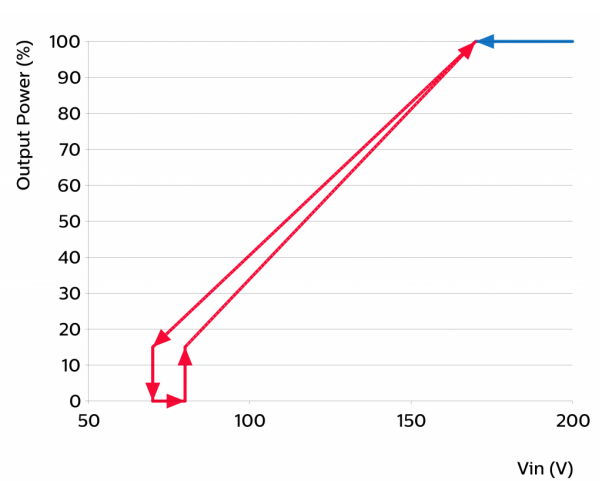
| Specification item | Value |
|--|-----------------------------------|
| Approval marks | CB / CCC / CE / ENEC / RCM / UKCA |
| Ingress Protection classification (IP) | 65 |
| Application | Outdoor |
| Mounting Type | Independent |

Graphs

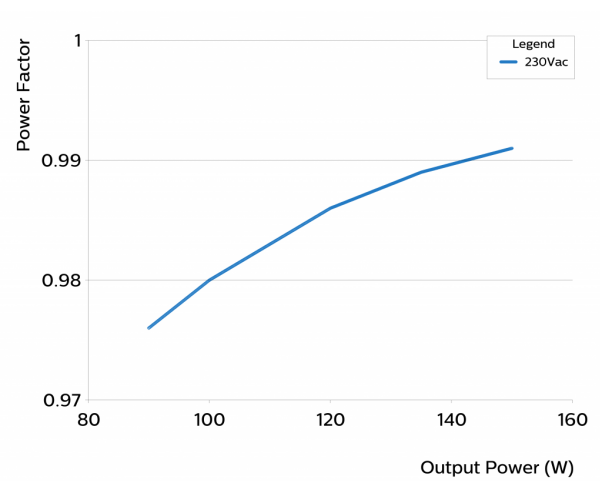
Operating window



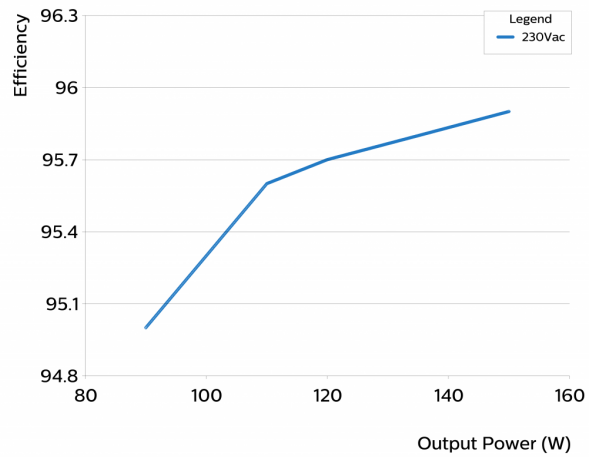
Mains Guard



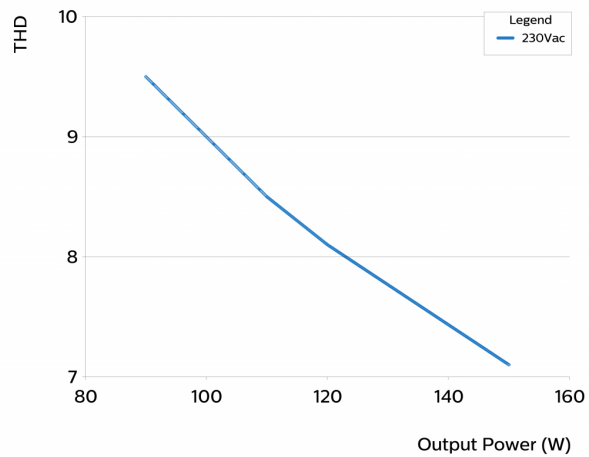
Power factor versus output power



Efficiency versus output power



THD versus output power



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Date of release: September 24, 2021 v1

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