



## Datasheet

### Xitanium LED drivers - Mini wireless

Xitanium 36W/m 0.15-1.05A 48V MC 230V

9290 034 63006

#### Enabling simple, cost effective wireless lighting system

Xitanium Mini wireless LED drivers are designed to operate LED solutions for general lighting applications. They enable simple, cost effective wireless lighting system for energy saving and comfort. Advanced design of the Mini wireless drivers helps to build a simple, scalable and standardized connected lighting with different functionalities from simple wireless dimming to cloud based operations and integration with gateways.

Wireless mini drivers can be configured via smart devices with MasterConnect app as standalone or in a mesh network. With Xitanium LED drivers, flexibility in luminaire design is assured thanks to the Adjustable Output Current (AOC). Application-oriented operating windows offer stable lumen output and light quality levels that specifiers and architects demand. The adjustable output current also enables operation of various LED PCB solutions from different manufacturers.

#### Features

- Compatible with Zigbee wireless protocols
- Operating windows - With SimpleSet feature, output current can be adjusted via the Philips MultiOne configurator
- Wide operating window: With extended operating window, availability of a wide output current from 0.15A to 1.05A that also helps complexity management
- Wide range of power ratings
- Traditional Mini design which can be used both as a built-in driver and an independent driver with add on caps

#### Benefits

- Enabling simple, scalable and standardized connected lighting system
- High reliability underpinned by 5-year warranty
- Lower installation cost for lighting control
- Future-proof flexibility -application-oriented operating windows enable LED generation and complexity management
- Wide range of use cases: From standalone to cloud based / gateway operations

#### Application

- Retail
- Hospitality
- Office

## Logistical data

| Specification item | Value                                 |
|--------------------|---------------------------------------|
| Product name       | Xitanium 36W/m 0.15-1.05A 48V MC 230V |
| EOC                | 872016929397700                       |
| Logistic code 12NC | 9290 034 63006                        |
| EAN1 (GTIN)        | 8720169293977                         |
| EAN3 (box)         | 8720169293984                         |
| Pieces per box     | 20                                    |
| Weight             | 88 gram                               |

## Electrical input data

| Specification item        | Value     | Unit            | Condition  |
|---------------------------|-----------|-----------------|--|
| Rated input voltage range | 220...240 | V <sub>ac</sub> | Performance range  |
| Rated input voltage       | 230       | V <sub>ac</sub> |  |
| Rated input frequency     | 50...60   | Hz              | Performance range  |
| Rated input current       | 0.2       | A               | @ rated output power @ rated input voltage               |
| Max. input current        | 0.22      | A               | @ rated output power @ minimum performance input voltage |
| Rated input power         | 42.0      | W               | @ rated output power @ rated input voltage               |
| Power factor              | 0.9       |                 | @maximum output power @ rated input voltage              |
| Total harmonic distortion | 20        | %               | @ rated output power @ rated input voltage               |
| Efficiency                | ≥ 88.0    | %               | @ rated output power @ rated input voltage               |
| Rated input voltage DC    | 186...250 | V <sub>dc</sub> | Performance range, No external DC fuse is required       |
| Rated input current DC    | ≤ 0.23    | A <sub>dc</sub> | Performance range  |
| Input voltage AC          | 198...264 | V <sub>ac</sub> | Safety operational range                                 |
| Input frequency AC        | 47.5...63 | Hz              | Safety operational range                                 |
| Input voltage DC          | 168...275 | V <sub>dc</sub> | Safety Operational range                                 |
| Standby Power (W)         | 0.5       | W               |  |
| Isolation input to output | SELV      |                 |  |

## Electrical output data

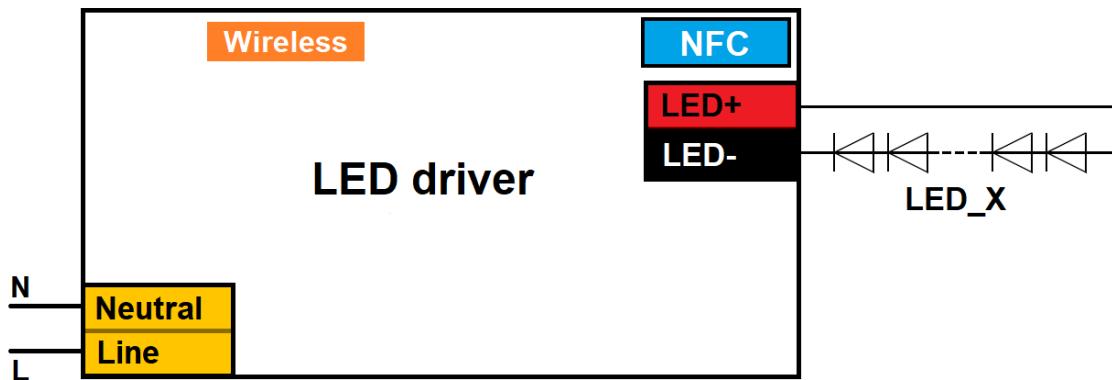
| Specification item                   | Value            | Unit            | Condition                        |
|--------------------------------------|------------------|-----------------|----------------------------------|
| Regulation method                    | Constant Current |                 |                                  |
| Output voltage                       | 24...48          | V <sub>dc</sub> |                                  |
| Output voltage max.                  | 60               | V               | Maximum output voltage (rms)     |
| Output current                       | 150...1050       | mA              |                                  |
| Output current min programmable      | 150              | mA              |                                  |
| Min output current                   | 6                | mA              |                                  |
| Output current tolerance ±           | 5                | %               |                                  |
| Output current ripple LF             | ≤ 4              | %               | Ripple = peak / average, < 3kHz  |
| Output P <sub>st</sub> <sup>LM</sup> | ≤ 0.3            |                 |                                  |
| Output SVM                           | ≤ 0.4            |                 |                                  |
| Output power                         | 0.1...36.0       | W               |                                  |
| Minimum performance output power     | 6                | W               | Power factor > 0.9 and THD < 20% |

## Control interfaces

| Specification item                 | Value    | Unit | Condition   |
|------------------------------------|----------|------|---|
| Control method                     | Wireless |      | Wireless protocol Zigbee by Switch and BLE by App |
| Dimming range                      | 1...100  | %    | Dimming via MasterConnect app / wireless switches |
| Isolation controls input to output | No       |      | acc. IEC61347-1                                   |

## Wiring and Connections

| Specification item        | Value               | Unit                  | Type   |
|---------------------------|---------------------|-----------------------|--|
| Input wire cross-section  | 0.5...1.5 / 20...16 | mm <sup>2</sup> / AWG | solid / stranded wire                                |
| Input wire strip length   | 8.5...9.5           | mm                    |  |
| Output wire cross-section | 0.5...1.5 / 20...16 | mm <sup>2</sup> / AWG | solid / stranded wire                                |
| Output wire strip length  | 8.5...9.5           | mm                    |  |
| Maximum cable length      | 0.6                 | m                     | Total length of wiring including LED module, one way |

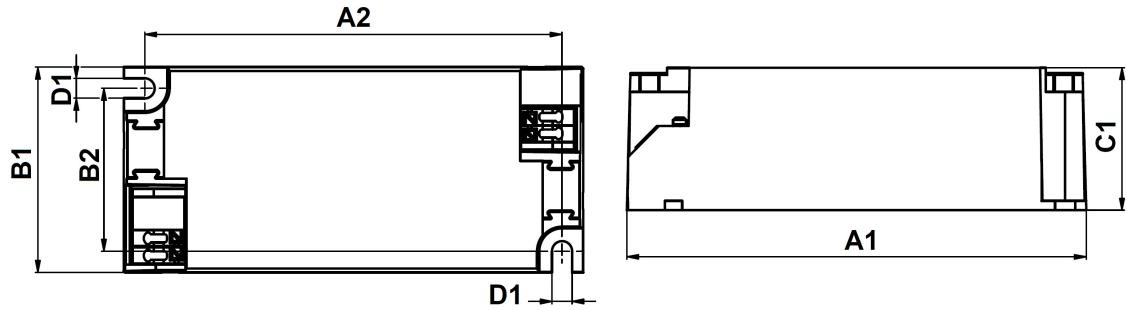


## Isolation

| Insulation per IEC61347-1 | Input | Output |
|---------------------------|-------|--------|
| Input                     | -     | SELV   |
| Output                    | SELV  | -      |

## Dimensions and weight

| Specification item          | Value | Unit | Tolerance (mm) |
|-----------------------------|-------|------|----------------|
| Length (A1)                 | 97.2  | mm   |                |
| Mounting hole distance (A2) | 88.5  | mm   |                |
| Width (B1)                  | 43    | mm   |                |
| Width (B2)                  | 34    | mm   |                |
| Height (C1)                 | 30    | mm   |                |
| Mounting hole diameter (D1) | 4.2   | mm   |                |
| Weight                      | 88    | gram |                |

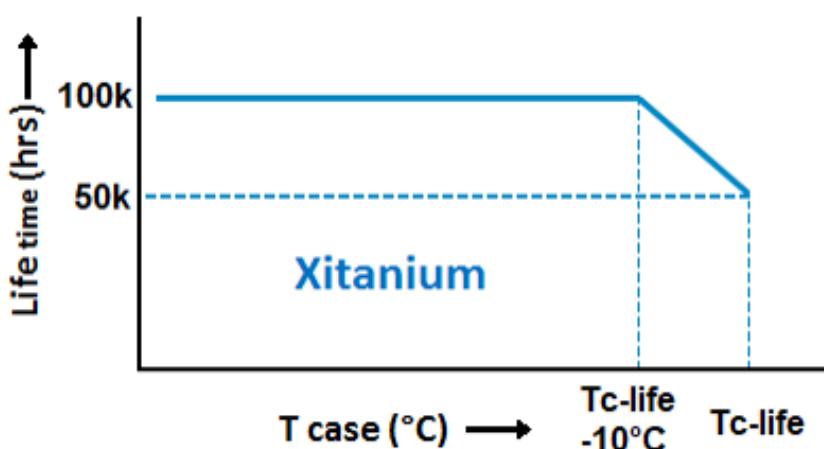


## Operational temperatures and humidity

| Specification item          | Value     | Unit | Condition   |
|-----------------------------|-----------|------|---|
| Ambient temperature         | -25...+50 | °C   | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max                   | 85        | °C   | Maximum temperature measured at Tcase-point                             |
| Tcase-life                  | 75        | °C   | Measured at Tcase-point measured at T <sub>c</sub> -point               |
| Maximum housing temperature | 110       | °C   | In case of a failure, inherent by design                                |
| Relative humidity           | 10...90   | %    | Non-condensing  |

## Lifetime

| Specification item | Value  | Unit  | Condition  |
|--------------------|--------|-------|--|
| Driver lifetime    | 50,000 | hours | Measured temperature at Tcase-point is Tcase-life. |



Maximum failures = 10%

## Storage temperature and humidity

| Specification item  | Value     | Unit | Condition      |
|---------------------|-----------|------|----------------|
| Ambient temperature | -25...+85 | °C   |                |
| Relative humidity   | 5...95    | %    | Non-condensing |

## Programmable features

| Specification item                     | Available | Default setting | Condition   |
|--|-----------|-----------------|---|
| Set Adjustable Output Current (AOC)    | SimpleSet | 150 mA          |   |
| Adjustable Light Output (ALO)          | Yes       | OFF             |   |
| Constant Light Output (CLO)            | Yes       | OFF             |   |
| Min Dim Level (%)                      | Yes       | 1 %             |   |
| DC emergency (DCemDim)                 | Yes       | ON              | Current output decreased to 15% (EOFx)                          |
| DALI control supported at DC operation | Yes       | OFF             |   |
| OEM Write Protection (OWP)             | Yes       |                 |   |
| Luminaire Info (DALI part 251)         | Yes       |                 |   |
| Tx Power                               | Yes       | 8 dBm           | Set the Tx power (strength of the wireless BLE / Zigbee signal) |

## Non-programmable features

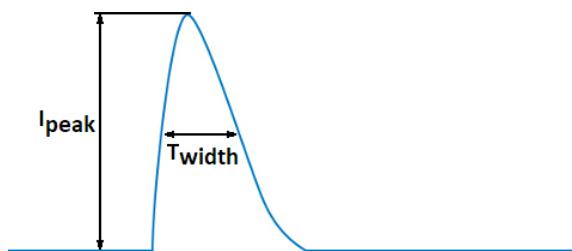
| Specification item                          | Value    | Condition  |
|---|----------|--|
| Open load protection                        | Yes      | Automatic recovering   |
| Short circuit protection                    | Yes      | Automatic recovering   |
| Over power protection                       | Yes      | Automatic recovering   |
| Hot wiring                                  | No       |  |
| Suitable for fixtures with protection class | I and II | per IEC60598   |
| Energy metering (DALI part 252)             | Yes      | Accuracy is 4%   |
| Diagnostics via Signify tool                | Yes      | Diagnostics data related to mainsvoltage is inaccurate when output power is less than 50%. |

## Inrush current

| Specification item                | Value | Unit | Condition                                   |
|-----------------------------------|-------|------|---|
| Inrush current                    | 4.8   | A    | Input voltage 230V                          |
| Inrush peak width                 | 56    | μs   | Input voltage 230 V, measured at 50% height |
| Drivers / MCB 16A type B @230V AC | ≤ 50  | pcs  | Input voltage 230V                          |

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

If several mini circuit breakers are used directly side-by-side (without distance pieces) a correction factor of 80% has to be applied to the rated current



## Driver touch current / protective conductor current / earth leakage current

| Specification item                    | Value | Unit    | Condition   |
|---------------------------------------|-------|---------|---|
| Typical Touch Current (ins. Class II) | 0.7   | mA peak | Acc. IEC61347-1. LED module contribution not included |

## Surge immunity

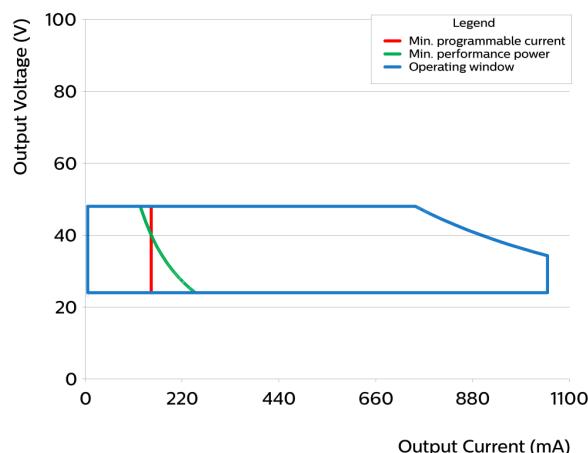
| Specification item                | Value | Unit | Condition                                  |
|-----------------------------------|-------|------|--|
| Mains surge immunity (diff. mode) | 1     | kV   | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 2     | kV   | Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us  |

## Application Info (Approbation)

| Specification item                     | Value   |
|--|---|
| Approval marks and Certifications      | BLE alliance / CCC / CE / EL / ENEC / KC / RCM / SELV / SRRC / TISI |
| Ingress Protection classification (IP) | 20  |
| Application                            | Indoor Point  |
| Mounting Type                          | Built-in / Independent  |

## Graphs

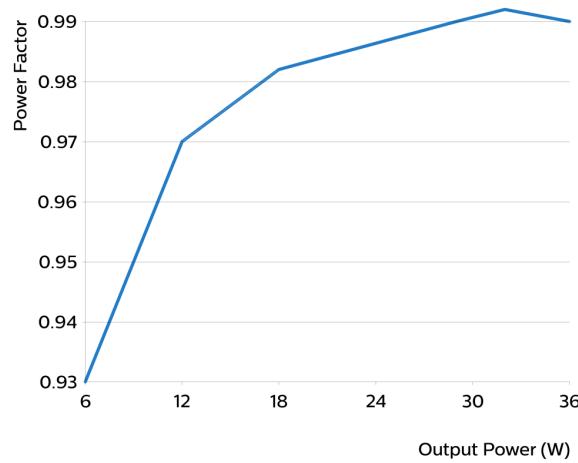
### Operating window



| Type                                  | Output current (mA) | Min. output voltage (V) | Max. output voltage (V) | Max. output power (W) |
|---------------------------------------|---------------------|-------------------------|-------------------------|-----------------------|
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 150                 | 24                      | 48                      | 7.2                   |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 200                 | 24                      | 48                      | 9.6                   |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 250                 | 24                      | 48                      | 12                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 300                 | 24                      | 48                      | 14.4                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 350                 | 24                      | 48                      | 16.8                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 400                 | 24                      | 48                      | 19.2                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 450                 | 24                      | 48                      | 21.6                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 500                 | 24                      | 48                      | 24                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 550                 | 24                      | 48                      | 26.4                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 600                 | 24                      | 48                      | 28.8                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 650                 | 24                      | 48                      | 31.2                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 700                 | 24                      | 48                      | 33.6                  |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 750                 | 24                      | 48                      | 36                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 800                 | 24                      | 45                      | 36                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 850                 | 24                      | 42                      | 36                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 900                 | 24                      | 40                      | 36                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 950                 | 24                      | 37                      | 36                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 1000                | 24                      | 36                      | 36                    |
| Xitanium 36W/m 0.15-1.05A 48V MC 230V | 1050                | 24                      | 34                      | 36                    |

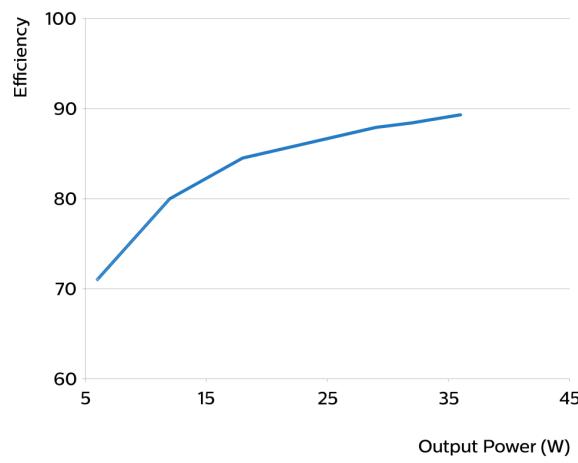
### Power factor versus output power

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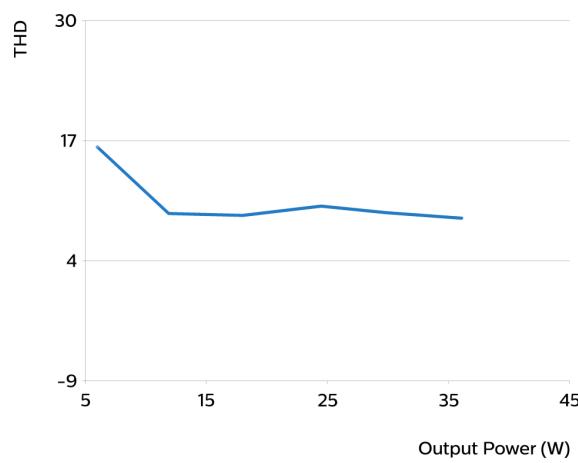
### Efficiency versus output power

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### THD versus output power

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## Notes

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### Notes

- For MultiOne configuration, two functions(Tx power and FCC/RED test mode)were removed, comparing with the base model. These two functions will be configured via Bluetooth (MC APP) in new drivers.
- Product fail to meet requirement of CEAG Star-Tech compatibility test. So it actually cannot comply with the standard of EATON



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