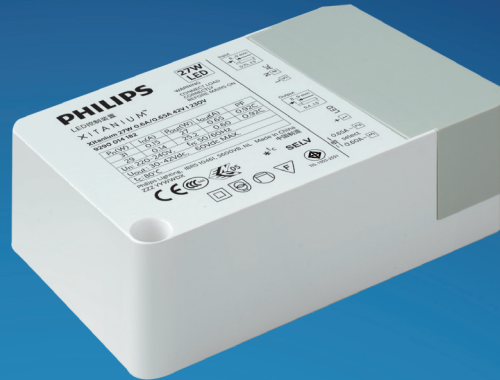


PHILIPS

Xitanium

LED driver



Datasheet

Xitanium G2

Xitanium 27W 0.6A/0.65A 42V | 230V

Affordable and reliable LED Drivers

Affordable LED Driver range offering Philips reliability. The Xitanium range is compatible with COB and mid-power LEDs from any LED manufacturer.

Benefits

- Driver design based on Philips experience and knowledge of conventional fluorescent and HID technologies
- Various power wattage Drivers that are related to the lumen packages/applications
- Fixed output Drivers
- Independent-version housing design for stand-alone installations

Features

- Small, compact dimensions
- Specific, optimized output current and voltage
- 50,000 hours lifetime
- Fast Time to Market
- Low ripple, low THD

Application

- Public buildings (airports, cinemas, theaters, exhibition halls)
- Retail (supermarkets, shops)
- Office

Electrical input data

| Specification item | Value | Unit | Condition |
|-----------------------------|-------------|-----------------|--|
| Rated input voltage range | 220...240 | V _{ac} | Performance range |
| Rated input voltage | 230 | V _{ac} | |
| Rated input frequency range | 50...60 | Hz | Performance range |
| Rated input current | 0.14 / 0.15 | A | @ full output power @ rated input voltage |
| Rated input power | 29 / 31 | W | @ rated output power @ rated input voltage |
| Power factor | 0.92 | | @ full output power @ rated input voltage |
| Total harmonic distortion | ≤ 15 | % | @ rated output power @ rated input voltage |
| Efficiency | 88 | % | @ 230V full load |
| Input voltage AC range | 202...254 | V _{ac} | Operational range |
| Input frequency AC range | 47.5...63 | Hz | Operational range |
| Isolation input to output | SELV | | |

Electrical output data

| Specification item | Value | Unit | Condition |
|--------------------------|-------------------------|-----------------|-----------------------------|
| Regulation method | Constant Current | | |
| Output voltage | 30...42 | V _{dc} | |
| Output voltage max. | 60 | V | Peak voltage at open load |
| Output current | 0.6 / 0.65 | A | Full output current setting |
| Output current tolerance | ± 8 | % | @230Vac, 36Vdc |
| Output current ripple LF | ≤ 3 | % | Ripple = peak / average |
| Output current ripple HF | ≤ 15 | % | Ripple = peak / average |
| Output power | 18.0...25.2 / 19.5...27 | W | Full output |

Electrical data controls input

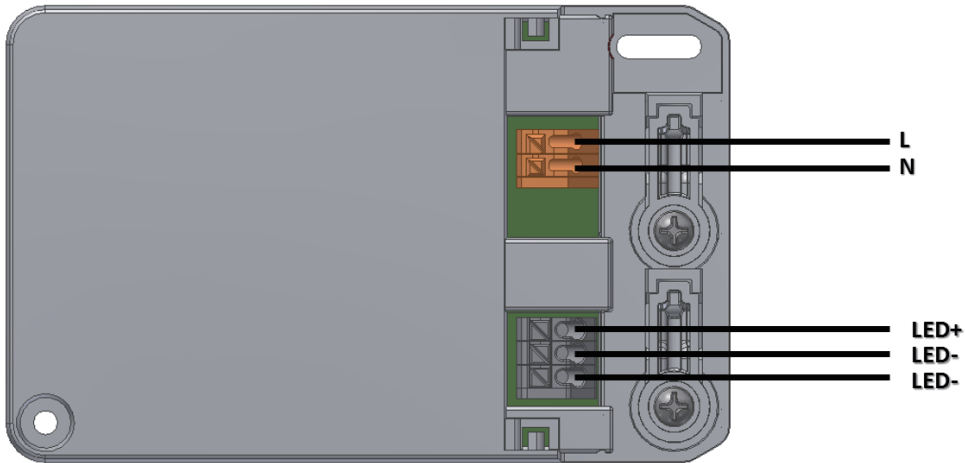
| Specification item | Value | Unit | Condition |
|--------------------|-------|------|-----------|
| Control method | Fixed | | |
| Galvanic Isolation | No | | |

Logistical data

| Specification item | Value |
|--------------------|-------------------------------------|
| Product name | Xtitanium 27W 0.6A/0.65A 42V I 230V |
| Logistic code 12NC | 9290 014 18280 |
| Pieces per box | 40 |

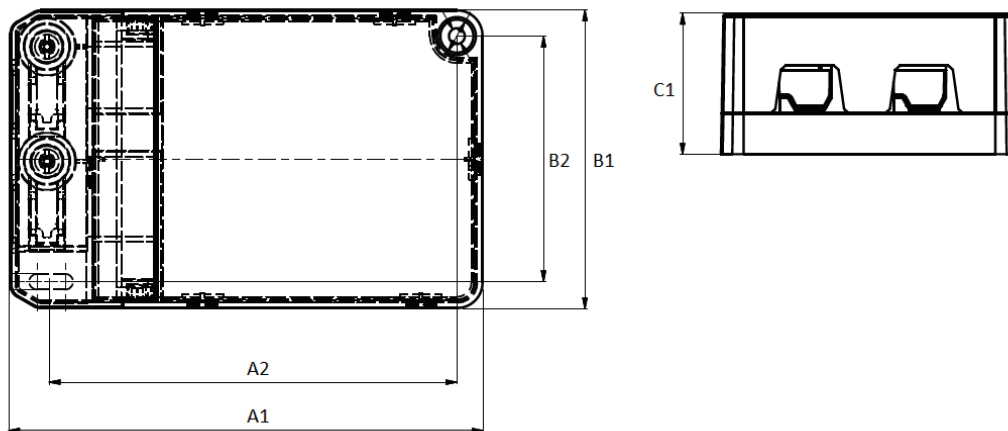
Wiring & Connections

| Specification item | Value | Unit | Condition |
|---------------------------|------------|-----------------|--|
| Input wire cross-section | 0.75...1.5 | mm ² | Connector 250 (3.5 mm), solid / stranded wire |
| | 16...21 | AWG | Connector 250 (3.5 mm), solid / stranded wire |
| Input wire strip length | 8.5...9.5 | mm | |
| Output wire cross-section | 0.4...1.5 | mm ² | Connector 250 (3.5 mm), solid / stranded wire |
| | 16...18 | AWG | Connector 250 (3.5 mm), solid / stranded wire |
| Output wire strip length | 8.5...9.5 | mm | |
| Maximum cable length | 600 | mm | Total length of wiring including LED module, one way |



Dimensions and weight

| Specification item | Value | Unit | Condition |
|---------------------------|-------|------|-----------|
| Length (A1) | 108 | mm | |
| Width (B1) | 68 | mm | |
| Width (B2) | 56.1 | mm | |
| Height (C1) | 32 | mm | |
| Fixing hole distance (A2) | 92.9 | mm | |
| Weight | 140 | gram | |



Operational temperatures and humidity

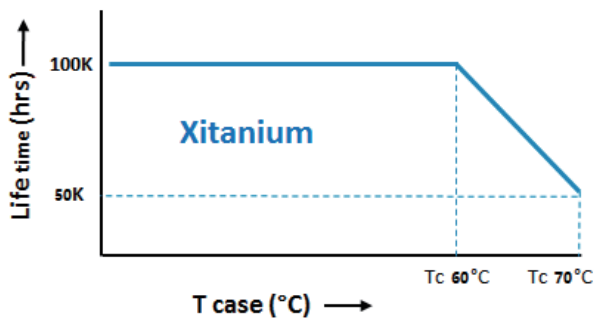
| Specification item | Value | Unit | Condition |
|-----------------------------|-----------|------|--|
| Ambient temperature | -20...+50 | °C | Higher ambient temperature allowed as long as T _{case-max} is not exceeded. |
| T _{case-max} | 80 | °C | Maximum temperature measured at T _{case-point} |
| T _{case-life} | 70 | °C | Measured at T _{case-point} |
| Maximum housing temperature | 130 | °C | In case of a failure |
| Relative humidity | 10...90 | % | Non-condensing |

Storage temperature and humidity

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

Lifetime

| Specification item | Value | Unit | Condition |
|--------------------|--------|-------|---|
| Driver lifetime | 50,000 | hours | Measured temperature at T _{case-point} is T _{case-life} . Maximum failures = 10% |



Programmable features

| Specification item | Value | Remark | Condition |
|---------------------------------------|-------|----------------------|--|
| Set output current (AOC) | | See Design-in guide. | Default output current: = 600 / 650 mA |
| LED module temperature derating (MTP) | No | | |
| Constant Lumen Over Lifetime (CLO) | No | | |
| DC emergency dimming (DCemDIM) | No | | |

Features

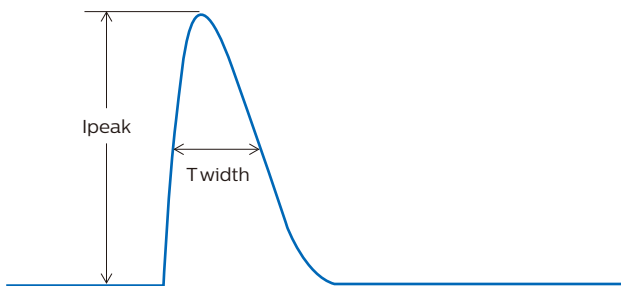
| Specification item | Value | Remark | Condition |
|---|----------|--------|----------------------|
| Open load protection | Yes | | Automatic recovering |
| Short circuit protection | Yes | | Automatic recovering |
| Over power protection | Yes | | Automatic recovering |
| Hot wiring | No | | |
| Suitable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

Certificates and standards

| Specification item | Value |
|-----------------------------------|-----------------------------|
| Approval marks | CB / CCC / CE / ENEC / TISI |
| Ingress Protection classification | 20 |

Inrush current

| Specification item | Value | Unit | Condition |
|----------------------------|-----------|---------|--|
| Inrush current I_{peak} | 17 | A | Input voltage 230V |
| Inrush current T_{width} | 250 | μ s | Input voltage 230V, measured at 50% I_{peak} |
| Drivers / MCB 16A type B | ≤ 28 | pcs | |



| MCB | Rating | Relative number of LED drivers |
|-----|--------|--------------------------------|
| B | 10A | 63% |
| B | 13A | 81% |
| B | 16A | 100% (stated in datasheet) |
| B | 20A | 125% |
| B | 25A | 156% |
| C | 10A | 104% |
| C | 13A | 135% |
| C | 16A | 170% |
| C | 20A | 208% |
| C | 25A | 260% |

Driver touch current / protective conductor current

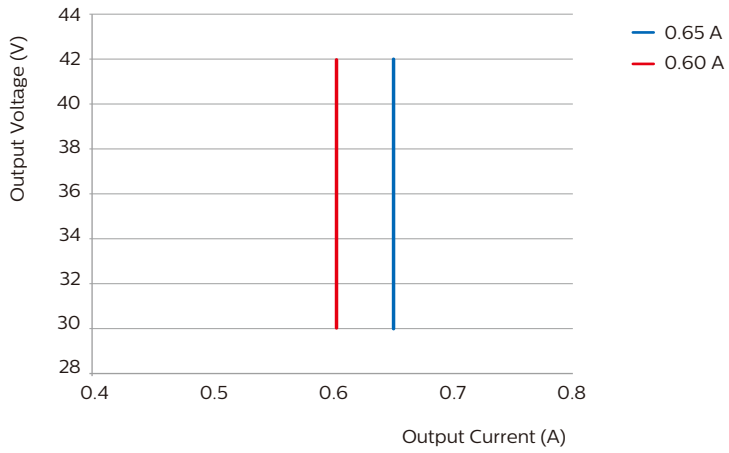
| Specification item | Value | Unit | Condition |
|---------------------------------------|---------|---------|---|
| Typical touch current (ins. Class II) | < 0.7 | mA peak | Acc. IEC61347-1. LED module contribution not included |

Surge immunity

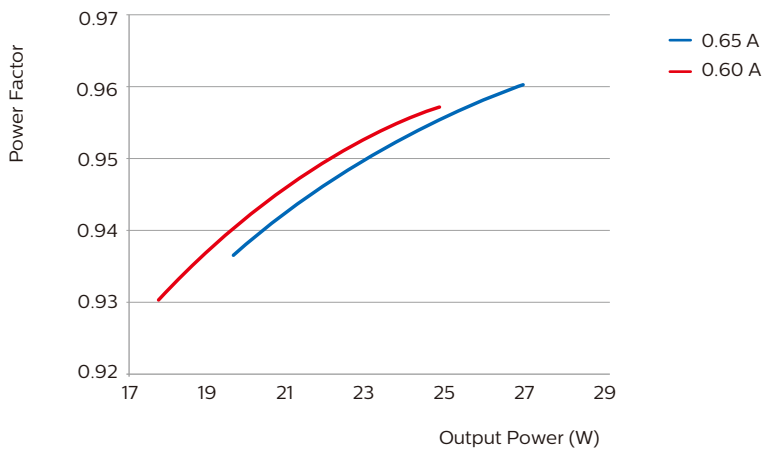
| Specification item | Value | Unit | Condition |
|-----------------------------------|-------|------|--|
| Mains surge immunity (diff. mode) | 1 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 2 | kV | Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us |

Graphs

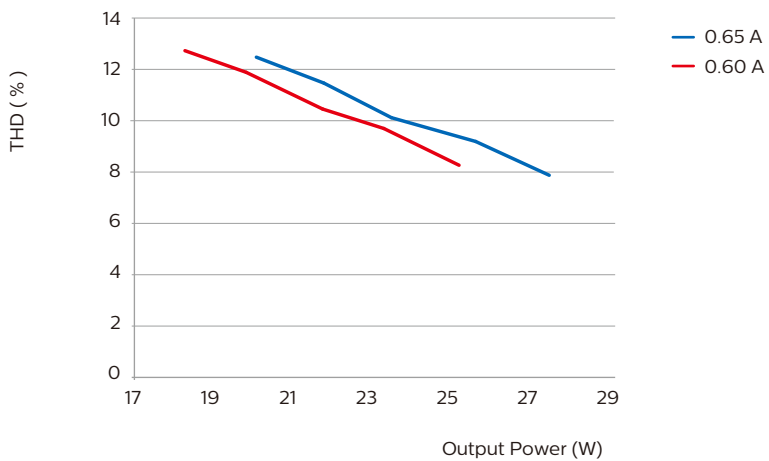
Operating window



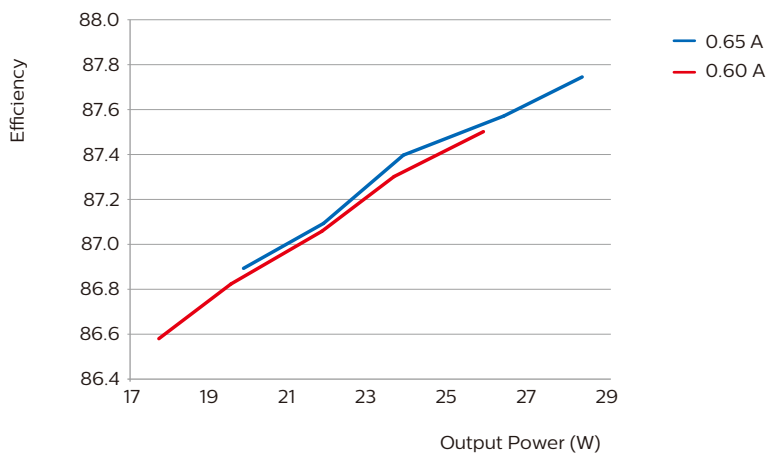
Power factor versus output power



Total Harmonic Distortion



Efficiency versus output power



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