

PHILIPS

Xitanium

LED driver



Datasheet

Xitanium track adaptor drivers

Xitanium 10W/a 0.2/0.25A 40V 3CB 230V

Xitanium 10W/a 0.2/0.25A 40V 3CG 230V

Xitanium 10W/a 0.2/0.25A 40V 3CW 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
- Track adaptor housing design for minimization of track light luminaire

Features

- Small, compact dimensions
- Specific, optimized output current and voltage
- 50,000 hours lifetime
- Fast Time to Market
- Low ripple, low THD
- Suitable for 3 circuits system
- White/Black/Grey colour available

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 | 0.05/0.06 | A | @ full output power @ rated input voltage |
| Rated input power | 11/13 | W | @ rated output power @ rated input voltage |
| Power factor | 0.9 | | @ full output power @ rated input voltage |
| Total harmonic distortion | 20 | % | @ rated output power @ rated input voltage |
| Efficiency | 80 | % | @ 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...40 | V _{dc} | |
| Output voltage max. | 60 | V | Peak voltage at open load |
| Output current | 0.2 / 0.25 | 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 | 6..8/7.5...10 | W | Full output |

Electrical data controls input

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

Logistical data

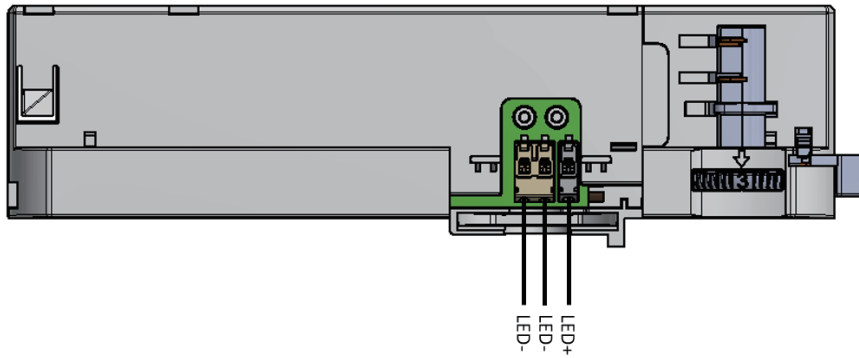
| Specification item | Value |
|--------------------|---------------------------------------|
| Product name | Xitanium 10W/a 0.2/0.25A 40V 3CB 230V |
| Logistic code 12NC | 9290 014 76006 |
| Pieces per box | 40 |

| Specification item | Value |
|--------------------|---------------------------------------|
| Product name | Xitanium 10W/a 0.2/0.25A 40V 3CG 230V |
| Logistic code 12NC | 9290 014 76406 |
| Pieces per box | 40 |

| Specification item | Value |
|--------------------|---------------------------------------|
| Product name | Xitanium 10W/a 0.2/0.25A 40V 3CW 230V |
| Logistic code 12NC | 9290 014 75606 |
| Pieces per box | 40 |

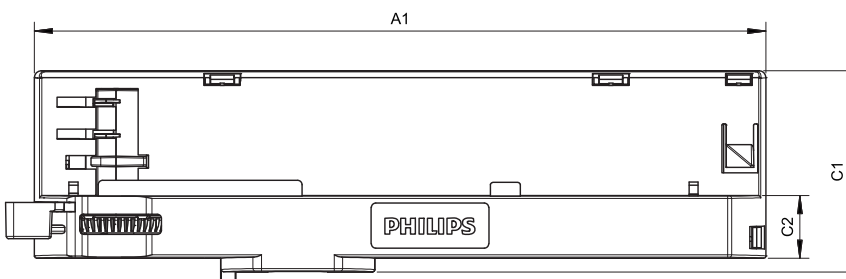
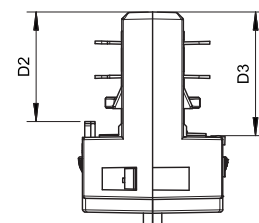
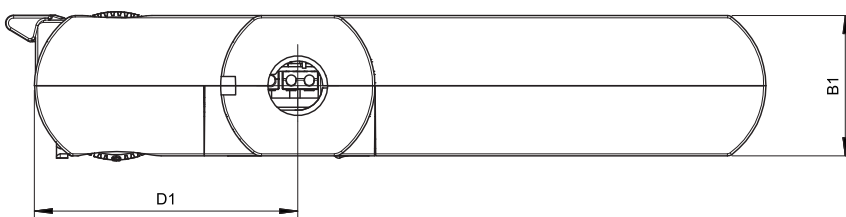
Wiring & Connections

| Specification item | Value | Unit | Condition |
|---------------------------|------------|-----------------|--|
| Output wire cross-section | 0.2...0.75 | mm ² | Molex 104188, solid wire |
| | 18...24 | AWG | Molex 104188, solid wire |
| | 0.45...0.7 | mm ² | Molex 104188, strand wire |
| | 20...22 | AWG | Molex 104188, strand wire |
| Output wire strip length | 7.5...8.5 | mm | Total length of wiring including LED module, one way |
| Maximum cable length | 300 | mm | |



Dimensions and weight

| Specification item | Value | Unit | Condition |
|--------------------|-------|------|-----------|
| Length (A1) | 161.5 | mm | |
| Width (B1) | 31 | mm | |
| Height (C1) | 44.4 | mm | |
| Height (C2) | 13.9 | mm | |
| Weight | 120 | gram | |



| Data Sheet | |
|------------|-----------------|
| Item | Dimension |
| A1 | 161.5 -/+1.5 mm |
| B1 | 31.0 -/+1.0 mm |
| C1 | 44.4 -/+1.0 mm |
| C2 | 13.9 -/+0.5 mm |
| D1 | 58.1 -/+1.5 mm |
| D2 | 24.2 -/+0.5 mm |
| D3 | 27.3 -/+0.5 mm |

Operational temperatures and humidity

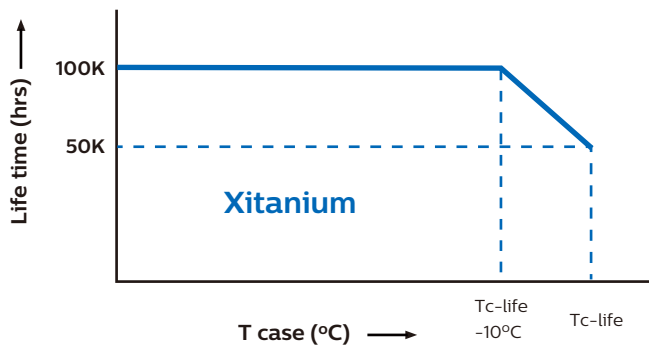
| Specification item | Value | Unit | Condition |
|-----------------------------|-----------|------|--|
| Ambient temperature | -20...+35 | °C | Higher ambient temperature allowed as long as T _{case-max} is not exceeded. |
| T _{case-max} | 85 | °C | Maximum temperature measured at T _{case-point} |
| T _{case-life} | 75 | °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: = 200 /250 mA |
| LED module temperature derating (MTP) | No | | |
| Constant Lumen Over Lifetime (CLO) | No | | |
| DC emergency dimming (DCemDIM) | No | | |

Features

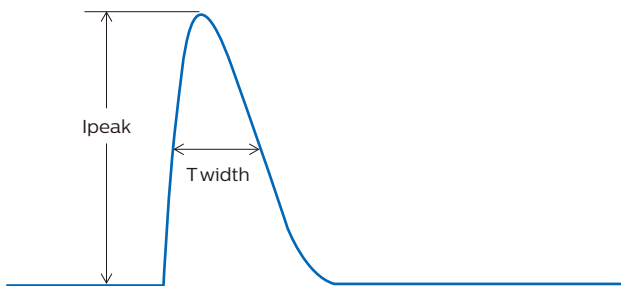
| Specification item | Value | Remark | Condition |
|---|-------|--------|----------------------|
| Open load protection | Yes | | Automatic recovering |
| Short circuit protection | Yes | | Automatic recovering |
| Over power protection | Yes | | Automatic recovering |
| Hot wiring | No | | |
| Suitable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

Certificates and standards

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

Inrush current

| Specification item | Value | Unit | Condition |
|----------------------------|-----------|---------|--|
| Inrush current I_{peak} | 12 | A | Input voltage 230V |
| Inrush current T_{width} | 200 | μ s | Input voltage 230V, measured at 50% I_{peak} |
| Drivers / MCB 16A type B | ≤ 40 | 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

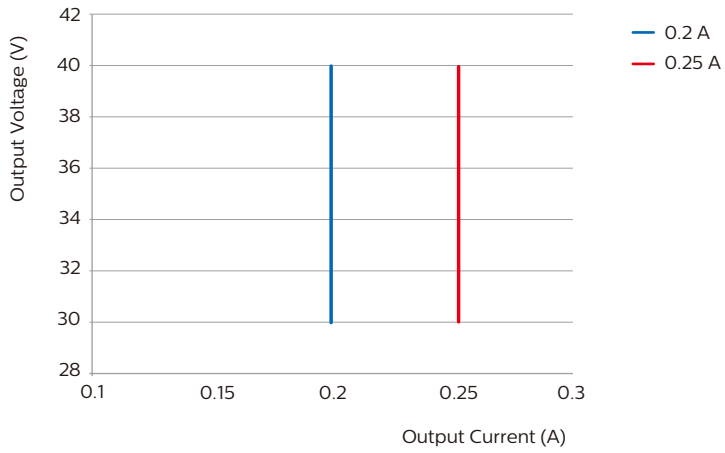
| Specification item | Value | Unit | Condition |
|---------------------------------------|-------|---------|---|
| Typical touch current (ins. Class II) | < 0.7 | mA peak | Acc. IEC61347-1. LED module contribution not included |

Surge immunity

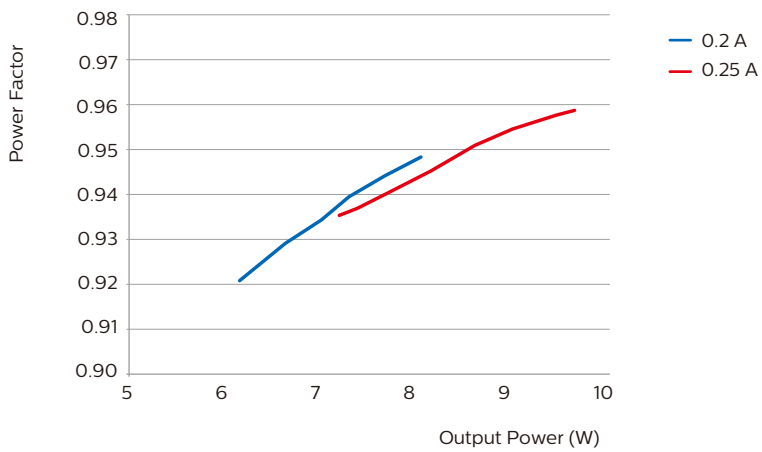
| Specification item | Value | Unit | Condition |
|-----------------------------------|-------|------|--|
| Mains surge immunity (diff. mode) | 1 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 2 | kV | Acc. IEC61000-4-5. 12 Ohm 1.2/50us,8/20us |

Graphs

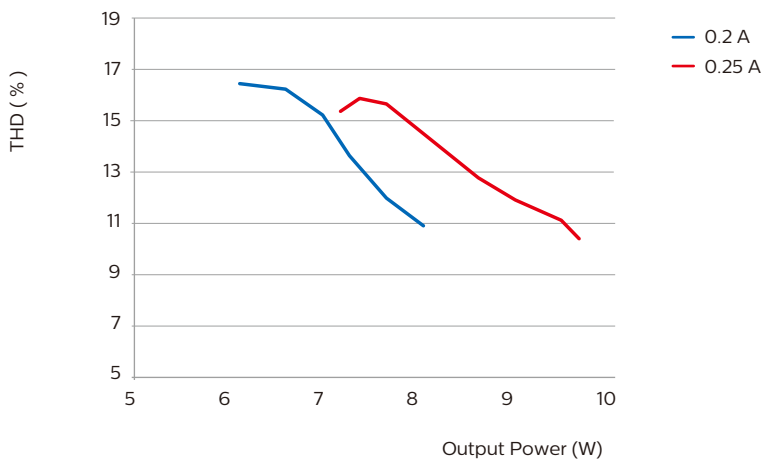
Operating window



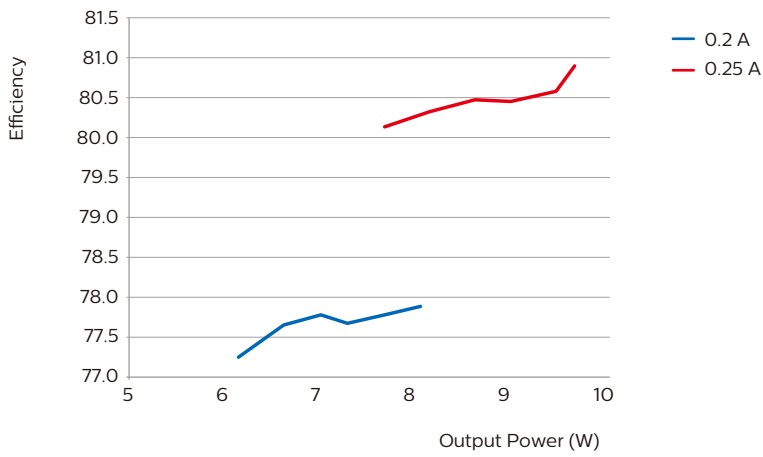
Power factor versus output power



Total Harmonic Distortion



Efficiency versus output power



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