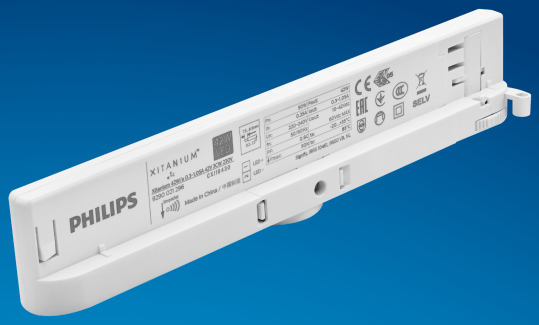
PHILIPS

Xitanium

LED driver




Datasheet

# Xitanium track adaptor drivers (3C)

## Xitanium 20W/a 0.15-0.5A 42V 3CG 230V

### 9290 021 29506

**Affordable and reliable LED Drivers**

Affordable LED driver range offering Philips reliability. The Xitanium track driver 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 ratings matching common lumen packages/applications
- Track adaptor housing design for compact track luminaire designs

**Features**

- Compact size
- Specific, optimized dual-output current choice
- Long lifetime
- Low output current ripple, low input current THD
- Suitable for 3-phase track systems
- Available in white, black and grey housing color

**Application**

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

August 2021

## 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 | 0.11 | A | @ full output power @ rated input voltage |
| Max. input current | 0.12 | A | @ rated output power @ minimum performance input voltage |
| Rated input power | 22 | 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 | 85.1 | % | @ rated input voltage @ rated output power @ max. Iout |
| Input voltage AC range | 198…264 | $V_{ac}$ | Safety operational range |
| Input frequency AC range | 45…66 | Hz | Safety operational range |
| Isolation input to output | SELV | | |

## Electrical output data

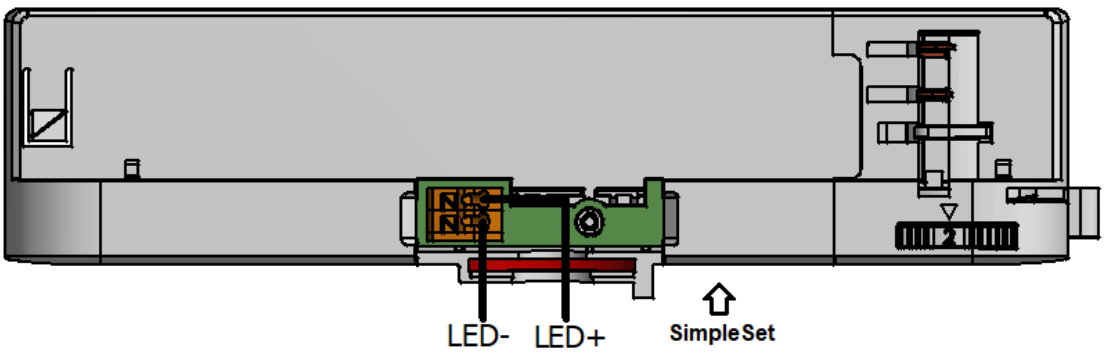
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Regulation method | Constant Current | | |
| Output voltage | 10…42 | $V_{dc}$ | |
| Output voltage max. | 60 | V | Maximum output voltage (rms) |
| Output current | 0.15…0.5 | A | |
| Output current tolerance ± | 5 | % | |
| Output current ripple LF | ≤ 4 | % | Ripple = peak / average, < 3kHz |
| Output $P_{st}^{LM}$ | ≤ 0.08 | | |
| Output SVM | ≤ 0.07 | | |
| Output power | 5…20 | W | |

## Electrical data controls input

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Control method | Fixed | | Set output current via SimpleSet (AOC) |

## Wiring and Connections

| Specification item | Value | Unit | Type |
|---|---|---|---|
| Output wire cross-section | 0.5…1.5 / 20…16 | $mm^2$ / AWG | solid / stranded wire |
| Output wire strip length | 7.5…8.5 | mm | |
| Maximum cable length | 0.3 | m | Total length of wiring including LED module, one way |

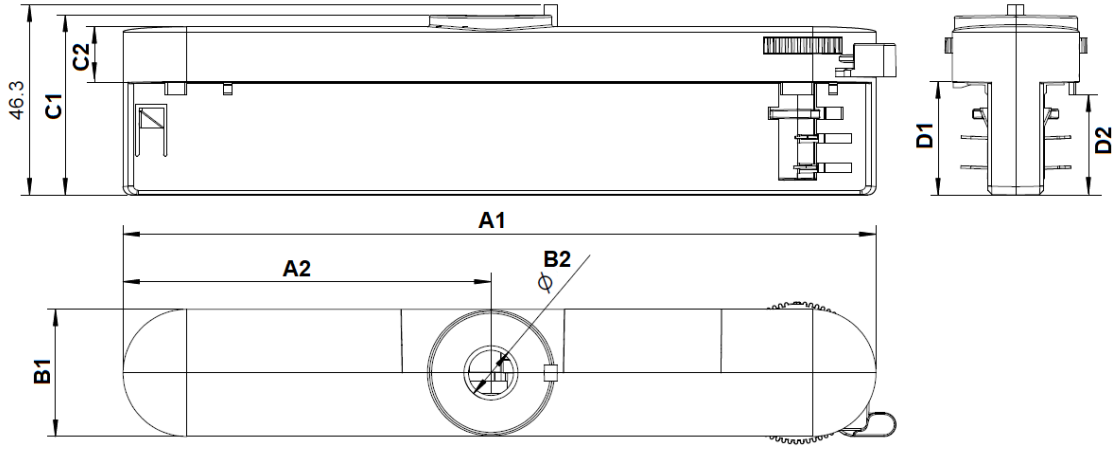


## Insulation

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

## Dimensions and weight

| Specification item | Value | Unit | Tolerance (mm) |
|---|---|---|---|
| Length (A1) | 171 | mm | |
| Mounting hole distance (A2) | 88 | mm | |
| Width (B1) | 31 | mm | |
| Width (B2) | 13.2 | mm | |
| Height (C1) | 43.8 | mm | |
| Height (C2) | 13.7 | mm | |
| Mounting hole diameter (D1) | 27.3 | mm | |
| Mounting hole diameter (D2) | 24.4 | mm | |
| Weight | 108 | gram | |
| Housing color | Grey (RAL 7040) | | |




## Logistical data

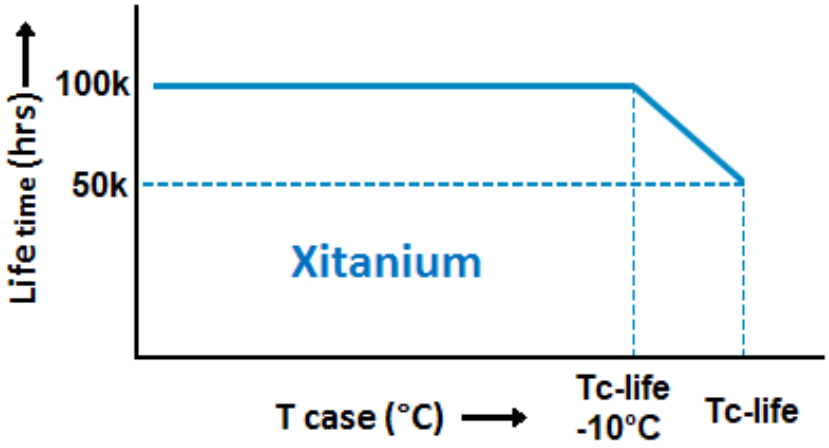
| Specification item | Value |
|---|---|
| Product name | Xitanium 20W/a 0.15-0.5A 42V 3CG 230V |
| EOC | 871869973470100 |
| Logistic code 12NC | 9290 021 29506 |
| EAN1 (GTIN) | 8718699734701 |
| EAN3 (box) | 8718699734718 |
| Pieces per box | 40 |

## Operational temperatures and humidity

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Ambient temperature | -20…+35 | °C | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max | 85 | °C | Maximum temperature measured at $T_{case}$-point |
| Tcase-life | 85 | °C | Measured at $T_{case}$-point |
| Maximum housing temperature | 130 | °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

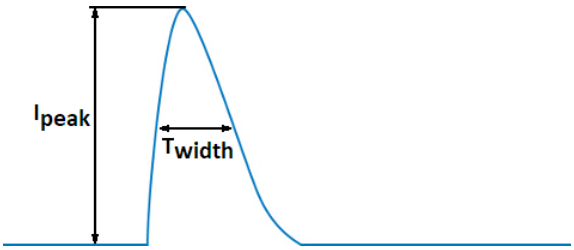
| Specification item | Available | Default setting | Condition |
|---|---|---|---|
| Set Adjustable Output Current (AOC) | SimpleSet | 150 mA | |
| OEM Write Protection (OWP) | Yes | OFF | |
| Luminaire Info (DALI part 251) | Yes | — | |

## 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 | | per IEC60598 |

## Inrush current

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Inrush current | 8 | A | Input voltage 230V |
| Inrush peak width | 150 | µs | Input voltage 230 V, measured at 50% height |
| Drivers / MCB 16A type B | ≤ 72 | 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 Touch Current (ins. Class II) | 0.7 | mA peak | Acc. IEC61347-1. LED module contribution not included |

## Surge immunity

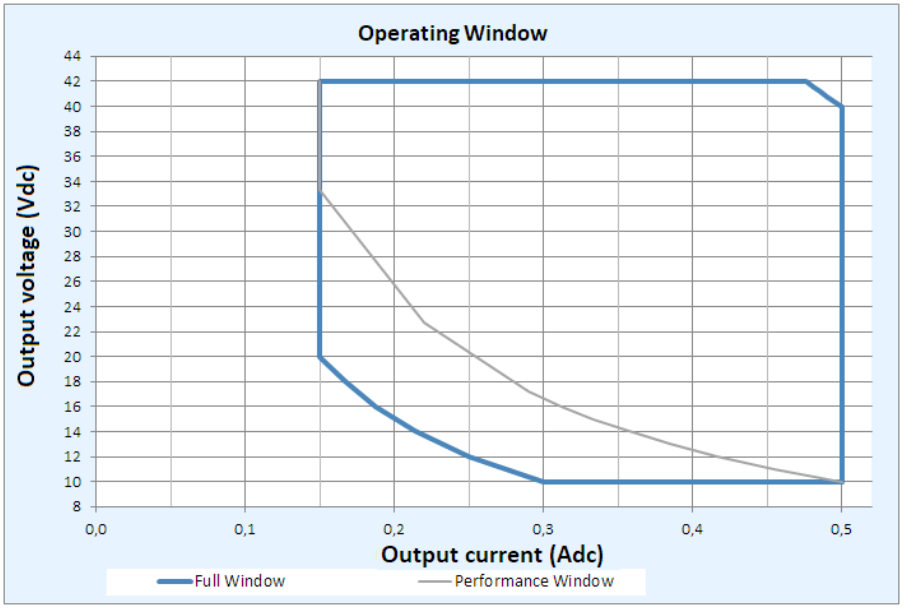
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Mains surge immunity (diff. mode) | 1 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 2 | kV | Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us |

## Application Info

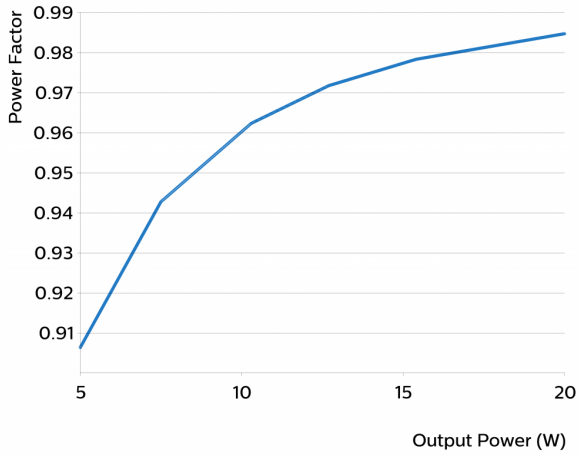
| Specification item | Value |
|---|---|
| Approval marks | CE / CQC / EAC / ENEC / RCM / SELV / UA |
| Ingress Protection classification (IP) | 20 |
| Application | Indoor Point |
| Mounting Type | Track mounting |

## Graphs

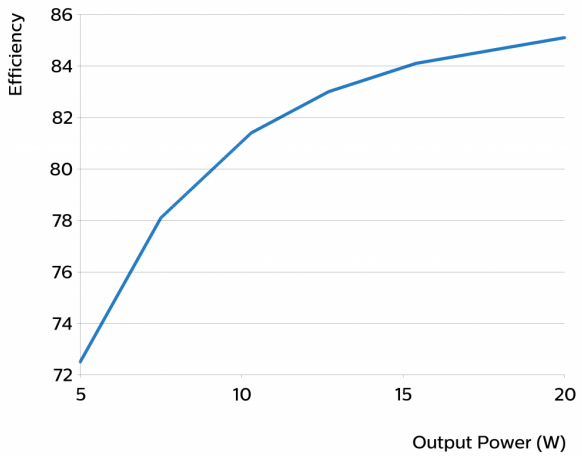
### Operating window



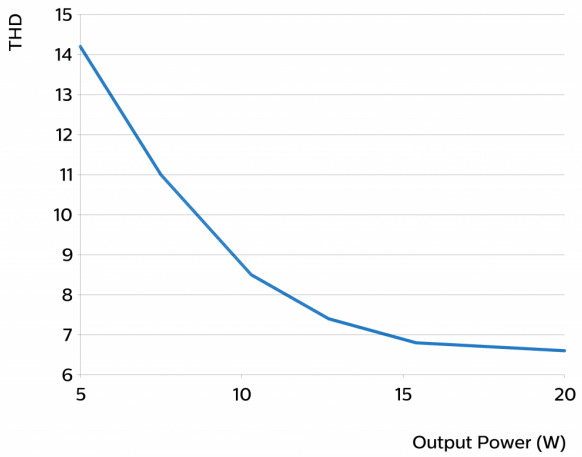

### Power factor versus output power



## Efficiency versus output power




## THD versus output power




## Notes

The adapter is compatible with Global Trac Pro, Stucchi OneTrack 3 Circuit tracks.

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