PHILIPS

Xitanium

LED driver

Datasheet

# Xitanium track adaptor drivers 1C G2

## Xi 34W/a 0.6-0.85A 40V DS 1CW 230V

## Xi 34W/a 0.6-0.85A 40V DS 1CG 230V

## Xi 34W/a 0.6-0.85A 40V DS 1CB 230V

### Affordable and reliable LED Drivers

Philips Xitanium LED Point drivers are designed to operate with LED COB solutions used in built-in applications such as track light. Xitanium drivers have common features such as low ripple output current, adjustable output current by dip switch and 50,000 hours lifetime. They are specifically designed to ensure great EMI performance, high robustness and safe usage.

### Features

- Class I application
- Low Ripple less than 3%
- 1 Circuit 3 Wire track system
- 4 output currents by Dip switch
- 50,000 hours lifetime

### Benefits

- Great EMI performance for easy design-in
- Simplify track light luminaire design
- Compatible with most popular tracks
- Selectable output current enables flexibility
- Peace of mind with proven reliability

### Application

- Track lighting

August 2023

## Logistical data

| Specification item | Value |
|---|---|
| Product name | Xi 34W/a 0.6-0.85A 40V DS 1CW 230V |
| Logistic code 12NC | 9290 034 53880 |
| Pieces per box | 80 |

| Specification item | Value |
|---|---|
| Product name | Xi 34W/a 0.6-0.85A 40V DS 1CB 230V |
| Logistic code 12NC | 9290 034 54280 |
| Pieces per box | 80 |

| Specification item | Value |
|---|---|
| Product name | Xi 34W/a 0.6-0.85A 40V DS 1CG 230V |
| Logistic code 12NC | 9290 034 54680 |
| Pieces per box | 80 |

## 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 | 0.17 | A | @max output power@rated input voltage |
| Rated input power | 37.1 | W | @max output power@rated input voltage |
| Power factor | 0.96 | | @max output power@rated input voltage |
| Total harmonic distortion | 20 | % | @ rated output power @ rated input voltage |
| Efficiency | 90.0 | % | @max output power@rated input voltage |
| Input voltage AC range | 198…264 | $V_{ac}$ | operational range |
| Input frequency AC range | 47.5…63 | Hz | operational range |
| Isolation input to output | Reinforced (SELV) | | |

## Electrical output data

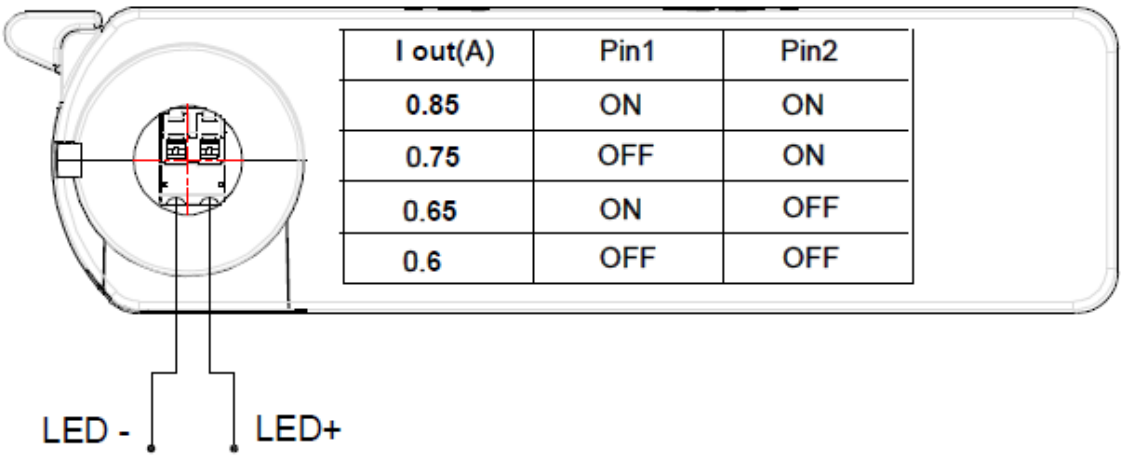
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Regulation method | Constant Current | | |
| Output voltage | 30…40 | $V_{dc}$ | |
| Output voltage max. | 60 | V | Maximum output voltage (rms) |
| Output current | 0.60 / 0.65 / 0.75 / 0.85 | A | |
| Output current tolerance ± | 8 | % | @full load |
| Output current ripple LF | ≤ 3 | % | Ripple = peak / average, < 3kHz |
| Output current ripple HF | ≤ 15 | % | |
| Output $P_{st}^{LM}$ | ≤ 0.1 | | In entire operating window |
| Output SVM | ≤ 0.1 | | In entire operating window |
| Output power | 18…34 | W | |

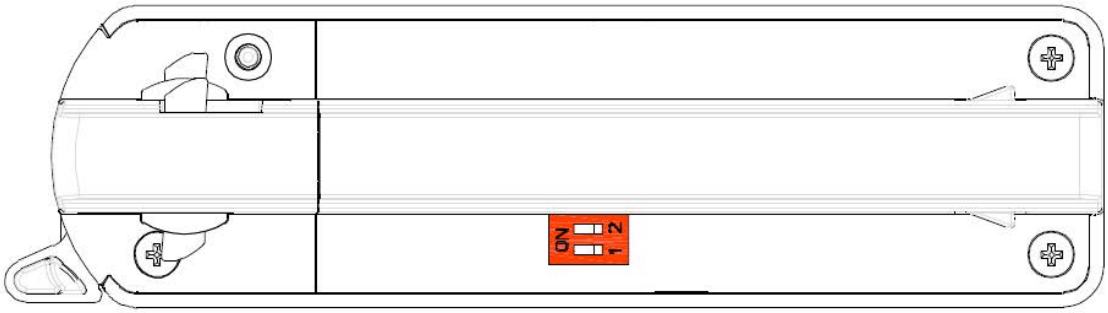
## Electrical data controls input

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

## Wiring and Connections

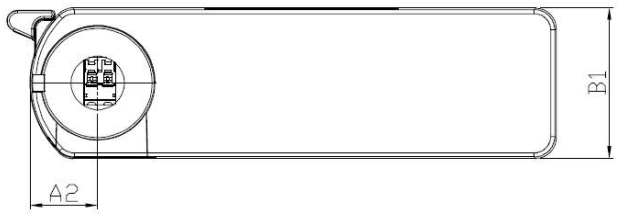
| Specification item | Value | Unit | Type |
|---|---|---|---|
| Output wire cross-section | 0.2...0.75 / 24...18 | $mm^2$ / AWG | Molex 104188, solid wire. Stranded wire supported from 0.45mm2 and up |
| Output wire strip length | 7.5...8.5 | mm | |
| Maximum cable length | 0.3 | m | Total length of wiring including LED module, one way |

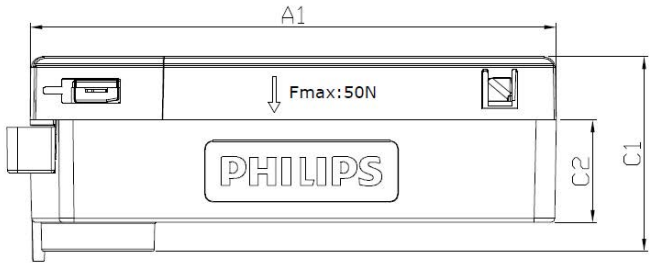


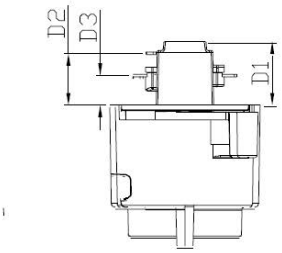



## Dimensions and weight

| Specification item | Value | Unit | Tolerance (mm) |
|---|---|---|---|
| Length (A1) | 128.9 | mm | |
| Mounting hole distance (A2) | 16.5 | mm | |
| Width (B1) | 36.9 | mm | |
| Height (C1) | 47.5 | mm | |
| Height (C2) | 25 | mm | |
| Mounting hole diameter (D1) | 15.5 | mm | |
| Mounting hole diameter (D2) | 12.6 | mm | |
| Weight | 99 | gram | |



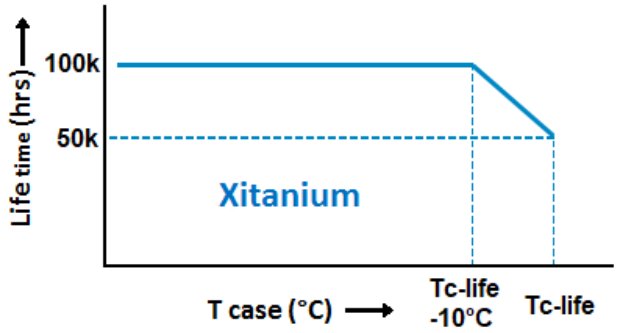



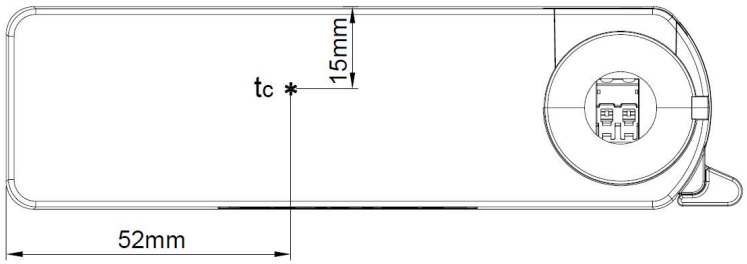

## Operational temperatures and humidity

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Ambient temperature | -20…+35 | °C | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max | 90 | °C | Maximum temperature measured at $T_{case}$-point |
| Tcase-life | 90 | °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

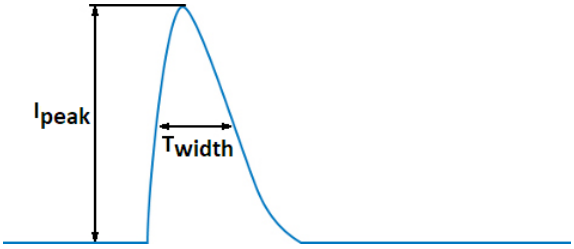
| Specification item | Available | Default setting | Condition |
|---|---|---|---|
| Set Adjustable Output Current (AOC) | DipSwitch | 850 mA | |
| LED Module Temperature Protection (MTP) | No | | |
| Driver Temperature Limit (DTL) | No | | |
| Constant Light Output (CLO) | No | | |
| Corridor Mode | No | | |
| DC emergency (DCemDim) | No | | |

## 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 | 24.5 | A | Input voltage 230V |
| Inrush peak width | 135 | µs | Input voltage 230 V, measured at 50% height |
| Drivers / MCB 16A type B | ≤ 32 | pcs | Indicative value at 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

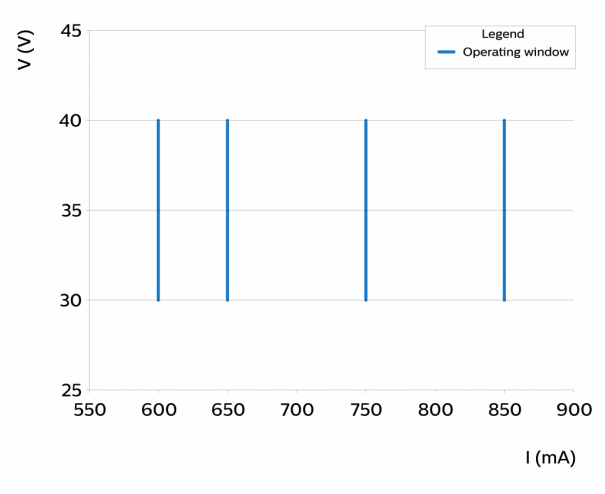
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Mains surge immunity (diff. mode) | 1 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 2 | kV | Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us |

## Application Info

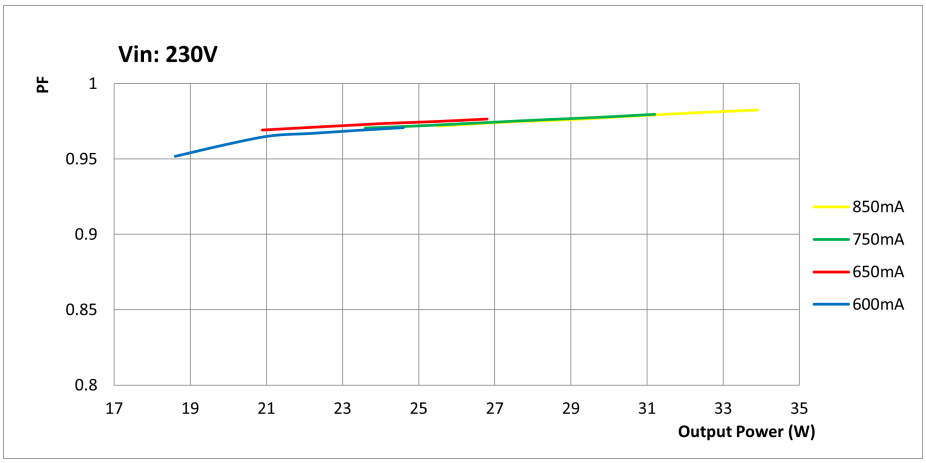
| Specification item | Value |
|---|---|
| Approval marks and Certifications | CB / CE / CQC / ENEC / TISI |
| Ingress Protection classification (IP) | 20 |
| Application | Indoor Point |
| Mounting Type | Track mounting |

## Graphs

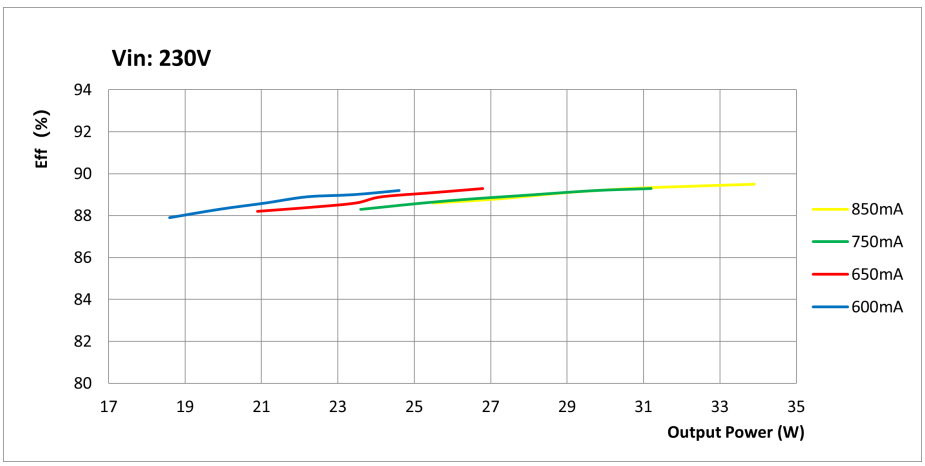
### Operating window



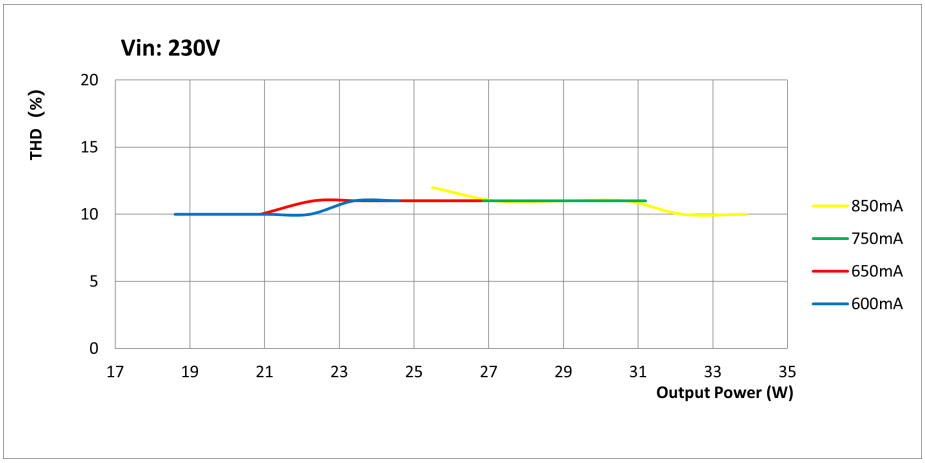

### Power factor versus output power




### Efficiency versus output power



## THD versus output power





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