

# PHILIPS

## Xitanium

### LED driver



## Datasheet

### Xitanium non-isolated Dipswitch

Xitanium 19W 200-350mA 54V DS 230V

9290 034 26006

Xitanium LED drivers with single current output offer industry leading performance and reliability at optimized cost. They are ideal for high volume applications while delivering to specific requirements. These drivers offer the same level of performance as Xitanium adjustable current linear drivers to ensure high quality of light, but with a specific current setting for optimized performance. Due to the low output current ripple, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects.

#### Benefits

- High quality of light
- High reliability
- Optimized performance at specific output current settings

#### Features

- Low output current tolerance
- Low output current ripple
- Flexible current setting (4 output currents – dipswitch)
- Suitable for Class I luminaires

#### Application

- Offices
- Retail: supermarkets, shopping malls

## 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 range | 50...60   | Hz              | Performance range                          |
| Rated input current         | 0.1       | A               | @ rated output power @ rated input voltage |
| Rated input power           | 22        | W               | @ rated output power @ rated input voltage |
| Minimum Power factor        | 0.95      |                 | @ rated output power @ rated input voltage |
| Total harmonic distortion   | 20        | %               | @ rated output power @ rated input voltage |
| Efficiency                  | 86        | %               | typical value @ 230V, full output power    |
| Input voltage AC range      | 198...264 | V <sub>ac</sub> | Operational range                          |
| Input frequency AC range    | 45...66   | Hz              | Operational range                          |
| Isolation input to output   | No        |                 |                                            |

## Electrical output data

| Specification item                   | Value                   | Unit            | Condition                                 |
|--------------------------------------|-------------------------|-----------------|-------------------------------------------|
| Regulation method                    | Constant Current        |                 |                                           |
| Output voltage                       | 30...54                 | V <sub>dc</sub> |                                           |
| Output voltage max.                  | 220                     | V               | Maximum output voltage (rms)              |
| Output current                       | 0.2 / 0.25 / 0.3 / 0.35 | A               | Select output current via the dipswitch   |
| Output current tolerance ±           | 8                       | %               | @full load                                |
| Output current ripple LF             | ≤ 4                     | %               | Ripple = peak / average, < 3kHz. Rd = 25Ω |
| Output current ripple HF             | ≤ 15                    | %               |                                           |
| Output P <sub>st</sub> <sup>LM</sup> | ≤ 1                     |                 | cfr. IEC TR 61547-1:2017                  |
| Output SVM                           | ≤ 0.4                   |                 | cfr. IEC TR 63518:2018                    |
| Output power                         | 6...19                  | W               |                                           |
| Minimum performance output power     | 6                       | W               | Power factor > 0.9 and THD < 20%          |
| Rated output power                   | 19                      | W               |                                           |

## Electrical data controls input

| Specification item | Value | Unit | Condition                                 |
|--------------------|-------|------|-------------------------------------------|
| Control method     | Fixed |      | Select output current via the dipswitches |

## Wiring and Connections

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

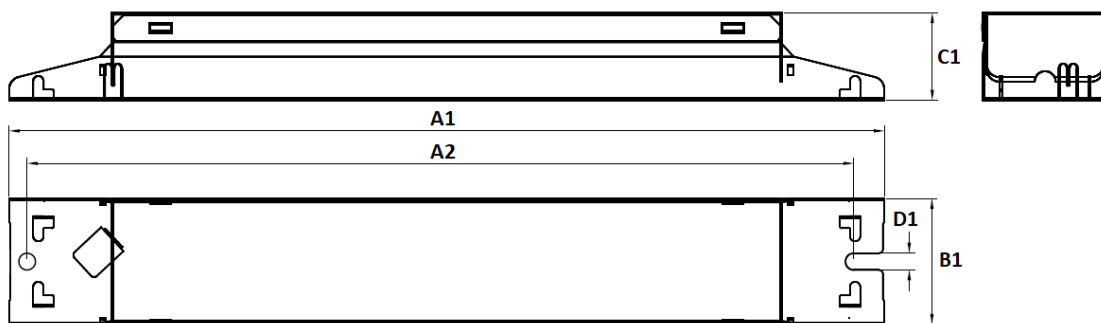


## Isolation

| Insulation per IEC61347-1 | Input | Output | Housing |
|---------------------------|-------|--------|---------|
| Input                     | -     | Non    | Basic   |
| Output                    | Non   | -      | Basic   |
| Housing                   | Basic | Basic  | -       |

## Dimensions and weight

| Specification item          | Value | Unit | Tolerance (mm) |
|-----------------------------|-------|------|----------------|
| Length (A1)                 | 210   | mm   |                |
| Mounting hole distance (A2) | 198.5 | mm   |                |
| Width (B1)                  | 30    | mm   |                |
| Height (C1)                 | 21    | mm   |                |
| Mounting hole diameter (D1) | 4.1   | mm   |                |
| Weight                      | 140   | gram |                |



## Logistical data

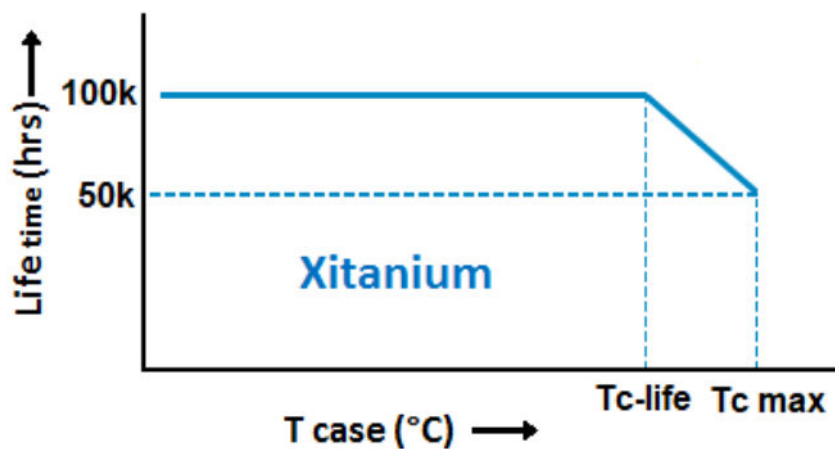
| Specification item | Value                              |
|--------------------|------------------------------------|
| Product name       | Xitanium 19W 200-350mA 54V DS 230V |
| EOC                | 871951448608900                    |
| Logistic code 12NC | 9290 034 26006                     |
| EAN1 (GTIN)        | 8719514486089                      |
| Pieces per box     | 20                                 |

## Operational temperatures and humidity

| Specification item          | Value     | Unit | Condition                                                                           |
|-----------------------------|-----------|------|-------------------------------------------------------------------------------------|
| Ambient temperature         | -20...+50 | °C   | Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded |
| T <sub>case-max</sub>       | 75        | °C   | Maximum temperature measured at T <sub>case-point</sub>                             |
| T <sub>case-life</sub>      | 65        | °C   | Measured at T <sub>case-point</sub>                                                 |
| 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    | 100,000 | 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

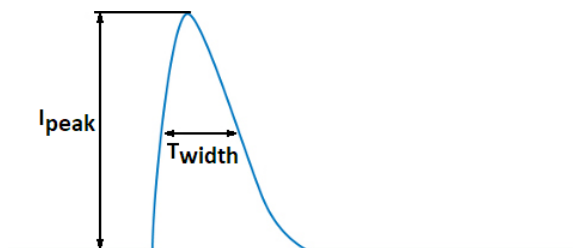
| Specification item                      | Available | Default setting | Condition                                                                             |
|-----------------------------------------|-----------|-----------------|---------------------------------------------------------------------------------------|
| Set Adjustable Output Current (AOC)     | DipSwitch | 350 mA          | Manual set the output current via the dipswitches, see wiring diagram for an overview |
| LED Module Temperature Protection (MTP) | 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           | 14    | A    | Input voltage 230V                          |
| Inrush peak width        | 120   | μs   | Input voltage 230 V, measured at 50% height |
| Drivers / MCB 16A type B | ≤ 76  | pcs  | Indicative value at 230V                    |



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

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

| Specification item                                  | Value | Unit   | Condition                                             |
|-----------------------------------------------------|-------|--------|-------------------------------------------------------|
| Typical Protective Conductor Current (ins. Class I) | 0.5   | mA rms | Acc. IEC60598-1. LED module contribution not included |

## Surge immunity

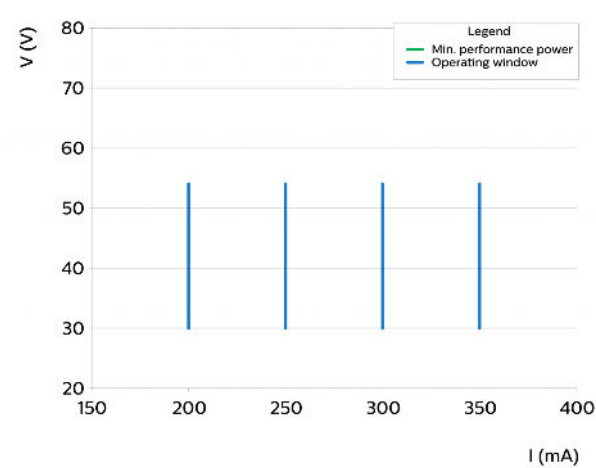
| Specification item                | Value | Unit | Condition                                   |
|-----------------------------------|-------|------|---------------------------------------------|
| Mains surge immunity (diff. mode) | 1     | kV   | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us  |
| Mains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

## Application Info

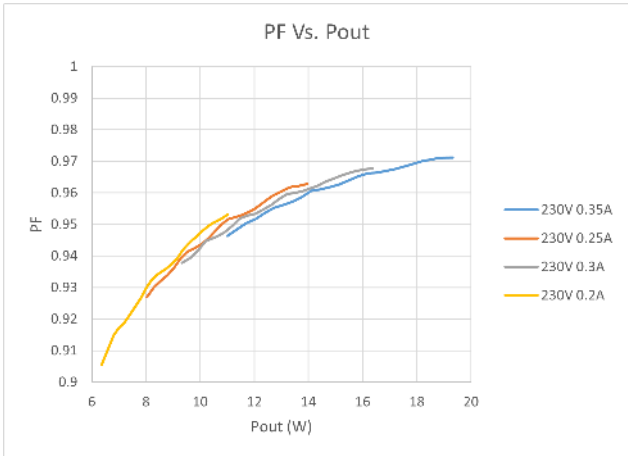
| Specification item                     | Value                                   |
|----------------------------------------|-----------------------------------------|
| Approval marks and Certifications      | CCC / CE / EAC / ENEC / RCM / UA / UKCA |
| Ingress Protection classification (IP) | 20                                      |
| Application                            | Indoor Linear                           |
| Mounting Type                          | Built-in                                |

Graphs

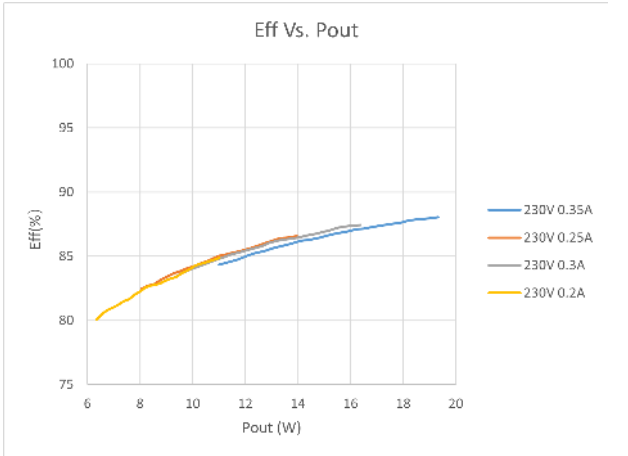
Operating window



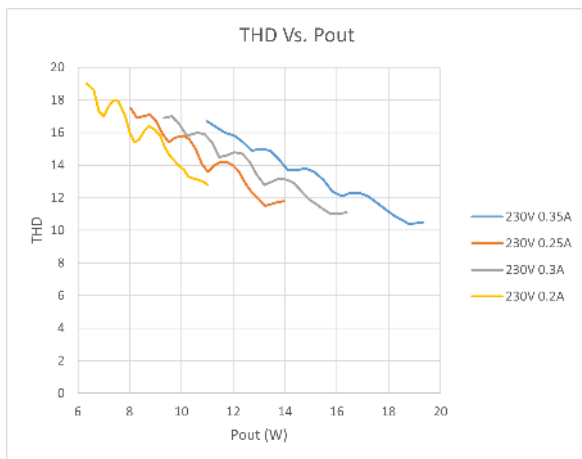
Power factor versus output power



Efficiency versus output power



## THD versus output power



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