

# Xitanium Spot / Downlight LED Drivers Single Current

Xitanium 32W/m 0.7A 46V SC 230V  
9290 021 05106



Single current LED drivers for enhanced lighting performance

Reliable and cost effective Xitanium single current drivers enable luminaires to deliver high quality light over an industry standard lifetime of 50,000 hours. Specifically designed with low ripple current to address luminaire flickering issues - making this optimal for camera, scanner, and barcode operation. These drivers provide assured reliability, safety, and long-term energy savings.

### Benefits

- Designed to operate solutions based on Chip On Board (COB) or mid-power LEDs
- Various power wattage Drivers that are related to the lumen packages/applications
- Independent-version housing design for stand-alone installations

### Application

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

### Features

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

Logistical data

| Specification item    | Value                                      |
|-----------------------|--------------------------------------------|
| Product name          | Xitanium 32W/m 0.7A 46V SC 230V            |
| EOC                   | 871869970223600                            |
| Logistic code 12NC    | 9290 021 05106                             |
| EAN1 (GTIN)           | 8718699702236                              |
| EAN3 (box)            | 8718699702243                              |
| Pieces per box        | 50                                         |
| Strain Relief 12NCccc | 929001461680 / For China use: 929001461880 |
| Weight                | 76 gram                                    |

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          | 50...60   | Hz              | Performance range                                                                    |
| Rated input current            | 0.16      | A               | @ rated output power @ rated input voltage                                           |
| Rated input power              | 37.0      | W               | @ rated output power @ rated input voltage                                           |
| Power factor performance range | ≥ 0.90 C  |                 | @ rated output power @ rated input voltage@ rated output power @ rated input voltage |
| Total harmonic distortion      | 20        | %               | @ rated output power @ rated input voltage                                           |
| Efficiency                     | 89.3      | %               | @ rated output power @ rated input voltage                                           |
| Input voltage AC               | 198...264 | V <sub>ac</sub> | Safety operational range                                                             |
| Input frequency AC             | 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                       | 31...46          | V <sub>dc</sub> | -10% operational tolerance on the minimum output voltage |
| Output voltage max.                  | 60               | V               | Maximum output voltage (rms)                             |
| Output current                       | 700              | mA              |                                                          |
| Output current tolerance ±           | 8                | %               | @full load                                               |
| Output current ripple LF             | ≤ 4              | %               | Ripple = peak / average, < 3kHz                          |
| Output P <sub>st</sub> <sup>LM</sup> | ≤ 0.3            |                 |                                                          |
| Output SVM                           | ≤ 0.3            |                 |                                                          |
| Output power                         | 21.7...32.2      | W               |                                                          |

Control interfaces

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

Wiring and Connections

| Specification item        | Value                | Unit                  | Type                                                 |
|---------------------------|----------------------|-----------------------|------------------------------------------------------|
| Input wire cross-section  | 0.75...1.5 / 18...16 | mm <sup>2</sup> / AWG | solid / stranded wire                                |
| Input wire strip length   | 8...9                | mm                    |                                                      |
| Input wire cross-section  | 0.5...1.5 / 20...16  | mm <sup>2</sup> / AWG | solid / stranded wire                                |
| Input wire strip length   | 8...9                | mm                    |                                                      |
| Output wire cross-section | 0.75...1.5 / 18...16 | mm <sup>2</sup> / AWG | solid / stranded wire                                |
| Output wire strip length  | 8...9                | mm                    |                                                      |
| Output wire cross-section | 0.5...1.5 / 20...16  | mm <sup>2</sup> / AWG | solid / stranded wire                                |
| Output wire strip length  | 8...9                | mm                    |                                                      |
| Maximum cable length      | 0.6                  | m                     | Total length of wiring including LED module, one way |

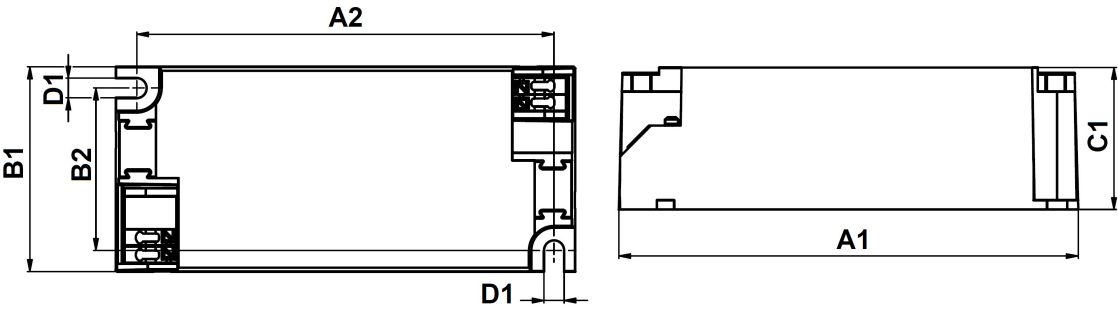


Isolation

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

Dimensions and weight

| Specification item          | Value | Unit | Tolerance (mm) |
|-----------------------------|-------|------|----------------|
| Length (A1)                 | 97.2  | mm   |                |
| Mounting hole distance (A2) | 88.5  | mm   |                |
| Width (B1)                  | 43    | mm   |                |
| Width (B2)                  | 34    | mm   |                |
| Height (C1)                 | 30    | mm   |                |
| Mounting hole diameter (D1) | 4.2   | mm   |                |
| Weight                      | 76    | gram |                |

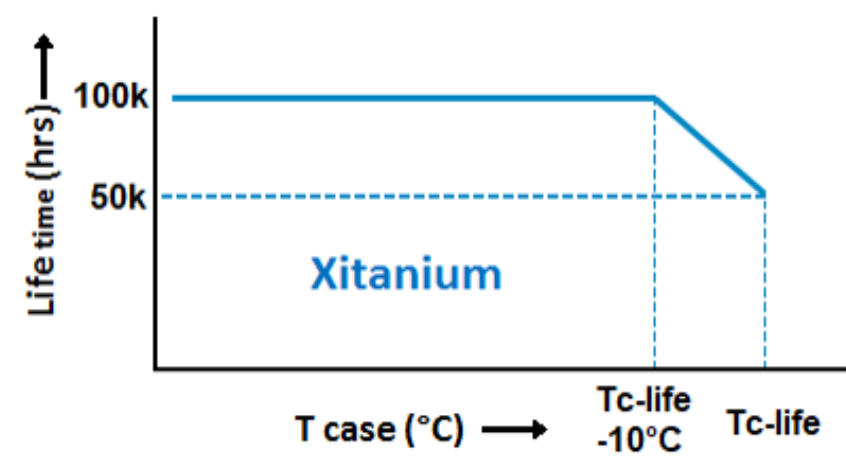


Operational temperatures and humidity

| Specification item          | Value     | Unit | Condition                                                               |
|-----------------------------|-----------|------|-------------------------------------------------------------------------|
| Ambient temperature         | -20...+50 | °C   | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max                   | 75        | °C   | Maximum temperature measured at Tcase-point                             |
| Tcase-life                  | 75        | °C   | Measured at Tcase-point                                                 |
| 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       | 50,000 | hours | Measured temperature at Tcase-point is Tcase-life.<br>Maximum failures = 10% |
| Driver lifetime Tcmax | 0      | hours | Measured temperature at Tcase-point is Tcase-life.<br>Maximum failures = 10% |



Maximum failures = 10%

| Temperature [°C] | Lifetime | Unit | Condition                      |
|------------------|----------|------|--------------------------------|
| 75               | 50000    | hr   | Temperature measured @Tc point |
| 70               | >50000   | hr   |                                |
| 65               | >50000   | hr   |                                |

Storage temperature and humidity

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

Programmable features

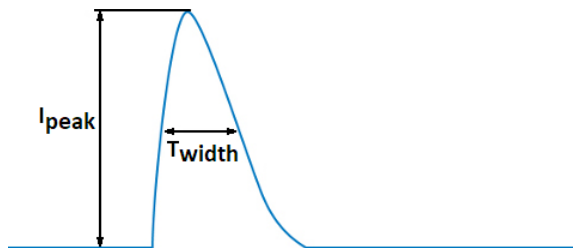
| Specification item                  | Available | Default setting | Condition            |
|-------------------------------------|-----------|-----------------|----------------------|
| Set Adjustable Output Current (AOC) | No        | 700 mA          | Fixed output current |
| Adjustable Light Output (ALO)       | No        |                 |                      |
| DC emergency (DCemDim)              | No        |                 |                      |

## Non-programmable 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 and II | per IEC60598         |

## Inrush current

| Specification item                | Value | Unit | Condition                                  |
|-----------------------------------|-------|------|--------------------------------------------|
| Inrush current                    | 19.2  | A    | Input voltage 230V                         |
| Inrush peak width                 | 140   | µs   | Input voltage 230V, measured at 50% height |
| Drivers / MCB 16A type B @230V AC | ≤ 48  | pcs  | Input voltage 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 piece) 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

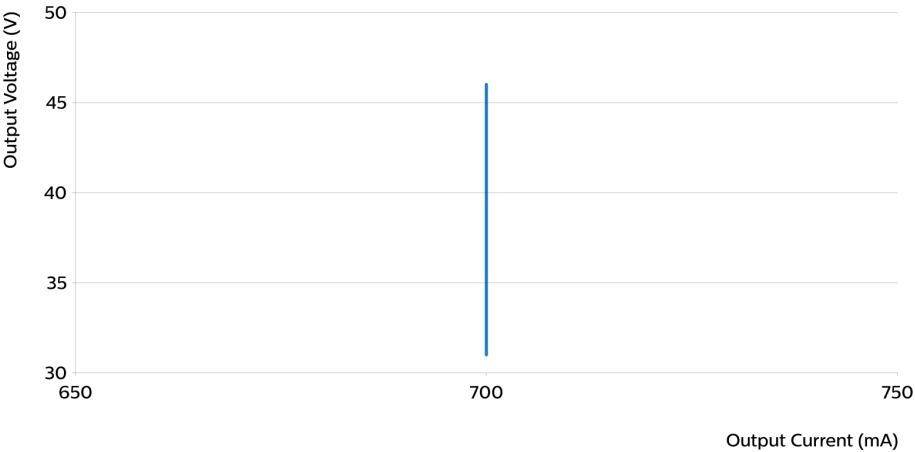
| Specification item                | Value | Unit | Condition                                   |
|-----------------------------------|-------|------|---------------------------------------------|
| Mains surge immunity (diff. mode) | 1     | kV   | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us  |
| Mains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

Application Info (Approbation)

| Specification item                     | Value                                                 |
|----------------------------------------|-------------------------------------------------------|
| Approval marks and Certifications      | CCC / CE / EAC / ENEC / RCM / SELV / TISI / UA / UKCA |
| Ingress Protection classification (IP) | 20                                                    |
| Noise and hum dB(A)                    | 20                                                    |
| Application                            | Indoor Point                                          |
| Mounting Type                          | Built-in / Independent                                |

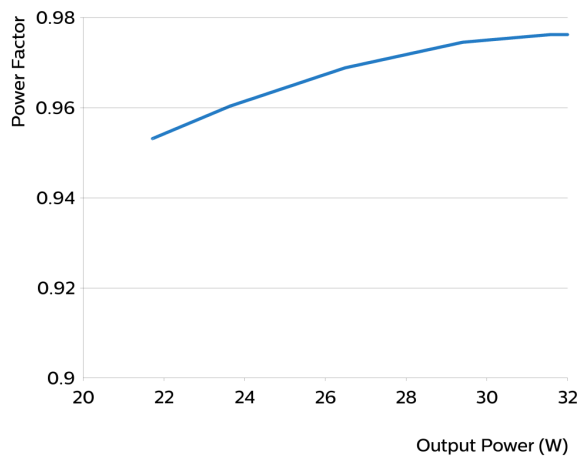
Graphs

Operating window

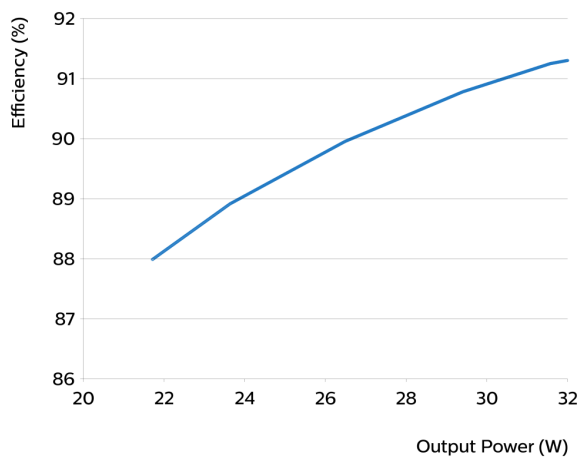


| Type                            | Output current (mA) | Min. output voltage (V) | Max. output voltage (V) | Max. output power (W) |
|---------------------------------|---------------------|-------------------------|-------------------------|-----------------------|
| Xitanium 32W/m 0.7A 46V SC 230V | 700                 | 31                      | 46                      | 32.2                  |
| Xitanium 32W/m 0.7A 46V SC 230V | 700                 | 31                      | 46                      | 32.2                  |

## Power factor versus output power



## Efficiency versus output power



## THD versus output power

