

## Datasheet

# Xitanium non-iso Fixed Output with SimpleSet

Xitanium 90W 0.25-0.7A 220V S21 230V  
9290 029 34606



### **Xitanium non-isolated Fixed Output drivers stand on three pillars: quality of light, reliability and flexibility**

By using Xitanium LED drivers in your luminaires, you can be sure to offer your customers high quality of light without visual flicker and stroboscopic effects. The reliability of your complete lighting system is enhanced as our drivers offer specific features that protect the connected LED module, including reduced ripple current. Finally, application-oriented operating windows offer the flexibility required to provide the stable lumen output and light quality levels that lighting specifiers and architects demand.

### **Benefits**

- High quality of light
- High reliability
- Future-proof flexibility
- Easy design-in due to standard housing dimensions and excellent thermal performance

### **Application**

- Offices
- Industry
- Retail: supermarkets, shopping malls

### **Features**

- High efficiency
- SimpleSet configuration interface (NFC)
- Low output ripple current

Logistical data

| Specification item | Value                                |
|--------------------|--------------------------------------|
| Product name       | Xitanium 90W 0.25-0.7A 220V S21 230V |
| EOC                | 871951447414700                      |
| Logistic code 12NC | 9290 029 34606                       |
| EAN1 (GTIN)        | 8719514474147                        |
| EAN3 (box)         | 8719514474154                        |
| Pieces per box     | 24                                   |
| Weight             | 205 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            | 0.45      | A               | @ full output power @ rated input voltage                                            |
| Rated input power              | 97.0      | 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                     | 93.0      | %               | @ full output power @ rated input voltage @ Max. U <sub>out</sub>                    |
| Rated input voltage DC         | 186...250 | V <sub>dc</sub> | Performance range                                                                    |
| Input voltage AC               | 198...264 | V <sub>ac</sub> | Operational range                                                                    |
| Input frequency AC             | 45...66   | Hz              | Operational range                                                                    |
| Input voltage DC               | 168...275 | V <sub>dc</sub> | Operational range                                                                    |
| Isolation input to output      | No        |                 |                                                                                      |

Electrical output data

| Specification item                   | Value            | Unit            | Condition                       |
|--------------------------------------|------------------|-----------------|---------------------------------|
| Regulation method                    | Constant Current |                 |                                 |
| Output voltage                       | 50...220         | V <sub>dc</sub> |                                 |
| Output voltage max.                  | 250              | V               | Maximum output voltage (rms)    |
| Output current                       | 250...700        | mA              |                                 |
| Output current tolerance ±           | 5                | %               | @full load                      |
| Output current ripple LF             | ≤ 4              | %               | Ripple = peak / average, < 3kHz |
| Output current ripple HF             | ≤ 4              | %               |                                 |
| Output P <sub>st</sub> <sup>LM</sup> | ≤ 1.0            |                 | cfr. IEC TR 61547-1:2017        |
| Output SVM                           | ≤ 0.6            |                 | cfr. IEC TR 63518:2018          |
| Output power                         | 25.0...90.0      | W               |                                 |

Control interfaces

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

Wiring and Connections

| Specification item        | Value               | Unit                  | Type                                                 |
|---------------------------|---------------------|-----------------------|------------------------------------------------------|
| Input wire cross-section  | 0.5...1.5 / 20...16 | mm <sup>2</sup> / AWG | WAGO744, solid wire                                  |
| Input wire strip length   | 8...9               | mm                    |                                                      |
| Output wire cross-section | 0.5...1.5 / 20...16 | mm <sup>2</sup> / AWG | WAGO744, solid wire                                  |
| Output wire strip length  | 8...9               | mm                    |                                                      |
| Maximum cable length      | 2                   | m                     | Total length of wiring including LED module, one way |

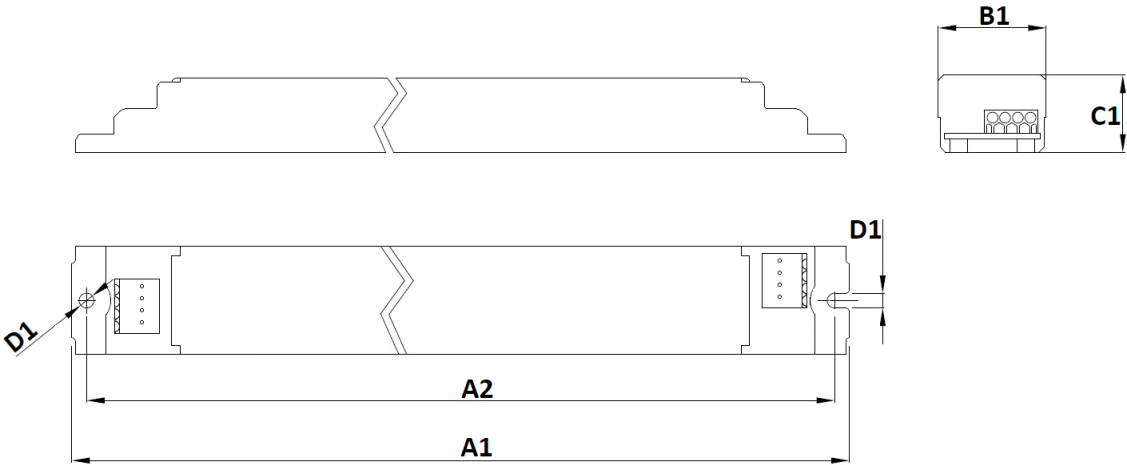


Isolation

| Insulation per IEC61347-1 | Input | Output | Housing |
|---------------------------|-------|--------|---------|
| Input                     | -     | No     | Basic   |
| Output                    | No    | -      | Basic   |
| Housing                   | Basic | Basic  | -       |

Dimensions and weight

| Specification item          | Value | Unit | Tolerance (mm) |
|-----------------------------|-------|------|----------------|
| Length (A1)                 | 280   | mm   |                |
| Mounting hole distance (A2) | 270   | mm   |                |
| Width (B1)                  | 30    | mm   |                |
| Height (C1)                 | 21    | mm   |                |
| Mounting hole diameter (D1) | 4.1   | mm   |                |
| Weight                      | 205   | gram |                |

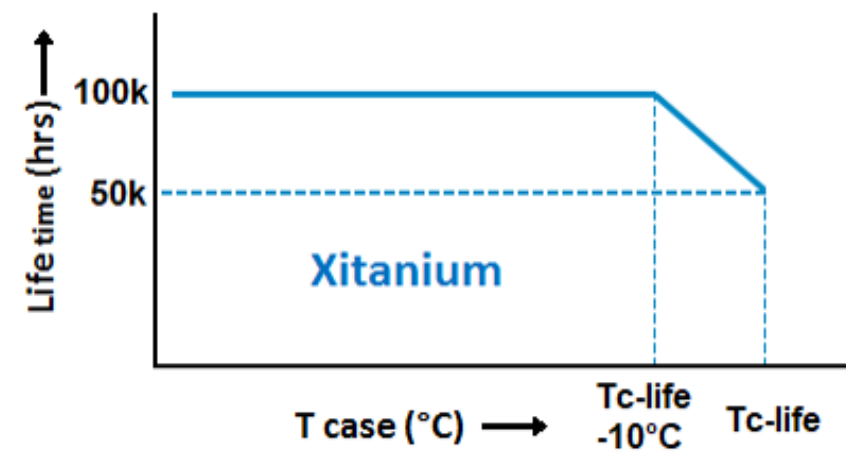


Operational temperatures and humidity

| Specification item          | Value     | Unit | Condition                                                               |
|-----------------------------|-----------|------|-------------------------------------------------------------------------|
| Ambient temperature         | -25...+50 | °C   | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max                   | 75        | °C   | lifetime 50khrs;                                                        |
| Tcase-life                  | 65        | °C   | Measured at T <sub>case</sub> -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        | 100,000   | 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% |
| Mains switching cycles | > 100,000 | switches | See Design-in guide for detailed explanation                                 |



Maximum failures = 10%

| Temperature [°C] | Lifetime | Unit | Condition                      |
|------------------|----------|------|--------------------------------|
| 75               | 50000    | hr   | Temperature measured @Tc point |
| 70               | 71000    | hr   |                                |
| 65               | 100000   | hr   |                                |
| 60               | >100000  | hr   |                                |
| 55               | >100000  | hr   |                                |

Storage temperature and humidity

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

Programmable features

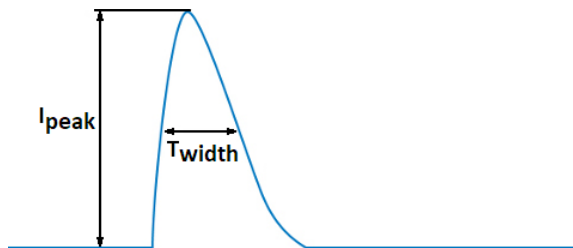
| Specification item                  | Available | Default setting | Condition                                      |
|-------------------------------------|-----------|-----------------|------------------------------------------------|
| Set Adjustable Output Current (AOC) | SimpleSet | 250 mA          | Light output is 100% when operated at DC mains |
| Adjustable Light Output (ALO)       | Yes       | OFF             |                                                |
| DC emergency (DCemDim)              | No        |                 |                                                |
| OEM Write Protection (OWP)          | Yes       | OFF             |                                                |

## 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     | per IEC60598         |

## Inrush current

| Specification item                | Value | Unit | Condition                                  |
|-----------------------------------|-------|------|--------------------------------------------|
| Inrush current                    | 18.5  | A    | Input voltage 230V                         |
| Inrush peak width                 | 223   | µs   | Input voltage 230V, measured at 50% height |
| Drivers / MCB 16A type B @230V AC | ≤ 19  | 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 Protective Conductor Current (ins. Class I) | 0.4   | mA rms | Acc. IEC60598-1. LED module contribution not included |

## Surge immunity

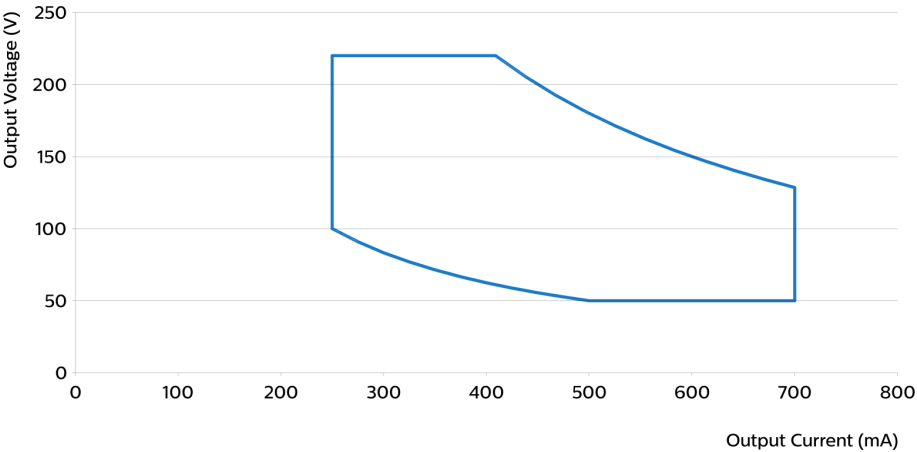
| Specification item                | Value | Unit | Condition                                   |
|-----------------------------------|-------|------|---------------------------------------------|
| Mains surge immunity (diff. mode) | 1     | kV   | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us  |
| Mains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

Application Info (Approbation)

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

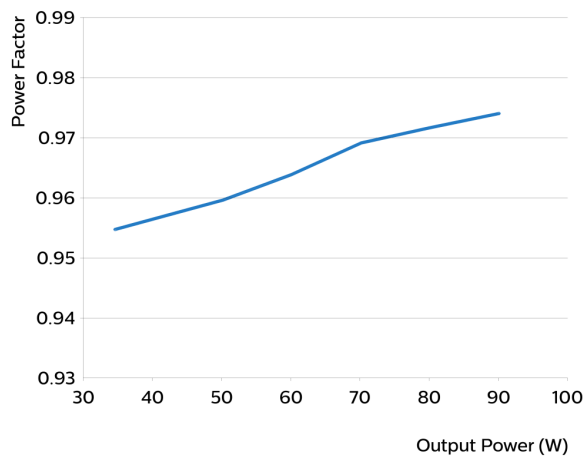
Graphs

Operating window

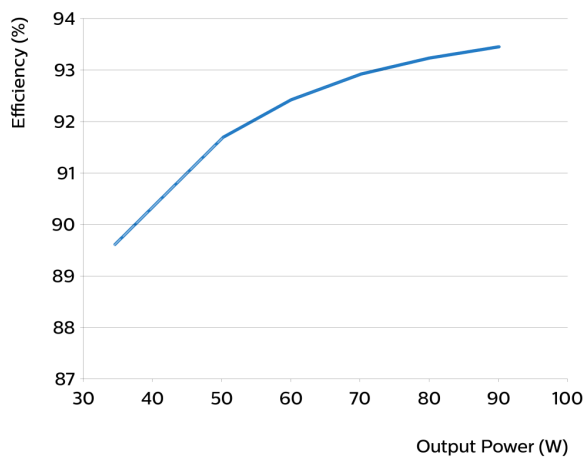


| Type                                 | Output current (mA) | Min. output voltage (V) | Max. output voltage (V) | Max. output power (W) |
|--------------------------------------|---------------------|-------------------------|-------------------------|-----------------------|
| Xitanium 90W 0.25-0.7A 220V S21 230V | 250                 | 100                     | 220                     | 55                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 300                 | 83                      | 220                     | 66                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 350                 | 71                      | 220                     | 77                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 400                 | 62                      | 220                     | 88                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 450                 | 55                      | 200                     | 90                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 500                 | 50                      | 180                     | 90                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 550                 | 50                      | 163                     | 90                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 600                 | 50                      | 150                     | 90                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 650                 | 50                      | 138                     | 90                    |
| Xitanium 90W 0.25-0.7A 220V S21 230V | 700                 | 50                      | 128                     | 90                    |

## Power factor versus output power



## Efficiency versus output power



## THD versus output power

