# Smart Bright 2m-HB-G5-200W LUMILEDS

## DESCRIPTION:

Our LED high bay unit provides high light output of 160/170 Lumens per Watt and energy savings through its energy efficiency.
Designed and built within IP65 protection rating, the unit contains high quality components and heavy duty die cast aluminum housing electro statically painting anti-corrosion with toughened glass and flicker driver

## FEATURES

- **Increased Light Output**
- **Highly Energy Efficient**
- **High Quality Drivers**
- **Designed to Prevent Dust Build Up**

## APPLICATIONS

**Warehouses**

**Factories**

**Stadium**

**Villas**

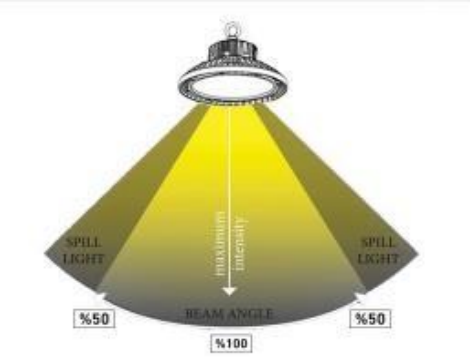
**High Celling**

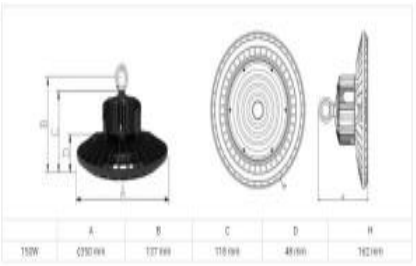
**WARRANTY:** **5 Years**

2M H.B

| | |
|---|---|
| Order Producate name | 2m-HB-G5-200W |
| Country of Manufacture | Egypt |
| Company Name | 2M For Lighting |
| Driver | Philips |
| Chip | Philips |
| Input power | 100-265 V AC |
| Power Factor (PF) | >97 |
| Surge Protection | 4 KV |
| Power | 200 W |
| Power Consumption tolerance | +/- 10% |
| Rated led luminaire luminous efficiency (Im\w) | 160/170 L/W |
| Rated luminous flux | 32000 LM |
| Luminous flux tolerance | +/- 10% |
| Beam angel | 120 |
| IP Rating | IP 65 |
| Rated median useful life (h) and the associated Rated lumen maintenance factor(x) | 50000h |
| Life expectancy | L 80 |
| Rated correlated color temperature (CCT) | 6500K |
| Rated color rendering index (CRI) | >85% |
| Rated Operating temperature for a luminaire (°c) | -40 to 85 •c |

**Beam Angel= 120**






PHILIPS

Xitanium

LED driver


Datasheet

# Xitanium High Bay LED Drivers GL Independent

## Xi 200W 0.66-1.10A 1-10V GL AUX RI132

## 9290 028 25480

**LED-based light sources are an excellent solution for highbay industrial applications.**

They are long-lasting and require low maintenance. However, to get the best out of the LEDs, these light sources require highly reliable and efficient LED Drivers. Philips Xitanium Dimmable (1-10V) LED Outdoor Drivers are specifically designed to deliver reliable performance and protection while meeting the strict approbation and application requirements.

### Benefits

- Able to reliably operate anywhere around the world
- Reliable and robust design, capable of withstanding the harsh industrial operating conditions
- Wide flexibility by adjusting light output and output current
- Option to power a sensor or control via AUX power supply
- Extremely long lifetime, fitting with high bay industrial applications
- Peace of mind. Backed by a 5-year warranty from a company you can trust

### Features

- 100-277V (Global) versions
- Independent/IP65 rated
- Adjustable output current
- Dimmable through 1-10V interface
- Auxiliary Power Supply (12V, 200mA)
- High ambient temperature rating
- Approbations: CE, ENEC, CB, CCC, UL
- 50,000 hours lifetime

### Application

- Highbay industrial lighting
- Warehouse lighting
- Big-box retail store lighting

## Electrical input data

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Rated input voltage range | 100…277 | $V_{ac}$ | Performance range |
| Rated input voltage | 230 | $V_{ac}$ | |
| Rated input frequency range | 50…60 | Hz | Performance range |
| Rated input current | 0.91 | A | @ rated output power @ rated input voltage |
| Rated input power | 209 | W | @ rated output power @ rated input voltage |
| Power factor | 0.95 | | @ rated output power @ rated input voltage |
| Total harmonic distortion | 10 | % | @ rated output power @ rated input voltage |
| Efficiency | 96 | % | @ rated output power @ rated input voltage @ max. Uout |
| Input voltage AC range | 85…305 | $V_{ac}$ | Operational range |
| Input frequency AC range | 47.5…63 | Hz | Operational range |
| Standby Power | 0.45 | W | |

## Electrical output data

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Regulation method | Constant Current | | |
| Output voltage | 160…260 | $V_{dc}$ | |
| Output voltage max. | 300 | V | Maximum output voltage (rms) |
| Output current | 0.66…1.1 | A | |
| Output current min dimming | 66 | mA | |
| Output current tolerance | ± 5 | % | |
| Output current ripple LF | ≤ 5 | % | Ripple = peak / average, < 3kHz |
| Output current ripple HF | ≤ 5 | % | |
| Output $P_{st}^{LM}$ | ≤ 0.13 | | In entire operating window |
| Output SVM | ≤ 0.07 | | In entire operating window |
| Output power | 10.6…200 | W | |

## Electrical data controls input

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Control method | 1-10V | | Output current amplitude dimming, 1-10V acc. IEC60929 |
| Dimming range | 10…100 | % | 1-9V |
| Isolation controls input to output | Reinforced | | acc. IEC61347-1 |

## Wiring and Connections

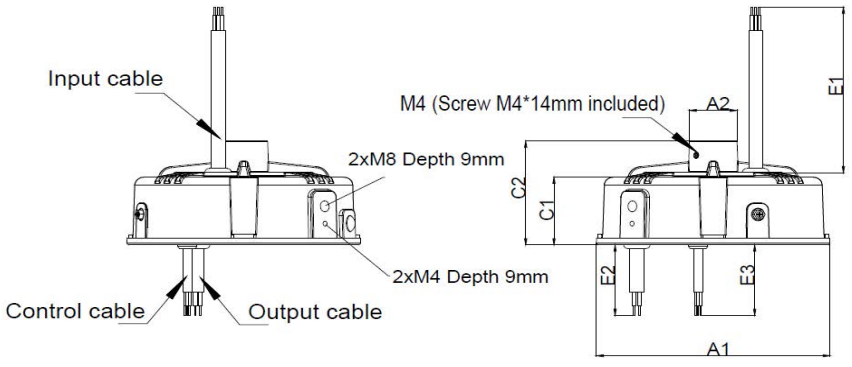
| Specification item | Value | Unit | Type |
|---|---|---|---|
| Input wire cross-section | 1.04 / 17 | $mm^2$ / AWG | 3-wire cable, AWG17, L:Brown, N:Blue, GND:Yellow/Green |
| Output wire cross-section | 1.04 / 17 | $mm^2$ / AWG | 2-wire cable, AWG17, LED+:Brown, LED-:Blue |
| Control wire cross-section | 0.33 / 22 | $mm^2$ / AWG | 3-wire cable, AWG22, 12V:B/W, Dim+:Purple, Dim-:Gray |
| Maximum cable length | 2 | m | Total length of wiring including LED module, one way |

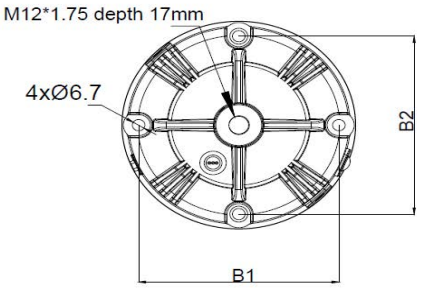
## Insulation

| Insulation per IEC61347-1 | Mains | Output | Dim & AUX | Ground |
|---|---|---|---|---|
| **Mains** | | Non | Reinforced | Basic |
| **Output** | Non | | Reinforced | Basic |
| **Dim & AUX** | Reinforced | Reinforced | | Basic |
| **Ground** | Basic | Basic | Basic | |

## Dimensions and weight

| Specification item | Value | Unit | Tolerance (mm) |
|---|---|---|---|
| Length (A1) | 132 | mm | |
| Mounting hole distance (A2) | 27 | mm | |
| Width (B1) | 113 | mm | |
| Width (B2) | 113 | mm | |
| Height (C1) | 43 | mm | |
| Height (C2) | 66 | mm | |
| Input cable length (E1) | 1500 | mm | |
| Output cable length (E2) | 300 | mm | |
| Control cable length (E3) | 300 | mm | |
| Weight | 1130 | gram | |



## Logistical data

| Specification item | Value |
|---|---|
| Product name | Xi 200W 0.66-1.10A 1-10V GL AUX RI132 |
| Logistic code 12NC | 9290 028 25480 |
| Pieces per box | 10 |

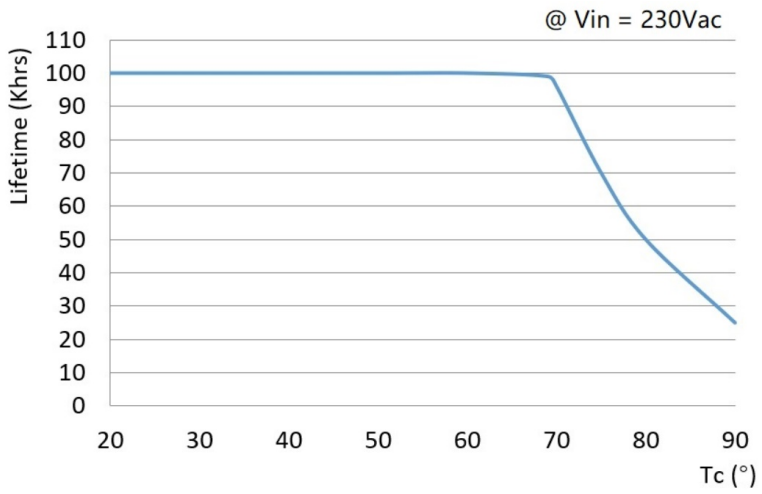
## Operational temperatures and humidity

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Ambient temperature* | -40…+60 | °C | Higher ambient temperature allowed as long as Tcase-max is not exceeded |
| Tcase-max | 80 | °C | Maximum temperature measured at $T_{case}$-point |
| Tcase-life | 70 | °C | Measured at $T_{case}$-point |
| Maximum housing temperature | 110 | °C | In case of a failure, inherent by design |
| Relative humidity | 10…90 | % | Non-condensing |

* Note: Ta = 55°C, Tc max = 75°C, Tc life = 65°C @Vin<120Vac;
Ta = 60°C, Tc max = 80°C, Tc life = 70°C @Vin: 120…277Vac

## Lifetime

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Driver lifetime | 50,000 | hours | Measured temperature at Tcase-point is Tcase-max. Maximum failures = 10% |




## Storage temperature and humidity

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Ambient temperature | -40…+85 | °C | |
| Relative humidity | 5…95 | % | Non-condensing |

## Programmable features

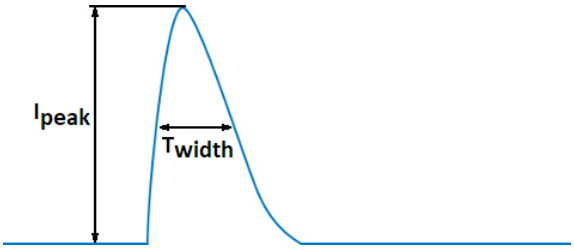
| Specification item | Available | Default setting | Condition |
|---|---|---|---|
| Set Adjustable Output Current (AOC) | Manual | 769 mA | |

## 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 |
| Overtemperature protection | Yes | | Automatic recovering |
| Overheating protection | Yes | | Automatic recovering |
| Auxiliary Power Supply (Vaux) | Yes | | 12Vdc, 200mA |

## Inrush current

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Inrush current $I_{peak}$ | 56 | A | Input voltage 230V |
| Inrush current $T_{width}$ | 326 | µs | Input voltage 230V, measured at 50% $I_{peak}$ |
| Drivers / MCB 16A type B | ≤ 5 | pcs | Indicative value |




| MCB | Rating | Relative number of LED drivers |
|---|---|---|
| B | 4A | 25% |
| B | 6A | 40% |
| B | 10A | 63% |
| B | 13A | 81% |
| B | 16A | 100% (stated in datasheet) |
| B | 20A | 125% |
| B | 25A | 156% |
| B | 32A | 200% |
| B | 40A | 250% |
| C | 4A | 42% |
| C | 6A | 63% |
| C | 10A | 104% |
| C | 13A | 135% |
| C | 16A | 170% |
| C | 20A | 208% |
| C | 25A | 260% |
| C | 32A | 340% |
| C | 40A | 415% |

## Driver touch current / protective conductor current

| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Typical Protective Conductor Current (ins. Class I) | 2 | mA rms | Acc. IEC60598-1. LED module contribution not included |
| Leakage current of dimming terminals | 0.010 | mA rms | UL 8750 |

## Surge immunity

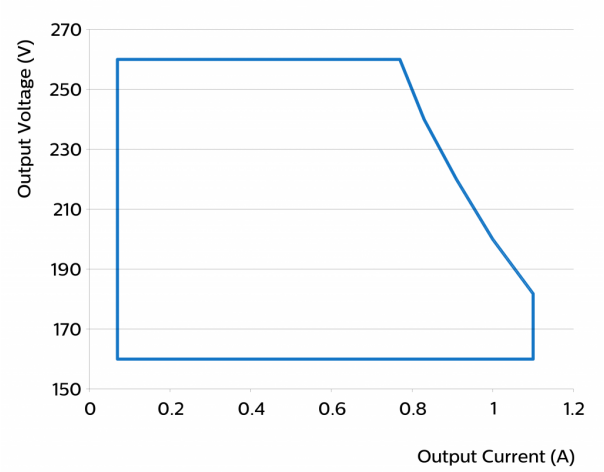
| Specification item | Value | Unit | Condition |
|---|---|---|---|
| Mains surge immunity (diff. mode) | 6 | kV | Acc. IEC61000-4-5. 2 Ohm, 1.2/50us, 8/20us |
| Mains surge immunity (comm. mode) | 6 | kV | Acc. IEC61000-4-5. 12 Ohm, 1.2/50us, 8/20us |

## Application Info

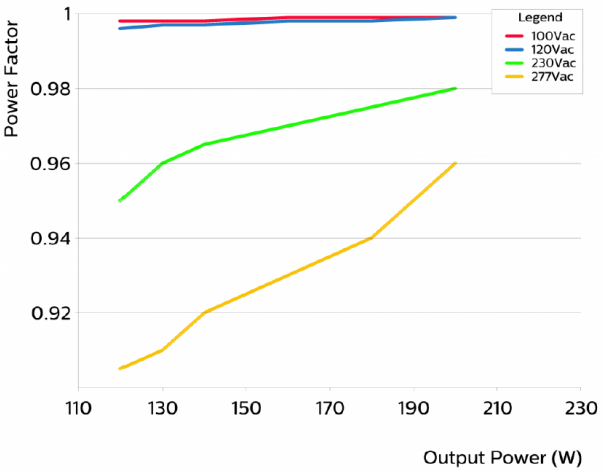
| Specification item | Value |
|---|---|
| Approval marks | CB / CCC / CE / ENEC / RCM / FCC / UL Recognized US & Can |
| Ingress Protection classification (IP) | 65 |

## Graphs

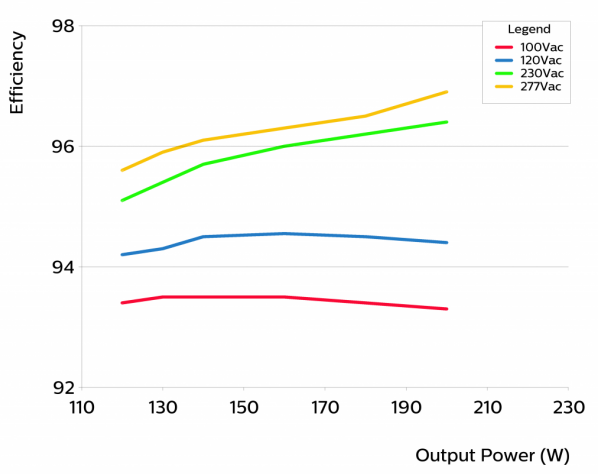
### Operating window



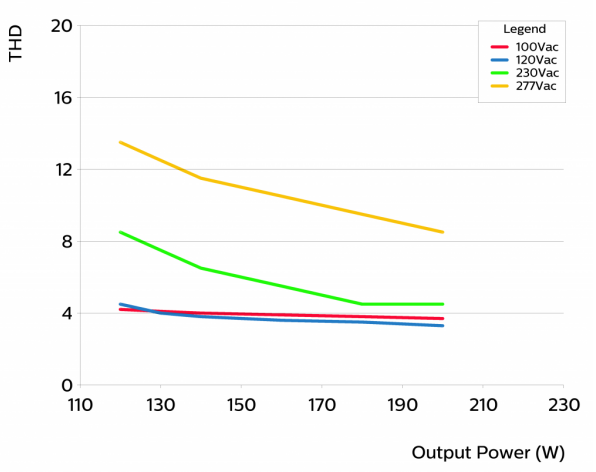

### Power factor versus output power



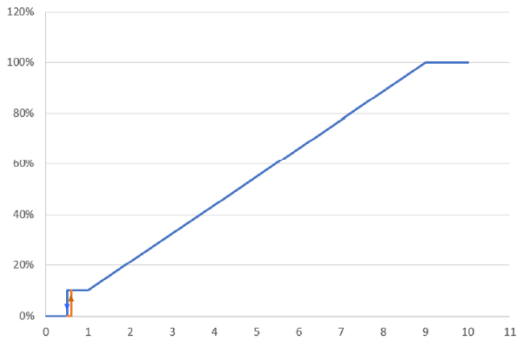
## Efficiency versus output power




## THD versus output power




## $I_{out}$ as function of 1-10V interface





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