# BriLux™ M Series

***"Finally, the BriLux™ Master series is a family of high power LED based, short base, E27 lamp that is all right. Right looks, right design, right form factor, right performance, and right price!"***

**BriLux™ M** series compact lamps are designed to fit into standard Edison fixtures and sockets, and project a 35° well-defined spot light. It is well suited for tracks, rails, cables and pendants in interior architectural, retail, exhibit, display and residential applications.

The lamp features standard Edison screw based connectors and sleek aluminum housing with black, polished or frosted finish. The **BriLux™ M** series is available in 1W, and 3W power rating. They are also available in three distinct white Kelvin temperatures: 3000K, 3500K and 6500K. Other colors are also available.

The **M** series utilizes the Brilliance Technologies' innovative heat management technology specifically developed for the high power (up to 3W power LED) solid state lighting devices. It uniquely allows heat to dissipate properly; making the product thermally stable for long hours of operation and last much longer than conventional light bulbs.

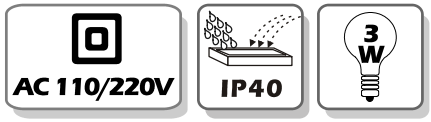
**BriLux™ M** series E27 is equipped with optical grade polycarbonate lens that allows highest light transmission at 35° beam angle.

## Features

- **Light source: One 1W or 3W power LED**
- **Source life: More than 40,000 hours**
- **Low heat, no UV or IR light radiation**
- **Full range of colors**
- **Homogeneous and well defined illumination**
- **Optimized heat sink with the right looks and sleek design**
- **3.5W version can achieve directional light output equal to 15W halogen lamp yet consume 80% less power**
- **Safety Standard: CE**
- **Works with worldwide electrical systems (100~240V AC)**

## Typical Applications

- **Landscape Accent/Spot lighting**
- **Architectural Lighting**
- **Display Case Accent**
- **Artwork Lighting**
- **Amusement Park Accent**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## PRODUCT SPECIFICATIONS

| | |
|---|---|
| **LIGHT SOURCE** | 1X1W or 1X3W power LED |
| **OPTICS** | Optical grade PC collimator |
| **LENS DIAMETER** | 34 mm |
| **BEAM ANGLE** | 35° (Wide Spot) |
| **MIN BEAM DISTANCE** | 15cm (6 inches) |
| **RENDERING INDEX (Ra)** | > 80 (for white color) |
| **TOTAL LENGTH** | 58 mm (including screw base) |
| **WEIGHT** | 54 g (1W) / 54g (3W) |
| **HOUSING** | Molded aluminum with frosted silver finish, 5 cm (2") diameter |
| **BASE** | E27 short screw base |

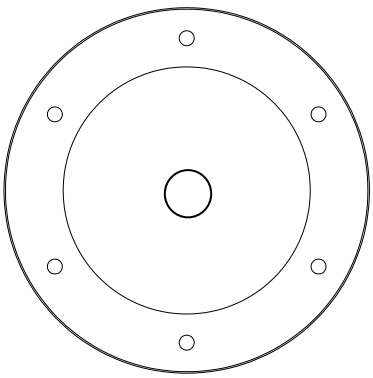
## ENVIRONMENTAL SPECIFICATIONS

| | |
|---|---|
| **TEMPERATURE RANGE** | Ambient: -20°C to 40°C; Surface of Lamp: 40°C to 50°C |
| **HUMIDITY RANGE** | 0 to 95% non-condensing humidity |

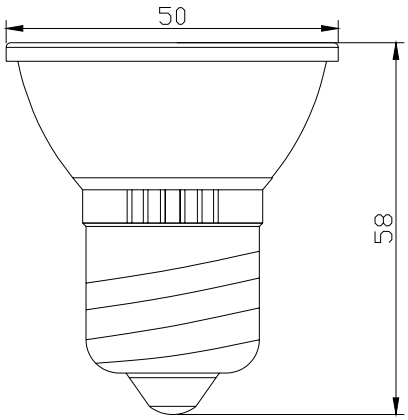
## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| **VOLTAGE REQUIREMENT** | 100~240 V AC |
| **POWER CONSUMPTION** | 2W (for 1W model); 3.5W (for 3W model) |

## PRODUCT DIMENSIONS (mm)



Front View




Short base side view

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## PRODUCT ORDERING CODE

**BTX-MX X-XX**

### Power Code

| |
|---|
| **1** = 1 Watt |
| **3** = 3 Watt |

### Beam Shape

| |
|---|
| **S** = Spot |

### Color Code

| Code | Color | WLD/CCT |
|---|---|---|
| **W** | White | 5000K~7000K |
| **V** | Warm White | 2800K~3800K |
| **R** | Red | 625nm |
| **O** | Red-Orange | 610nm |
| **A** | Amber | 595nm |
| **B** | Blue | 470nm |
| **G** | Green | 525nm |

### Electrical/Base Code

| Code | Voltage |
|---|---|
| **3S** | 100~240V E27 short base |

(Please specify when ordering)

### Housing Finish

| Code | Finish |
|---|---|
| **F** | Frosted Silver |

(Please specify when ordering)

(Standard Housing Finish: Frosted)

| ORDER CODE | Color | Wavelength or CCT (nm/K) | Operating Voltage (V) | LED Power (W) | Typ. Luminous Flux (lm) | Illuminance @ 1m (Lux) | BEAM ANGLE |
|---|---|---|---|---|---|---|---|
| BT1-MWS-3SX | White | 5000K~7000K | 100~240V AC | 1X1W | 30 lm | 260 | 35° ±2° |
| BT1-MVS-3SX | Warm White | 2800K~3800K | | | 25 lm | 190 | |
| BT1-MRS-3SX | Red | 625 nm | | | 36 lm | 600 | |
| BT1-MOS-3SX | Red-Orange | 610 nm | | | 40 lm | 650 | |
| BT1-MAS-3SX | Amber | 595 nm | | | 35 lm | 600 | |
| BT1-MBS-3SX | Blue | 470 nm | | | 8 lm | 140 | |
| BT1-MGS-3SX | Green | 530 nm | | | 35 lm | 350 | |
| BT3-MWS-3SX | White | 5000K~7000K | 100~240V AC | 1X3W | 75 lm | 360 | 35° ±2° |
| BT3-MVS-3SX | Warm White | 2800K~3800K | | | 40 lm | 260 | |
| BT3-MRS-3SX | Red | 625 nm | | | 55 lm | 800 | |
| BT3-MOS-3SX | Red-Orange | 610 nm | | | 60 lm | 850 | |
| BT3-MAS-3SX | Amber | 595 nm | | | 55 lm | 800 | |
| BT3-MBS-3SX | Blue | 470 nm | | | 15 lm | 200 | |
| BT3-MGS-3SX | Green | 530 nm | | | 55 lm | 500 | |

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## Typical Electrical Characteristics at $T_a$=25ºC (For 1W Model)

| Parameter | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Input Voltage (AC) | $V_{AC}$ | 100 | – | 240 | V |
| LED Forward Current | $I_F$ | – | 350 | – | mA |
| Estimated Life[6] | | – | 40,000 | – | hours |
| Optimized Body Temperature (1W LED) | T | – | 40 | 45 | °C |

## Typical Electrical Characteristics at $T_a$=25ºC (For 3W Model)

| Parameter | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Input Voltage (AC) | $V_{AC}$ | 100 | – | 240 | V |
| LED Forward Current | $I_F$ | – | 500 | – | mA |
| Estimated Life[6] | | – | 40,000 | – | hours |
| Optimized Body Temperature (3W LED) | T | – | 45 | 50 | °C |

## Illumination Characteristics ($T_a$=25ºC)

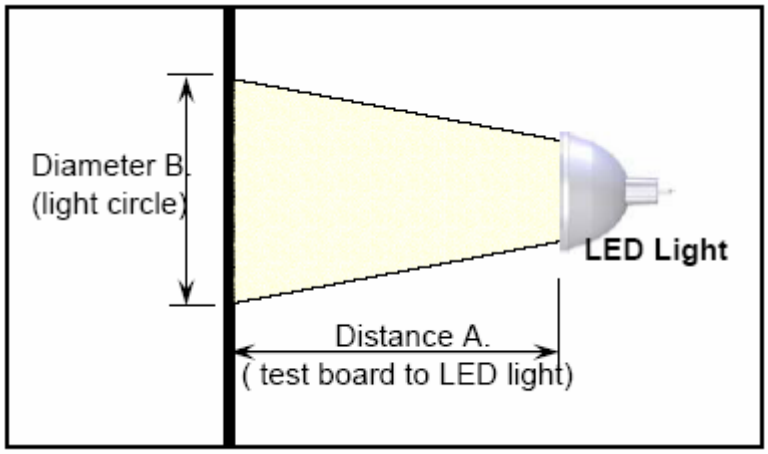


Fig 1. Set up for Illuminance Measurement

| Distance | | 1W Typical Illuminance Measured at Center of Beam (Lux) | | | | |
|---|---|---|---|---|---|---|
| Dist A (cm) | Dia. B (cm) | White | Warm White | Green | Blue | Red |
| 30 | 25 | 2300 | 1800 | 3000 | 1000 | 5200 |
| 50 | 40 | 1000 | 650 | 1250 | 400 | 2100 |
| 100 | 90 | 260 | 190 | 350 | 140 | 600 |
| 150 | 140 | 130 | 100 | 150 | 80 | 280 |
| 200 | 190 | 90 | 70 | 100 | 50 | 170 |

Note: Center beam lux is measured with Digital Lux Meter (Model TES-1334A)

| Distance | | 3W Typical Illuminance Measured at Center of Beam (Lux) | | | | |
|---|---|---|---|---|---|---|
| Dist A (cm) | Dia. B (cm) | White | Warm White | Green | Blue | Red |
| 30 | 25 | 3500 | 2600 | 5000 | 2000 | 8200 |
| 50 | 40 | 1400 | 1000 | 2050 | 820 | 3000 |
| 100 | 90 | 360 | 260 | 500 | 200 | 850 |
| 150 | 140 | 170 | 120 | 250 | 100 | 430 |
| 200 | 190 | 110 | 80 | 180 | 90 | 200 |

Note: Center beam lux is measured with Digital Lux Meter (Model TES-1334A)

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## RELIABILITY TESTS

| No. | Test Item | Test Coions | Sample | Duration |
|---|---|---|---|---|
| 1 | Ambient Life Test | $T_a$=25°C, $V_{AC}$=220V | 10 | 1000 hrs |
| 2 | High Temp/High Humidity Life Test | $T_a$=50°C, $V_{AC}$=220V, 85%RH | 10 | 1000 hrs |
| 3 | Thermal Shock Test | -40°C to +50°C, 30 Mins | 10 | 50 Cycles |
| 4 | HTOL Test | $T_a$=50°C, $V_{AC}$=220V | 10 | 1000 hrs |
| 5 | LTOL Test | $T_a$=-40°C, $V_{AC}$=220V | 10 | 1000 hrs |

Note: All LED E27 lamps are burnt in for 48 hours before every order shipment.

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