



# The best LED solution for High Intensity Discharge (HID) lamp replacement

## TrueForce LED Industrial and retail Mains (Highbay – HPI/SON/HPL)

Philips MASTER – LED HID HPI EM/Mains Highbay lamps give you a quick and easy payback solution to replace HID alternatives in high-bay applications. MASTER – LED HID HPI EM/Mains solutions give you the LED benefits of energy efficiency and a long lifetime with a retrofit solution. The design of MASTER – LED HID HPI EM/Mains enables the direct retrofit of HID lamps without changing the fixtures or EM ballast (see installation guide for more info). The MASTER – LED HID HPI EM/Mains lamp is compatible with both 250W and 400W EM ballast to maximize the feasibility of such retrofits.

### Benefits

- Cost saving with short payback time
- Low initial investment
- Enhance lighting quality with easy adoption

### Features

- High Energy efficient lamps
- Long lifetime - 50,000 hrs
- Surge protection 4KV
- Direct lamp replacement solution without changing the fixture or EM ballast
- Compatible with 250W and 400W EM gear systems
- Additional Energy saving by Direct Mains connection
- Pleasant white light with CRI 80

# TrueForce LED Industrial and retail Mains (Highbay – HPI/SON/HPL)

## Application

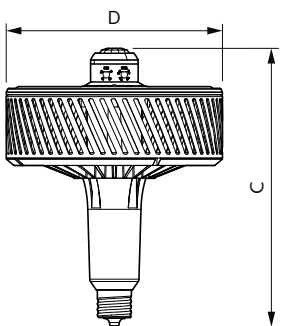
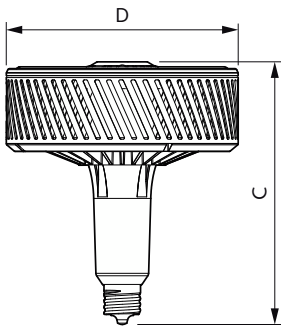
- Industrial/retail - warehouses, factories, shops, transport hubs

## Versions



LEDTForce HPI Others E40 sensor

## Dimensional drawing



| Product                      | D      | C      |
|------------------------------|--------|--------|
| TForce HB 140W E40 840 NB GM | 250 mm | 290 mm |
| TForce HB 140W E40 840 NB LA | 250 mm | 290 mm |
| TForce HB 140W E40 840 WB GM | 250 mm | 290 mm |
| TForce HB 140W E40 840 WB LA | 250 mm | 290 mm |
| TForce HB 140W E40 865 NB GM | 250 mm | 290 mm |
| TForce HB 140W E40 865 NB LA | 250 mm | 290 mm |
| TForce HB 140W E40 865 WB GM | 250 mm | 290 mm |
| TForce HB 140W E40 865 WB LA | 250 mm | 290 mm |

| Product                             | D      | C      |
|-------------------------------------|--------|--------|
| TForce HB 160W E40 865 WB Sensor LA | 250 mm | 330 mm |

# TrueForce LED Industrial and retail Mains (Highbay – HPI/SON/HPL)

| General Information                   |                 |
|---------------------------------------|-----------------|
| Cap-Base                              | E40             |
| Switching Cycle                       | 50,000          |
| Nominal lifetime                      | 50,000 hour(s)  |
| Light Technical                       |                 |
| Color rendering index (CRI)           | 80              |
| LLMF At End Of Nominal Lifetime (Nom) | 70 %            |
| Operating and Electrical              |                 |
| Input Frequency                       | 50 to 60 Hz     |
| Line Frequency                        | 50 to 60 Hz     |
| Starting Time (Nom)                   | 0.5 s           |
| Temperature                           |                 |
| Ambient temperature range             | -20 °C to 45 °C |
| Mechanical and Housing                |                 |
| Bulb Finish                           | Clear           |
| Bulb Shape                            | Others          |

## Light Technical

| Order Code   | Full Product Name                   | Beam Angle (Nom) | Correlated Color Temperature (Nom) | Color Code | Luminous Flux |
|--------------|-------------------------------------|------------------|------------------------------------|------------|---------------|
| 929002282112 | TForce HB 160W E40 865 WB Sensor LA | 120 degree(s)    | 6500 K                             | 865        | 25,000 lm     |
| 929002281608 | TForce HB 140W E40 840 NB GM        | 60 degree(s)     | 4000 K                             | 840        | 20,000 lm     |
| 929002281612 | TForce HB 140W E40 840 NB LA        | 60 degree(s)     | 4000 K                             | 840        | 20,000 lm     |
| 929002281708 | TForce HB 140W E40 840 WB GM        | 120 degree(s)    | 4000 K                             | 840        | 20,000 lm     |
| 929002281712 | TForce HB 140W E40 840 WB LA        | 120 degree(s)    | 4000 K                             | 840        | 20,000 lm     |
| 929002281808 | TForce HB 140W E40 865 NB GM        | 60 degree(s)     | 6500 K                             | 865        | 20,000 lm     |
| 929002281812 | TForce HB 140W E40 865 NB LA        | 60 degree(s)     | 6500 K                             | 865        | 20,000 lm     |
| 929002281908 | TForce HB 140W E40 865 WB GM        | 120 degree(s)    | 6500 K                             | 865        | 20,000 lm     |
| 929002281912 | TForce HB 140W E40 865 WB LA        | 120 degree(s)    | 6500 K                             | 865        | 20,000 lm     |

## Operating and Electrical

| Order Code   | Full Product Name                   | Power Consumption |
|--------------|-------------------------------------|-------------------|
| 929002282112 | TForce HB 160W E40 865 WB Sensor LA | 160 W             |
| 929002281608 | TForce HB 140W E40 840 NB GM        | 140 W             |
| 929002281612 | TForce HB 140W E40 840 NB LA        | 140 W             |
| 929002281708 | TForce HB 140W E40 840 WB GM        | 140 W             |
| 929002281712 | TForce HB 140W E40 840 WB LA        | 140 W             |

| Order Code   | Full Product Name            | Power Consumption |
|--------------|------------------------------|-------------------|
| 929002281808 | TForce HB 140W E40 865 NB GM | 140 W             |
| 929002281812 | TForce HB 140W E40 865 NB LA | 140 W             |
| 929002281908 | TForce HB 140W E40 865 WB GM | 140 W             |
| 929002281912 | TForce HB 140W E40 865 WB LA | 140 W             |

## Temperature

| Order Code   | Full Product Name                   | T-Case Maximum (Nom) |
|--------------|-------------------------------------|----------------------|
| 929002282112 | TForce HB 160W E40 865 WB Sensor LA | 58 °C                |
| 929002281608 | TForce HB 140W E40 840 NB GM        | 60 °C                |
| 929002281612 | TForce HB 140W E40 840 NB LA        | 60 °C                |
| 929002281708 | TForce HB 140W E40 840 WB GM        | 60 °C                |
| 929002281712 | TForce HB 140W E40 840 WB LA        | 60 °C                |

| Order Code   | Full Product Name            | T-Case Maximum (Nom) |
|--------------|------------------------------|----------------------|
| 929002281808 | TForce HB 140W E40 865 NB GM | 60 °C                |
| 929002281812 | TForce HB 140W E40 865 NB LA | 60 °C                |
| 929002281908 | TForce HB 140W E40 865 WB GM | 60 °C                |
| 929002281912 | TForce HB 140W E40 865 WB LA | 60 °C                |

## Controls and Dimming

| Order Code   | Full Product Name                   | Dimmable |
|--------------|-------------------------------------|----------|
| 929002282112 | TForce HB 160W E40 865 WB Sensor LA | Yes      |
| 929002281608 | TForce HB 140W E40 840 NB GM        | No       |
| 929002281612 | TForce HB 140W E40 840 NB LA        | No       |
| 929002281708 | TForce HB 140W E40 840 WB GM        | No       |
| 929002281712 | TForce HB 140W E40 840 WB LA        | No       |

| Order Code   | Full Product Name            | Dimmable |
|--------------|------------------------------|----------|
| 929002281808 | TForce HB 140W E40 865 NB GM | No       |
| 929002281812 | TForce HB 140W E40 865 NB LA | No       |
| 929002281908 | TForce HB 140W E40 865 WB GM | No       |
| 929002281912 | TForce HB 140W E40 865 WB LA | No       |

## Approval and Application

# TrueForce LED Industrial and retail Mains (Highbay – HPI/SON/HPL)

| Order Code   | Full Product Name                   | Energy Consumption kWh/<br>1000 h |
|--------------|-------------------------------------|-----------------------------------|
| 929002282112 | TForce HB 160W E40 865 WB Sensor LA | - kWh                             |
| 929002281608 | TForce HB 140W E40 840 NB GM        | 140 kWh                           |
| 929002281612 | TForce HB 140W E40 840 NB LA        | - kWh                             |
| 929002281708 | TForce HB 140W E40 840 WB GM        | 140 kWh                           |
| 929002281712 | TForce HB 140W E40 840 WB LA        | - kWh                             |
| 929002281808 | TForce HB 140W E40 865 NB GM        | 140 kWh                           |
| 929002281812 | TForce HB 140W E40 865 NB LA        | - kWh                             |
| 929002281908 | TForce HB 140W E40 865 WB GM        | 140 kWh                           |
| 929002281912 | TForce HB 140W E40 865 WB LA        | - kWh                             |

