



# Ideal for HPI/SON/HPL LED replacement in Highbay application

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

Philips TrueForce LED Industrial and Retail lamps give you a quick and easy payback solution to replace HID lamps in High-bay applications. The solution gives you the LED benefits of energy-efficiency and long-lifetime, plus the initial investment is low. With unique lamp design and compatibility, you can directly retrofit HID lamps with TrueForce LED lamps without changing the fixtures or gear. Multiple beam angle options and high colour-rendering index enhance the lighting distribution while creating a comfortable, safe and high-productivity environment.

#### **Benefits**

- Instant upgrade and easy to install less time consuming and safer working at height
- Great payback (<2 years) and extended energy savings of 65% vs. existing conventional systems
- · Low initial investment

#### **Features**

- · Direct lamp replacement solution without changing the fixture or gear
- · High energy efficiency with directional light
- · Long lifetime 50,000hrs for operation efficiency
- · Crispy white light 4000K, CRI80 for better visual colour
- Product weight < 1,3kg</li>

## **Application**

- · Industrial factories, warehouses, distribution centres
- Retail hyper markets, shopping malls
- $\bullet \ \, \text{Others} \text{transportation hubs, convention centres, sport/city halls}$

## **Warnings and Safety**

• EM version requires an EM ballast to operate. Please refer to the installation guide or consult a Philips Lighting representative.

### Versions

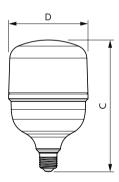


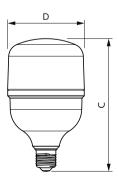




LEDTForce Entry GC T80

## Dimensional drawing

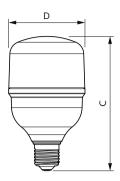




| Product                                 | D      | С      |
|---|--------|--------|
| TForce ESS LED HB MV 3.5Klm 35W 865 E27 | 102 mm | 174 mm |
| TForce ESS LED HB MV 3.5Klm 35W 865 E27 | 102 mm | 174 mm |

| Product                                 | D      | С      |
|---|--------|--------|
| TForce ESS LED HB MV 4.5Klm 45W 865 E27 | 121 mm | 199 mm |
| TForce ESS LED HB MV 4.5Klm 45W 865 E27 | 121 mm | 199 mm |

# Dimensional drawing



| Product                                 | D     | С      |
|---|-------|--------|
| TForce ESS LED HB MV 2.5Klm 25W 865 E27 | 82 mm | 141 mm |
| TForce ESS LED HB MV 2.7Klm 25W 865 E27 | 82 mm | 141 mm |

| General Information                |                |
|------------------------------------|----------------|
| Cap-Base                           | E27            |
| Switching Cycle                    | 50,000         |
| Nominal lifetime                   | 15,000 hour(s) |
|                                    |                |
| Light Technical                    |                |
| Beam Angle (Nom)                   | 180 degree(s)  |
| Correlated Color Temperature (Nom) | 6500 K         |
| Color rendering index (CRI)        | 80             |
| Color Code                         | 865            |
| LLMF At End Of Nominal Lifetime    | 70 %           |
| (Nom)                              |                |
|                                    |                |
| Operating and Electrical           |                |
| Input Frequency                    | 50 to 60 Hz    |
| Starting Time (Nom)                | 0.5 s          |
|                                    |                |
| Controls and Dimming               |                |
| Dimmable                           | No             |
|                                    |                |
| Mechanical and Housing             |                |
| Bulb Finish                        | Frosted        |

## Light Technical

| Order Code | Full Product Name                          | Luminous Flux |
|------------|--|---------------|
| 19021400   | TrueForce ESS LED HB MV 4.5Klm 45W 865 E27 | 4,500 lm      |
| 26014600   | TrueForce ESS LED HB MV 4.5Klm 45W 865 E27 | 4,500 lm      |
| 19017700   | TrueForce ESS LED HB MV 2.7Klm 25W 865 E27 | 2,700 lm      |
| 26010800   | TrueForce ESS LED HB MV 2.5Klm 25W 865 E27 | 2,500 lm      |
| 19019100   | TrueForce ESS LED HB MV 3.5Klm 35W 865 E27 | 3,500 lm      |
| 26012200   | TrueForce ESS LED HB MV 3.5Klm 35W 865 E27 | 3,500 lm      |

## Operating and Electrical

|            |                                |                | Power       |
|------------|--------------------------------|----------------|-------------|
| Order Code | Full Product Name              | Line Frequency | Consumption |
| 19021400   | TrueForce ESS LED HB MV 4.5Klm | 50 to 60 Hz    | 45 W        |
|            | 45W 865 E27                    |                |             |
| 26014600   | TrueForce ESS LED HB MV 4.5Klm | -              | 45 W        |
|            | 45W 865 E27                    |                |             |
| 19017700   | TrueForce ESS LED HB MV 2.7Klm | 50 to 60 Hz    | 25 W        |
|            | 25W 865 E27                    |                |             |
|            |                                |                |             |

|            |                                |                | Power       |
|------------|--------------------------------|----------------|-------------|
| Order Code | Full Product Name              | Line Frequency | Consumption |
| 26010800   | TrueForce ESS LED HB MV 2.5Klm | -              | 25 W        |
|            | 25W 865 E27                    |                |             |
| 19019100   | TrueForce ESS LED HB MV 3.5Klm | 50 to 60 Hz    | 35 W        |
|            | 35W 865 E27                    |                |             |
| 26012200   | TrueForce ESS LED HB MV 3.5Klm | -              | 35 W        |
|            | 35W 865 E27                    |                |             |

### Temperature

| Order Code | Full Product Name                          | T-Case Maximum (Nom) |
|------------|--|----------------------|
| 19021400   | TrueForce ESS LED HB MV 4.5Klm 45W 865 E27 | 77 °C                |

| Order Code | Full Product Name                          | T-Case Maximum (Nom) |
|------------|--|----------------------|
| 26014600   | TrueForce ESS LED HB MV 4.5Klm 45W 865 E27 | 78 °C                |

| Order Code | Full Product Name                          | T-Case Maximum (Nom) |
|------------|--|----------------------|
| 19017700   | TrueForce ESS LED HB MV 2.7Klm 25W 865 E27 | 77 °C                |
| 26010800   | TrueForce ESS LED HB MV 2.5Klm 25W 865 E27 | 78 °C                |

| Order Code | Full Product Name                          | T-Case Maximum (Nom) |
|------------|--|----------------------|
| 19019100   | TrueForce ESS LED HB MV 3.5Klm 35W 865 E27 | 78 °C                |
| 26012200   | TrueForce ESS LED HB MV 3.5Klm 35W 865 E27 | 79 ℃                 |

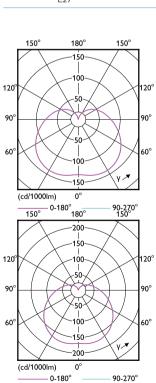
### Mechanical and Housing

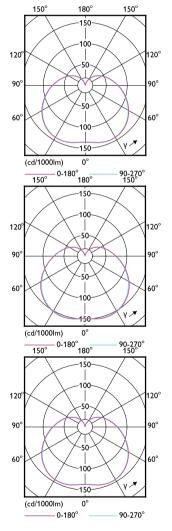
| Order Code | Full Product Name                          | Bulb Shape |
|------------|--|------------|
| 19021400   | TrueForce ESS LED HB MV 4.5Klm 45W 865 E27 | T120       |
| 26014600   | TrueForce ESS LED HB MV 4.5Klm 45W 865 E27 | T120       |
| 19017700   | TrueForce ESS LED HB MV 2.7Klm 25W 865 E27 | T80        |

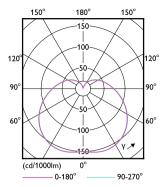
| Order Code | Full Product Name                          | Bulb Shape |
|------------|--|------------|
| 26010800   | TrueForce ESS LED HB MV 2.5Klm 25W 865 E27 | T80        |
| 19019100   | TrueForce ESS LED HB MV 3.5Klm 35W 865 E27 | T100       |
| 26012200   | TrueForce ESS LED HB MV 3.5Klm 35W 865 E27 | T100       |

#### Approval and Application

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|---------------------------|--|---------------------------|--|
| Order Code                | Full Product Name                      | Ambient temperature range |  |
| 19021400                  | TrueForce ESS LED HB MV 4.5Klm 45W 865 | -20 °C to 45 °C           |  |
|                           | E27                                    |                           |  |
| 26014600                  | TrueForce ESS LED HB MV 4.5Klm 45W 865 | -20 to +45 °C             |  |
|                           | E27                                    |                           |  |
| 19017700                  | TrueForce ESS LED HB MV 2.7Klm 25W 865 | -20 °C to 45 °C           |  |
|                           | E27                                    |                           |  |
| 26010800                  | TrueForce ESS LED HB MV 2.5Klm 25W 865 | -20 to +45 °C             |  |
|                           | E27                                    |                           |  |
| 19019100                  | TrueForce ESS LED HB MV 3.5Klm 35W 865 | -20 °C to 45 °C           |  |
|                           | E27                                    |                           |  |
| 26012200                  | TrueForce ESS LED HB MV 3.5Klm 35W 865 | -20 to +45 °C             |  |
|                           | E27                                    |                           |  |









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