



# Product Description

## TORNADO

The Helix range is a twist-shape compact fluorescent lamp, with optimal light distribution. It is available in 11W, 15W, 20W and 23W (25W), with lumen equivalence of 60W, 75W, 100W and 125W incandescent light bulb. It is also available in two color temperatures: warm white (2700K) and cool daylight (6500K). It is available in both 220–240V and 120–127V and able to operate under a wide voltage range (Power supply fluctuation). It consumes up to 80% less energy than the incandescent light bulb and lasts for 3 years.

### Benefits

- Very compact size and wide range allowing easy replacement of most GLS lamps from 25 W up to 150 W
- More than 80% energy saving effect compared with incandescent lamps of similar light output
- Fewer lamp replacements. Fit & forget.

### Features

- Spiral-shaped alternative to incandescent lamps
- High energy efficiency
- Long-life alternative to incandescent lamps

### Application

- The Helix range is widely used to replace incandescent light bulb at all kinds of applications, especially where require intensive light output.
- It is not suitable for dimming and electronic devices

### Warnings and Safety

- Breaking a lamp is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a closed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.
- Compact fluorescent lamps have to be treated as special waste, they must be taken to your local waste facilities for recycling. The European Lighting Industry has set up an infrastructure, capable of recycling mercury, other metals, glass etc.

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## Versions



8718291138150 - RFT

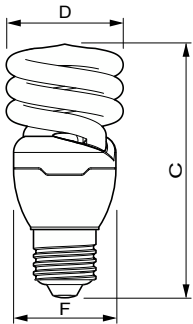


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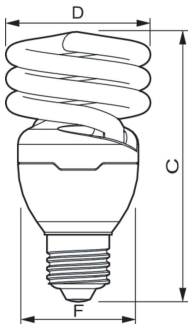


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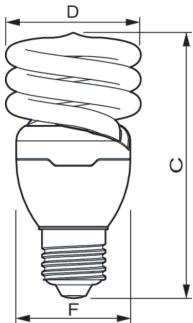
## Dimensional drawing



| Product   | D (max) | C (max)  | F (max) |
|---|---------|----------|---------|
| 15 W (60 W) E27 cap Cool daylight Spiral energy saving bulb | 51.5 mm | 107.5 mm | 42.5 mm |
| 15 W (60 W) E27 cap Warm white Spiral energy saving bulb    | 51.5 mm | 107.5 mm | 42.5 mm |

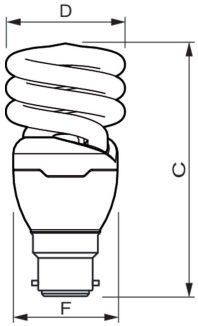


| Product  | D (max) | C (max)  | F (max) |
|--|---------|----------|---------|
| 24 W (100 W) E27 cap Cool daylight Spiral energy saving bulb | 61.5 mm | 118.5 mm | 50.5 mm |
| 24 W (100 W) E27 cap Warm white Spiral energy saving bulb    | 61.5 mm | 118.5 mm | 50.5 mm |

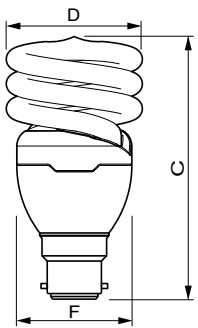


| Product   | D (max) | C (max)  | F (max) |
|---|---------|----------|---------|
| 20 W (75 W) E27 cap Cool daylight Spiral energy saving bulb | 56.5 mm | 111.5 mm | 47 mm   |
| 20 W (75 W) E27 cap Warm white Spiral energy saving bulb    | 56.5 mm | 111.5 mm | 47 mm   |

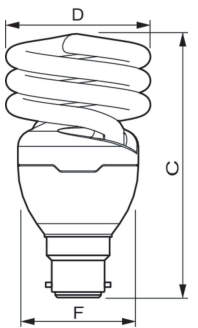
## Dimensional drawing



| Product   | D (max) | C (max)  | F (max) |
|---|---------|----------|---------|
| 15 W (60 W) B22 cap Cool daylight Spiral energy saving bulb | 51.5 mm | 106.0 mm | 42.5 mm |
| 15 W (60 W) B22 cap Warm white Spiral energy saving bulb    | 51.5 mm | 106.0 mm | 42.5 mm |



| Product   | D (max) | C (max)  | F (max) |
|---|---------|----------|---------|
| 20 W (75 W) B22 cap Cool daylight Spiral energy saving bulb | 56.5 mm | 110.0 mm | 47 mm   |
| 20 W (75 W) B22 cap Warm white Spiral energy saving bulb    | 56.5 mm | 110.0 mm | 47 mm   |



| Product  | D (max) | C (max) | F (max) |
|--|---------|---------|---------|
| 24 W (100 W) B22 cap Cool daylight Spiral energy saving bulb | 61.5 mm | 117 mm  | 50.5 mm |
| 24 W (100 W) B22 cap Warm white Spiral energy saving bulb    | 61.5 mm | 117 mm  | 50.5 mm |

| General Information                   |               |
|---------------------------------------|---------------|
| Rated Lifetime (Hours)                | 8,000 hour(s) |
| Switching Cycle                       | 5,000         |
| Nominal lifetime                      | 8,000 hour(s) |
| Light Technical                       |               |
| LLMF At End Of Nominal Lifetime (Nom) | 70 %          |
| Operating and Electrical              |               |
| Input Frequency                       | 50 or 60 Hz   |
| Line Frequency                        | 50 or 60 Hz   |
| Voltage (Nom)                         | 220-240 V     |
| Starting Time (Nom)                   | 0.3 s         |
| Controls and Dimming                  |               |
| Dimmable                              | No            |
| Mechanical and Housing                |               |
| Bulb Shape                            | Spiral        |

## General Information

| Order Code   | Full Product Name  | Cap-Base |
|--------------|--|----------|
| 929689858502 | 24 W (100 W) B22 cap Warm white Spiral energy saving bulb    | B22      |
| 929689858602 | 24 W (100 W) B22 cap Cool daylight Spiral energy saving bulb | B22      |
| 929689858302 | 20 W (75 W) B22 cap Warm white Spiral energy saving bulb     | B22      |
| 929689858402 | 20 W (75 W) B22 cap Cool daylight Spiral energy saving bulb  | B22      |
| 929689858102 | 15 W (60 W) B22 cap Warm white Spiral energy saving bulb     | B22      |
| 929689858202 | 15 W (60 W) B22 cap Cool daylight Spiral energy saving bulb  | B22      |
| 929689848506 | 24 W (100 W) E27 cap Warm white Spiral energy saving bulb    | E27      |
| 929689848605 | 24 W (100 W) E27 cap Cool daylight Spiral energy saving bulb | E27      |
| 929689848306 | 20 W (75 W) E27 cap Warm white Spiral energy saving bulb     | E27      |
| 929689848405 | 20 W (75 W) E27 cap Cool daylight Spiral energy saving bulb  | E27      |
| 929689848105 | 15 W (60 W) E27 cap Warm white Spiral energy saving bulb     | E27      |
| 929689848205 | 15 W (60 W) E27 cap Cool daylight Spiral energy saving bulb  | E27      |

## Light Technical (1/2)

| Order Code   | Full Product Name  | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Designation | Correlated              |
|--------------|--|---------------------------------|---------------------------------|-------------------|-------------------------|
|              |  |                                 |                                 |                   | Color Temperature (Nom) |
| 929689858502 | 24 W (100 W) B22 cap Warm white Spiral energy saving bulb    | 463                             | 420                             | Warm White (WW)   | 2700 K                  |
| 929689858602 | 24 W (100 W) B22 cap Cool daylight Spiral energy saving bulb | 313                             | 337                             | Cool Daylight     | 6500 K                  |
| 929689858302 | 20 W (75 W) B22 cap Warm white Spiral energy saving bulb     | 463                             | 420                             | Warm White (WW)   | 2700 K                  |
| 929689858402 | 20 W (75 W) B22 cap Cool daylight Spiral                     | 313                             | 337                             | Cool Daylight     | 6500 K                  |

| Order Code   | Full Product Name  | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Designation | Correlated              |
|--------------|--|---------------------------------|---------------------------------|-------------------|-------------------------|
|              |  |                                 |                                 |                   | Color Temperature (Nom) |
| 929689858102 | 15 W (60 W) B22 cap Warm white Spiral energy saving bulb     | 463                             | 420                             | Warm White (WW)   | 2700 K                  |
| 929689858202 | 15 W (60 W) B22 cap Cool daylight Spiral energy saving bulb  | 313                             | 337                             | Cool Daylight     | 6500 K                  |
| 929689848506 | 24 W (100 W) E27 cap Warm white Spiral energy saving bulb    | 463                             | 420                             | Warm White (WW)   | 2700 K                  |
| 929689848605 | 24 W (100 W) E27 cap Cool daylight Spiral energy saving bulb | 313                             | 337                             | Cool Daylight     | 6500 K                  |

# TORNADO

| Order Code   | Full Product Name  | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Designation | Correlated Color Temperature (Nom) |
|--------------|--|---------------------------------|---------------------------------|-------------------|------------------------------------|
|              | daylight Spiral energy saving bulb                       |                                 |                                 |                   |                                    |
| 929689848306 | 20 W (75 W) E27 cap Warm white Spiral energy saving bulb | 463                             | 420                             | Warm White (WW)   | 2700 K                             |
| 929689848405 | 20 W (75 W) E27 cap Cool daylight Spiral                 | 313                             | 337                             | Cool Daylight     | 6500 K                             |

| Order Code   | Full Product Name   | Chromaticity Coordinate X (Nom) | Chromaticity Coordinate Y (Nom) | Color Designation | Correlated Color Temperature (Nom) |
|--------------|---|---------------------------------|---------------------------------|-------------------|------------------------------------|
|              | energy saving bulb  |                                 |                                 |                   |                                    |
| 929689848105 | 15 W (60 W) E27 cap Warm white Spiral energy saving bulb    | 463                             | 420                             | Warm White (WW)   | 2700 K                             |
| 929689848205 | 15 W (60 W) E27 cap Cool daylight Spiral energy saving bulb | 313                             | 337                             | Cool Daylight     | 6500 K                             |

## Light Technical (2/2)

| Order Code   | Full Product Name  | Color rendering index (CRI) | Color Code | Luminous Efficacy (rated) (Nom) | Luminous Flux |
|--------------|--|-----------------------------|------------|---------------------------------|---------------|
| 929689858502 | 24 W (100 W) B22 cap Warm white Spiral energy saving bulb    | 82                          | 827        | 67 lm/W                         | 1,550 lm      |
| 929689858602 | 24 W (100 W) B22 cap Cool daylight Spiral energy saving bulb | 80                          | 865        | 63 lm/W                         | 1,450 lm      |
| 929689858302 | 20 W (75 W) B22 cap Warm white Spiral energy saving bulb     | 82                          | 827        | 65 lm/W                         | 1,250 lm      |
| 929689858402 | 20 W (75 W) B22 cap Cool daylight Spiral energy saving bulb  | 80                          | 865        | 61 lm/W                         | 1,200 lm      |
| 929689858102 | 15 W (60 W) B22 cap Warm white Spiral energy saving bulb     | 82                          | 827        | 65 lm/W                         | 950 lm        |
| 929689858202 | 15 W (60 W) B22 cap Cool daylight Spiral energy saving bulb  | 80                          | 865        | 61 lm/W                         | 900 lm        |
| 929689848506 | 24 W (100 W) E27 cap Warm white                              | 82                          | 827        | 67 lm/W                         | 1,550 lm      |

| Order Code   | Full Product Name  | Color rendering index (CRI) | Color Code | Luminous Efficacy (rated) (Nom) | Luminous Flux |
|--------------|--|-----------------------------|------------|---------------------------------|---------------|
|              | Spiral energy saving bulb                                    |                             |            |                                 |               |
| 929689848605 | 24 W (100 W) E27 cap Cool daylight Spiral energy saving bulb | 80                          | 865        | 63 lm/W                         | 1,450 lm      |
| 929689848306 | 20 W (75 W) E27 cap Warm white Spiral energy saving bulb     | 82                          | 827        | 65 lm/W                         | 1,250 lm      |
| 929689848405 | 20 W (75 W) E27 cap Cool daylight Spiral energy saving bulb  | 80                          | 865        | 61 lm/W                         | 1,200 lm      |
| 929689848105 | 15 W (60 W) E27 cap Warm white Spiral energy saving bulb     | 82                          | 827        | 65 lm/W                         | 950 lm        |
| 929689848205 | 15 W (60 W) E27 cap Cool daylight Spiral energy saving bulb  | 80                          | 865        | 61 lm/W                         | 900 lm        |

## Operating and Electrical

| Order Code   | Full Product Name   | Lamp          |                   |
|--------------|---|---------------|-------------------|
|              |   | Current (Nom) | Power Consumption |
| 929689858502 | 24 W (100 W) B22 cap Warm white<br>Spiral energy saving bulb    | 170 mA        | 24 W              |
| 929689858602 | 24 W (100 W) B22 cap Cool daylight<br>Spiral energy saving bulb | 170 mA        | 24 W              |
| 929689858302 | 20 W (75 W) B22 cap Warm white<br>Spiral energy saving bulb     | 150 mA        | 20 W              |
| 929689858402 | 20 W (75 W) B22 cap Cool daylight<br>Spiral energy saving bulb  | 150 mA        | 20 W              |
| 929689858102 | 15 W (60 W) B22 cap Warm white<br>Spiral energy saving bulb     | 110 mA        | 15 W              |
| 929689858202 | 15 W (60 W) B22 cap Cool daylight<br>Spiral energy saving bulb  | 110 mA        | 15 W              |

| Order Code   | Full Product Name   | Lamp          |                   |
|--------------|---|---------------|-------------------|
|              |   | Current (Nom) | Power Consumption |
| 929689848506 | 24 W (100 W) E27 cap Warm white<br>Spiral energy saving bulb    | 170 mA        | 24 W              |
| 929689848605 | 24 W (100 W) E27 cap Cool daylight<br>Spiral energy saving bulb | 170 mA        | 24 W              |
| 929689848306 | 20 W (75 W) E27 cap Warm white<br>Spiral energy saving bulb     | 150 mA        | 20 W              |
| 929689848405 | 20 W (75 W) E27 cap Cool daylight<br>Spiral energy saving bulb  | 150 mA        | 20 W              |
| 929689848105 | 15 W (60 W) E27 cap Warm white<br>Spiral energy saving bulb     | 110 mA        | 15 W              |
| 929689848205 | 15 W (60 W) E27 cap Cool daylight<br>Spiral energy saving bulb  | 110 mA        | 15 W              |

## Approval and Application

| Order Code   | Full Product Name   | Energy                 | Mercury (Hg)  |
|--------------|---|------------------------|---------------|
|              |   | Consumption kWh/1000 h | Content (Nom) |
| 929689858502 | 24 W (100 W) B22 cap Warm white<br>Spiral energy saving bulb    | 23 kWh                 | 2 mg          |
| 929689858602 | 24 W (100 W) B22 cap Cool daylight<br>Spiral energy saving bulb | 23 kWh                 | 2 mg          |
| 929689858302 | 20 W (75 W) B22 cap Warm white<br>Spiral energy saving bulb     | 20 kWh                 | 1.5 mg        |
| 929689858402 | 20 W (75 W) B22 cap Cool daylight<br>Spiral energy saving bulb  | 20 kWh                 | 1.5 mg        |
| 929689858102 | 15 W (60 W) B22 cap Warm white<br>Spiral energy saving bulb     | 15 kWh                 | 1.5 mg        |
| 929689858202 | 15 W (60 W) B22 cap Cool daylight<br>Spiral energy saving bulb  | 15 kWh                 | 1.5 mg        |

| Order Code   | Full Product Name   | Energy                 | Mercury (Hg)  |
|--------------|---|------------------------|---------------|
|              |   | Consumption kWh/1000 h | Content (Nom) |
| 929689848506 | 24 W (100 W) E27 cap Warm white<br>Spiral energy saving bulb    | 23 kWh                 | 2 mg          |
| 929689848605 | 24 W (100 W) E27 cap Cool daylight<br>Spiral energy saving bulb | 23 kWh                 | 2 mg          |
| 929689848306 | 20 W (75 W) E27 cap Warm white<br>Spiral energy saving bulb     | 20 kWh                 | 1.5 mg        |
| 929689848405 | 20 W (75 W) E27 cap Cool daylight<br>Spiral energy saving bulb  | 20 kWh                 | 1.5 mg        |
| 929689848105 | 15 W (60 W) E27 cap Warm white<br>Spiral energy saving bulb     | 15 kWh                 | -             |
| 929689848205 | 15 W (60 W) E27 cap Cool daylight<br>Spiral energy saving bulb  | 15 kWh                 | -             |

