



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

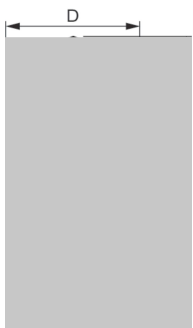
- Breaking a lamp is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a closed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.
- Compact 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



Dimensional drawing

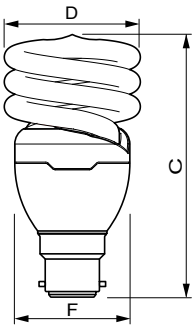
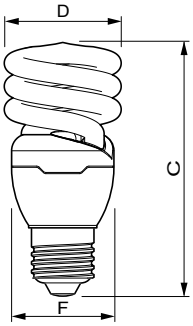


Product	D (max)	C (max)	F (max)
TORNADO 20W WW E27 220-240V 1PF/6	56.5 mm	111.5 mm	47 mm
TORNADO 20W CDL E27 220-240V 1PF/6	56.5 mm	111.5 mm	47 mm

Product	D (max)	C (max)	F (max)
TORNADO 24W CDL B22 220-240V 1PF/6	61.5 mm	117 mm	50.5 mm
TORNADO 24W WW B22 220-240V 1PF/6	61.5 mm	117 mm	50.5 mm

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Dimensional drawing



Product	D (max)	C (max)	F (max)
TORNADO 15W CDL E27 220-240V 1PF/6	51.5 mm	107.5 mm	42.5 mm
TORNADO 15W WW E27 220-240V 1PF/6	51.5 mm	107.5 mm	42.5 mm

Product	D (max)	C (max)	F (max)
TORNADO 20W CDL B22 220-240V 1PF/6	56.5 mm	110.0 mm	47 mm
TORNADO 20W WW B22 220-240V 1PF/6	56.5 mm	110.0 mm	47 mm

Product	D (max)	C (max)	F (max)
TORNADO 24W WW E27 220-240V 1PF/6	61.5 mm	118.5 mm	50.5 mm
TORNADO 24W CDL E27 220-240V 1PF/6	61.5 mm	118.5 mm	50.5 mm

Product	D (max)	C (max)	F (max)
TORNADO 15W WW B22 220-240V 1PF/6	51.5 mm	106.0 mm	42.5 mm
TORNADO 15W CDL B22 220-240V 1PF/6	51.5 mm	106.0 mm	42.5 mm

Approval and Application

Energy Efficiency Label (EEL)	A
Controls and Dimming	
Dimmable	no
Operating and Electrical	
Input Frequency	50 or 60 Hz
Voltage (Nom)	220-240 V
Starting Time (Nom)	0.3 s
Warm Up Time To 60% Light (Max)	60 s
Warm Up Time To 60% Light (Min)	5 s
General Information	
Nominal Lifetime (Nom)	8000 h
Rated Lifetime (Hours)	8000 h
Switching Cycle	5000X
Light Technical	
Llmf At End Of Nominal Lifetime (Nom)	70 %
Lumen Maintenance 2000 h (Nom)	85 %
Lumen Maintenance 5000 h (Nom)	75 %
Mechanical and Housing	
Bulb Shape	Spiral

Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/	Mercury (Hg)
		1000 h	Content (Nom)
929689848105	TORNADO 15W WW E27 220-240V 1PF/6	15 kWh	-
929689848205	TORNADO 15W CDL E27 220-240V 1PF/6	15 kWh	-
929689848306	TORNADO 20W WW E27 220-240V 1PF/6	20 kWh	1.5 mg
929689848405	TORNADO 20W CDL E27 220-240V 1PF/6	20 kWh	1.5 mg
929689848506	TORNADO 24W WW E27 220-240V 1PF/6	23 kWh	2 mg
929689848605	TORNADO 24W CDL E27 220-240V 1PF/6	23 kWh	2 mg
929689858102	TORNADO 15W WW B22 220-240V 1PF/6	15 kWh	1.5 mg
929689858202	TORNADO 15W CDL B22 220-240V 1PF/6	15 kWh	1.5 mg
929689858302	TORNADO 20W WW B22 220-240V 1PF/6	20 kWh	1.5 mg
929689858402	TORNADO 20W CDL B22 220-240V 1PF/6	20 kWh	1.5 mg
929689858502	TORNADO 24W WW B22 220-240V 1PF/6	23 kWh	2 mg
929689858602	TORNADO 24W CDL B22 220-240V 1PF/6	23 kWh	2 mg

Operating and Electrical

Order Code	Full Product Name	Lamp Current (Nom)	Power (Rated) (Nom)
929689848105	TORNADO 15W WW E27 220-240V 1PF/6	110 mA	15 W
929689848205	TORNADO 15W CDL E27 220-240V 1PF/6	110 mA	15 W
929689848306	TORNADO 20W WW E27 220-240V 1PF/6	150 mA	20 W
929689848405	TORNADO 20W CDL E27 220-240V 1PF/6	150 mA	20 W
929689848506	TORNADO 24W WW E27 220-240V 1PF/6	170 mA	23 W
929689848605	TORNADO 24W CDL E27 220-240V 1PF/6	170 mA	23 W

Order Code	Full Product Name	Lamp Current (Nom)	Power (Rated) (Nom)
929689858102	TORNADO 15W WW B22 220-240V 1PF/6	110 mA	15 W
929689858202	TORNADO 15W CDL B22 220-240V 1PF/6	110 mA	15 W
929689858302	TORNADO 20W WW B22 220-240V 1PF/6	150 mA	20 W
929689858402	TORNADO 20W CDL B22 220-240V 1PF/6	150 mA	20 W
929689858502	TORNADO 24W WW B22 220-240V 1PF/6	170 mA	23 W
929689858602	TORNADO 24W CDL B22 220-240V 1PF/6	170 mA	23 W

General Information

Order Code	Full Product Name	Cap-Base
929689848105	TORNADO 15W WW E27 220-240V 1PF/6	E27
929689848205	TORNADO 15W CDL E27 220-240V 1PF/6	E27
929689848306	TORNADO 20W WW E27 220-240V 1PF/6	E27
929689848405	TORNADO 20W CDL E27 220-240V 1PF/6	E27
929689848506	TORNADO 24W WW E27 220-240V 1PF/6	E27
929689848605	TORNADO 24W CDL E27 220-240V 1PF/6	E27

Order Code	Full Product Name	Cap-Base
929689858102	TORNADO 15W WW B22 220-240V 1PF/6	B22
929689858202	TORNADO 15W CDL B22 220-240V 1PF/6	B22
929689858302	TORNADO 20W WW B22 220-240V 1PF/6	B22
929689858402	TORNADO 20W CDL B22 220-240V 1PF/6	B22
929689858502	TORNADO 24W WW B22 220-240V 1PF/6	B22

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Order Code	Full Product Name	Cap-Base
929689858602	TORNADO 24W CDL B22 220-240V 1PF/6	B22

Light Technical (1/2)

Order Code	Full Product Name	Chromaticity		Colour	
		Coordinate X (Nom)	Coordinate Y (Nom)	Code	Designation
929689848105	TORNADO 15W WW E27 220-240V 1PF/6	463	420	827	Warm white (WW)
929689848205	TORNADO 15W CDL E27 220-240V 1PF/6	313	337	865	Cool Daylight
929689848306	TORNADO 20W WW E27 220-240V 1PF/6	463	420	827	Warm white (WW)
929689848405	TORNADO 20W CDL E27 220-240V 1PF/6	313	337	865	Cool Daylight
929689848506	TORNADO 24W WW E27 220-240V 1PF/6	463	420	827	Warm white (WW)
929689848605	TORNADO 24W CDL E27 220-240V 1PF/6	313	337	865	Cool Daylight

Order Code	Full Product Name	Chromaticity		Colour	
		Coordinate X (Nom)	Coordinate Y (Nom)	Code	Designation
929689858102	TORNADO 15W WW B22 220-240V 1PF/6	463	420	827	Warm white (WW)
929689858202	TORNADO 15W CDL B22 220-240V 1PF/6	313	337	865	Cool Daylight
929689858302	TORNADO 20W WW B22 220-240V 1PF/6	463	420	827	Warm white (WW)
929689858402	TORNADO 20W CDL B22 220-240V 1PF/6	313	337	865	Cool Daylight
929689858502	TORNADO 24W WW B22 220-240V 1PF/6	463	420	827	Warm white (WW)
929689858602	TORNADO 24W CDL B22 220-240V 1PF/6	313	337	865	Cool Daylight

Light Technical (2/2)

Order Code	Full Product Name	Correlated Colour Temperature (Nom)	Colour Rendering Index (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
		929689848105	2700 K	82	65 lm/W	950 lm
929689848205	15W CDL E27 220-240V 1PF/6	6500 K	80	61 lm/W	900 lm	900 lm
929689848306	20W WW E27	2700 K	82	65 lm/W	1250 lm	1250 lm

Order Code	Full Product Name	Correlated Colour Temperature (Nom)	Colour Rendering Index (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
		929689848405	20W CDL E27 220-240V 1PF/6	6500 K	80	61 lm/W
929689848506	24W WW E27 220-240V 1PF/6	2700 K	82	67 lm/W	1550 lm	1550 lm

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Order Code	Full Product Name	Correlated Colour Temperature (Nom)	Colour Rendering Index (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
929689848605	TORNADO 24W CDL E27 220-240V 1PF/6	6500 K	80	63 lm/W	1450 lm	1450 lm
929689858102	TORNADO 15W WW B22 220-240V 1PF/6	2700 K	82	65 lm/W	950 lm	950 lm
929689858202	TORNADO 15W CDL B22 220-240V 1PF/6	6500 K	80	61 lm/W	900 lm	900 lm
929689858302	TORNADO 20W WW B22	2700 K	82	65 lm/W	1250 lm	1250 lm

Order Code	Full Product Name	Correlated Colour Temperature (Nom)	Colour Rendering Index (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Nom)	Luminous Flux (Rated) (Nom)
	220-240V 1PF/6					
929689858402	TORNADO 20W CDL B22 220-240V 1PF/6	6500 K	80	61 lm/W	1200 lm	1200 lm
929689858502	TORNADO 24W WW B22 220-240V 1PF/6	2700 K	82	67 lm/W	1550 lm	1550 lm
929689858602	TORNADO 24W CDL B22 220-240V 1PF/6	6500 K	80	63 lm/W	1450 lm	1450 lm

