



# High efficient fluorescent lighting

## MASTER TL5 High Efficiency

This TL5 lamp (tube diameter 16 mm) has a high luminous efficacy, resulting in low energy consumption. The High Efficiency TL5 lamp offers excellent lumen maintenance and good color rendering. Application areas are offices, industry, public and governmental buildings, schools, hospitals and indoor sports lighting.

### Benefits

- Allows system miniaturization and maximum luminaire design freedom
- Lamp lengths enable easy fitting into ceiling module systems
- High lamp efficacies and luminaire efficiencies

### Features

- 40% thinner and 5 cm shorter than corresponding TL-D lamps
- High lamp efficacies up to 104 lm/W
- Specifically designed for operation with electronic gear
- Maximum light output reached at approximately 35 °C in free-burning position

### Application

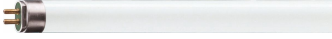
- Ideally suited for recessed, surface-mounted and suspended luminaires in applications like offices, shops, schools, public buildings and industry (low ceiling), wherever high-quality, energy-effective lighting is required

### Warnings and Safety

- A lamp breaking 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 sealed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.

# MASTER TL5 High Efficiency

## Versions



# MASTER TL5 High Efficiency

## Dimensional drawing

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Product	D (max)	A (max)	B (max)	B (min)	C (max)
MASTER TL5 HE 28W/827 SLV/40	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
MASTER TL5 HE 14W/865 SLV/40	17 mm	549.0 mm	556.1 mm	553.7 mm	563.2 mm
MASTER TL5 HE 14W/827 SLV/40	17 mm	549.0 mm	556.1 mm	553.7 mm	563.2 mm
MASTER TL5 HE 21W/840 SLV/40	17 mm	849.0 mm	856.1 mm	853.7 mm	863.2 mm
MASTER TL5 HE 21W/840 UNP/40	17 mm	849.0 mm	856.1 mm	853.7 mm	863.2 mm
MASTER TL5 HE 14W/830 SLV/40	17 mm	549.0 mm	556.1 mm	553.7 mm	563.2 mm
MASTER TL5 HE 35W/865 SLV/40	17 mm	1449.0 mm	1456.1 mm	1453.7 mm	1463.2 mm
MASTER TL5 HE 21W/830 SLV/40	17 mm	849.0 mm	856.1 mm	853.7 mm	863.2 mm
MASTER TL5 HE 21W/865 SLV/40	17 mm	849.0 mm	856.1 mm	853.7 mm	863.2 mm
MASTER TL5 HE 35W/830 SLV/40	17 mm	1449.0 mm	1456.1 mm	1453.7 mm	1463.2 mm
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MASTER TL5 HE 35W/827 SLV/40	17 mm	1449.0 mm	1456.1 mm	1453.7 mm	1463.2 mm
MASTER TL5 HE 14W/840 SLV/40	17 mm	549.0 mm	556.1 mm	553.7 mm	563.2 mm
MASTER TL5 HE 28W/840 SLV/40	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
MASTER TL5 HE 28W/840 UNP/40	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
MASTER TL5 HE 28W/830 SLV/40	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
MASTER TL5 HE 28W/835 SLV/40	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
MASTER TL5 HE 28W/865 SLV/40	17 mm	1149.0 mm	1156.1 mm	1153.7 mm	1163.2 mm
MASTER TL5 HE 35W/840 SLV/40	17 mm	1449.0 mm	1456.1 mm	1453.7 mm	1463.2 mm

# MASTER TL5 High Efficiency

## Approval and Application

Energy Efficiency Label (EEL)	A+
Mercury (Hg) Content (Nom)	1.4 mg

## Controls and Dimming

Dimmable	Yes
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## General Information

Cap-Base	G5
Life To 50% Failures Preheat (Nom)	24000 h
LSF Preheat 16000 h Rated	97 %
LSF Preheat 20000 h Rated	84 %
LSF Preheat 2000 h Rated	99 %
LSF Preheat 4000 h Rated	99 %
LSF Preheat 6000 h Rated	99 %
LSF Preheat 8000 h Rated	99 %
System Description	High Efficiency

## Light Technical

Colour Rendering Index (Max)	85
Colour Rendering Index (Min)	80
LLMF 12000 h Rated	92 %
LLMF 16000 h Rated	91 %
LLMF 2000 h Rated	96 %
LLMF 20000 h Rated	90 %
LLMF 4000 h Rated	95 %
LLMF 6000 h Rated	94 %
LLMF 8000 h Rated	93 %

## Mechanical and Housing

Bulb Shape	T5
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## Temperature

Design Temperature (Nom)	35 °C
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## Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h
64102155	MASTER TL5 HE 14W/827 1SL/40	15 kWh
63938755	MASTER TL5 HE 14W/830 1SL/40	15 kWh
63940055	MASTER TL5 HE 14W/840 1SL/40	15 kWh
71009355	MASTER TL5 HE 14W/865 1SL/40	15 kWh
64320955	MASTER TL5 HE 21W/827 1SL/40	23 kWh
63942455	MASTER TL5 HE 21W/830 1SL/40	23 kWh
61072055	MASTER TL5 HE 21W/840 UNP/40	23 kWh
63944855	MASTER TL5 HE 21W/840 1SL/40	23 kWh
71011655	MASTER TL5 HE 21W/865 1SL/40	23 kWh
64322355	MASTER TL5 HE 28W/827 1SL/40	31 kWh
63946255	MASTER TL5 HE 28W/830 1SL/40	31 kWh
71004855	MASTER TL5 HE 28W/835 1SL/40	31 kWh
61090455	MASTER TL5 HE 28W/840 UNP/40	31 kWh
63948655	MASTER TL5 HE 28W/840 1SL/40	31 kWh
71015455	MASTER TL5 HE 28W/865 1SL/40	31 kWh
64324755	MASTER TL5 HE 35W/827 1SL/40	38 kWh
63950955	MASTER TL5 HE 35W/830 SLV/40	38 kWh
63952355	MASTER TL5 HE 35W/840 1SL/40	38 kWh
71018555	MASTER TL5 HE 35W/865 1SL/40	38 kWh

## Operating and Electrical

Order Code	Full Product Name	Lamp Current (Nom)	Power (Rated) (Nom)
64102155	MASTER TL5 HE 14W/827 1SL/40	0.165 A	14 W
63938755	MASTER TL5 HE 14W/830 1SL/40	0.165 A	14 W
63940055	MASTER TL5 HE 14W/840 1SL/40	0.165 A	14 W
71009355	MASTER TL5 HE 14W/865 1SL/40	0.165 A	14 W
64320955	MASTER TL5 HE 21W/827 1SL/40	0.165 A	20.6 W
63942455	MASTER TL5 HE 21W/830 1SL/40	0.165 A	20.6 W
61072055	MASTER TL5 HE 21W/840 UNP/40	0.165 A	20.6 W
63944855	MASTER TL5 HE 21W/840 1SL/40	0.165 A	20.6 W
71011655	MASTER TL5 HE 21W/865 1SL/40	0.165 A	20.6 W
64322355	MASTER TL5 HE 28W/827 1SL/40	0.170 A	27.9 W

Order Code	Full Product Name	Lamp Current (Nom)	Power (Rated) (Nom)
63946255	MASTER TL5 HE 28W/830 1SL/40	0.170 A	27.9 W
71004855	MASTER TL5 HE 28W/835 1SL/40	0.170 A	27.9 W
61090455	MASTER TL5 HE 28W/840 UNP/40	0.170 A	27.9 W
63948655	MASTER TL5 HE 28W/840 1SL/40	0.170 A	27.9 W
71015455	MASTER TL5 HE 28W/865 1SL/40	0.170 A	27.9 W
64324755	MASTER TL5 HE 35W/827 1SL/40	0.175 A	35.5 W
63950955	MASTER TL5 HE 35W/830 SLV/40	0.175 A	35.5 W
63952355	MASTER TL5 HE 35W/840 1SL/40	0.175 A	35.5 W
71018555	MASTER TL5 HE 35W/865 1SL/40	0.175 A	35.5 W

## Light Technical (1/2)

## MASTER TL5 High Efficiency

Order Code	Full Product Name	Colour Code	Colour Designation	Correlated Colour	Colour Rendering
				Temperature (Nom)	Index (Nom)
64102155	MASTER TL5 HE 14W/827 1SL/40	827	Incandescent White	2700 K	82
63938755	MASTER TL5 HE 14W/830 1SL/40	830	Warm White (WW)	3000 K	>80
63940055	MASTER TL5 HE 14W/840 1SL/40	841	Cool White (CW)	4000 K	82
71009355	MASTER TL5 HE 14W/865 1SL/40	865	Cool Daylight	6500 K	82
64320955	MASTER TL5 HE 21W/827 1SL/40	827	Incandescent White	2700 K	82
63942455	MASTER TL5 HE 21W/830 1SL/40	830	Warm White (WW)	3000 K	>80
61072055	MASTER TL5 HE 21W/840 UNP/40	841	Cool White (CW)	4000 K	82
63944855	MASTER TL5 HE 21W/840 1SL/40	841	Cool White (CW)	4000 K	82
71011655	MASTER TL5 HE 21W/865 1SL/40	865	Cool Daylight	6500 K	82
64322355	MASTER TL5 HE 28W/827 1SL/40	827	Incandescent White	2700 K	82

Order Code	Full Product Name	Colour Code	Colour Designation	Correlated Colour	Colour Rendering
				Temperature (Nom)	Index (Nom)
63946255	MASTER TL5 HE 28W/830 1SL/40	830	Warm White (WW)	3000 K	>80
71004855	MASTER TL5 HE 28W/835 1SL/40	835	White (WH)	3500 K	82
61090455	MASTER TL5 HE 28W/840 UNP/40	841	Cool White (CW)	4000 K	82
63948655	MASTER TL5 HE 28W/840 1SL/40	841	Cool White (CW)	4000 K	82
71015455	MASTER TL5 HE 28W/865 1SL/40	865	Cool Daylight	6500 K	82
64324755	MASTER TL5 HE 35W/827 1SL/40	827	Incandescent White	2700 K	82
63950955	MASTER TL5 HE 35W/830 SLV/40	830	Warm White (WW)	3000 K	82
63952355	MASTER TL5 HE 35W/840 1SL/40	841	Cool White (CW)	4000 K	82
71018555	MASTER TL5 HE 35W/865 1SL/40	865	Cool Daylight	6500 K	82

### Light Technical (2/2)

Order Code	Full Product Name	Luminous Efficacy (@	Luminous Efficacy	Luminous Flux	Luminous Flux
		Max Lumen, Rated) (Nom)	(rated) (Nom)	Luminous Flux (Nom)	(Rated) (Nom)
64102155	MASTER TL5 HE 14W/827 1SL/40	99 lm/W	86 lm/W	1350 lm	1200 lm
63938755	MASTER TL5 HE 14W/830 1SL/40	99 lm/W	86 lm/W	1350 lm	1200 lm
63940055	MASTER TL5 HE 14W/840 1SL/40	99 lm/W	86 lm/W	1350 lm	1200 lm
71009355	MASTER TL5 HE 14W/865 1SL/40	91 lm/W	80 lm/W	1250 lm	1125 lm
64320955	MASTER TL5 HE 21W/827 1SL/40	101 lm/W	90 lm/W	2100 lm	1850 lm
63942455	MASTER TL5 HE 21W/830 1SL/40	101 lm/W	90 lm/W	2100 lm	1850 lm
61072055	MASTER TL5 HE 21W/840 UNP/40	101 lm/W	90 lm/W	2100 lm	1850 lm
63944855	MASTER TL5 HE 21W/840 1SL/40	101 lm/W	90 lm/W	2100 lm	1850 lm
71011655	MASTER TL5 HE 21W/865 1SL/40	94 lm/W	84 lm/W	1950 lm	1725 lm
64322355	MASTER TL5 HE 28W/827 1SL/40	104 lm/W	96 lm/W	2900 lm	2675 lm

Order Code	Full Product Name	Luminous Efficacy (@	Luminous Efficacy	Luminous Flux	Luminous Flux
		Max Lumen, Rated) (Nom)	(rated) (Nom)	Luminous Flux (Nom)	(Rated) (Nom)
63946255	MASTER TL5 HE 28W/830 1SL/40	104 lm/W	96 lm/W	2900 lm	2675 lm
71004855	MASTER TL5 HE 28W/835 1SL/40	104 lm/W	96 lm/W	2900 lm	2675 lm
61090455	MASTER TL5 HE 28W/840 UNP/40	104 lm/W	96 lm/W	2900 lm	2675 lm
63948655	MASTER TL5 HE 28W/840 1SL/40	104 lm/W	96 lm/W	2900 lm	2675 lm
71015455	MASTER TL5 HE 28W/865 1SL/40	97 lm/W	90 lm/W	2700 lm	2500 lm
64324755	MASTER TL5 HE 35W/827 1SL/40	105 lm/W	94 lm/W	3650 lm	3325 lm
63950955	MASTER TL5 HE 35W/830 SLV/40	105 lm/W	94 lm/W	3650 lm	3325 lm
63952355	MASTER TL5 HE 35W/840 1SL/40	105 lm/W	94 lm/W	3650 lm	3325 lm
71018555	MASTER TL5 HE 35W/865 1SL/40	98 lm/W	87 lm/W	3400 lm	3100 lm

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