



MASTER TL5 High Output Eco

MASTER TL5 HO Eco 20=24W/840 UNP

This extremely efficient TL5 lamp (tube diameter 16 mm) saves considerable energy by simple lamp-for-lamp replacement. The TL5 HO Eco lamp is optimized for installations requiring high light output and offers excellent lumen maintenance and color rendering. Application areas vary from offices and industry to schools and retail environments.

Product data

• General Characteristics

Cap-Base	G5
Bulb	T5 [16 mm]
Life to 50% fail	25000 hr
Preheat EL,3h	
Life to 10% fail	21000 hr
Preheat EL,3h	
LSF HF Preheat	92 %
20000h Rated,3h	
LSF HF Preheat	95 %
16000h Rated,3h	
LSF HF Preheat	95 %
12000h Rated,3h	
LSF HF Preheat	97 %
8000h Rated,3h	
LSF HF Preheat	98 %
6000h Rated,3h	
LSF HF Preheat	98 %
4000h Rated,3h	
LSF HF Preheat	99 %
2000h Rated,3h	

• Electrical Characteristics

Lamp Wattage	20 W
Lamp Voltage EL	62 V
25°C	
Lamp Current EL	0.320 A
25°C	
Dimmable	Yes
Lamp Wattage EL	19.6 W
35°C	
Lamp Current EL	0.300 A
35°C	
Lamp Voltage EL	66 V
35°C	

Lamp Wattage EL	19.7 W
25°C, Rated	
Lamp Wattage EL	20 W
25°C, Nominal	

• Environmental Characteristics

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

• Light Technical Characteristics

Color Code	840 [CCT of 4000K]
Color Rendering	85 Ra8
Index	
Color Designation	Cool White
(text)	
Color Temperature	4000 K
Chromaticity Coordinate X	383 -
Chromaticity Coordinate Y	382 -
Luminous Flux Lamp	1950 Lm
EL 35°C	
Lum Efficacy Rated	84 Lm/W
HF 25°C	
Lum Efficacy Rated	98 Lm/W
HF 35°C	
LLMF HF 20000h	88 %
Rated	
LLMF HF 16000h	90 %
Rated	
LLMF HF 12000h	91 %
Rated	



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MASTER TL5 High Output Eco

LLMF HF 8000h Rated	93 %
LLMF HF 6000h Rated	94 %
LLMF HF 4000h Rated	95 %
LLMF HF 2000h Rated	96 %
Luminous Flux EL 25°C, Rated	1650 Lm
Luminous Flux EL 25°C, Nominal	1650 Lm
Design Temperature	35 C

• Product Dimensions

Base Face to Base Face A	549.0 (max) mm
Insertion Length B	553.7 (min), 556.1 (max) mm
Overall Length C	563.2 (max) mm
Diameter D	17 (max) mm

• Measuring Conditions

Calibration Current	0.300 A
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HF Generator Rated Voltage	141 V
Resistor	250 ohm

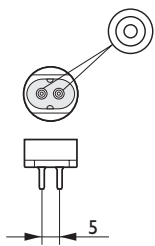
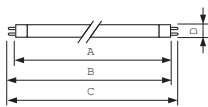
• Product Data

Order code	927989984031
Full product code	927989984031
Full product name	MASTER TL5 HO Eco 20=24W/840 UNP
Order product name	MASTER TL5 HO Eco 20=24W/840 UNP/40
Pieces per pack	1
Packing configuration	40
Packs per outerbox	40
Bar code on pack - EAN1	8711500881311
Bar code on outerbox - EAN3	8727900880861
Logistic code(s) - 12NC	927989984031
ILCOS code	FDH-20/40/1B-L/P-G5-16/550
Net weight per piece	53.000 gr

Warnings and Safety

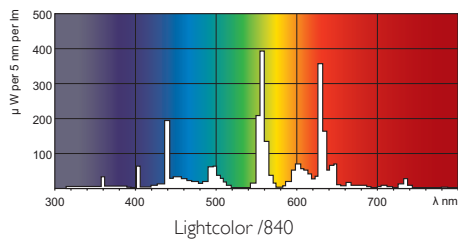
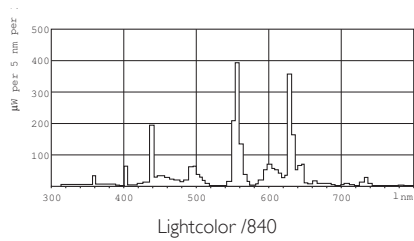
- Energy reduction is only achieved with current-controlled gear
- The lamps operate perfectly with power-controlled gear, but in that case give more light output instead of using less energy
- Depending on the technical design of the ballast the increase of light output can be up to 10 % with a fully power-controlled ballast

Dimensional drawing



Product	A (Max)	B (Min)	B (Max)	C (Max)	D (Max)
TL5 HO Eco 20=24W/840	549.0	553.7	556.1	563.2	17

Photometric data



Lamps being part of this product family comply with Commission Regulation (EC) No 245/2009 – Ecodesign requirements, applicable from 13 April 2010.

1.3 Product information requirements on lamps

- Nominal and rated lamp wattage;
- Nominal and rated lamp luminous flux;
- Rated lamp efficacy at 100 h in standard conditions (25 °C, for T5 lamps at 35 °C). For fluorescent lamps both at 50 Hz (mains frequency) operation (where applicable) and at High Frequency (> 50 Hz) operation (where applicable) for the same rated luminous flux in all cases, indicating for High Frequency operation the calibration current of the test conditions and/or the rated voltage of the HF generator with the resistance. It shall be stated in a conspicuous manner that the power dissipated by auxiliary equipment such as ballasts is not included in the power consumed by the source;
- Rated lamp Lumen Maintenance Factor at 2000 h, 4000 h, 6000 h, 8000 h, 12000 h, 16000 h and 20000 h (up to 8000 h only for new lamps on the market where no data is yet available), indicating which operation mode of the lamp was used for the test if both 50 Hz and High Frequency operation are possible;
- Rated lamp Survival Factor at 2000 h, 4000 h, 6000 h, 8000 h, 12000 h, 16000 h and 20000 h (up to 8000 h only for new lamps on the market where no data is yet available), indicating which operation mode of the lamp was used for the test if both 50 Hz and High Frequency operation are possible;
- Lamp mercury content as X.X mg;
- Colour Rendering Index (Ra) of the lamp;
- Colour temperature of the lamp;
- Ambient temperature inside the luminaire at which the lamp was designed to maximise its luminous flux. If this temperature is equal to or lower than 0 °C or equal to or higher than 50 °C it shall be stated that the lamp is not suitable for indoor use at standard room temperatures;
- For fluorescent lamps without integrated ballast, the energy efficiency index(es) of ballasts as defined in Table 17 with which the lamp can operate.
See Table 17-EuP245.pdf for Table 17 – Energy efficiency index requirements for non-dimmable ballasts for fluorescent lamps.
For more information see: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:076:0017:0044:EN:PDF>



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data subject to change