



Product Description

MASTER HPI-T Plus

Quartz metal halide lamps with clear outer bulb

Benefits

- High safety and comfort level, maintained over life
- Minimal maintenance cost
- Initial investment saving options with "Plus"-concept

Features

- Clear tubular outer bulb
- Unique 3-band technology resulting in high luminous efficacy, both initially and over long lifetime
- Renders a natural white color appearance and good color stability

Application

- Sports lighting, floodlighting of buildings and monuments, area lighting e.g. harbours and building sites, canopy lighting e.g. petrol stations, horticultural lighting

Warnings and Safety

- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- For use with control gear designed for high-pressure mercury or sodium lamps
- 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.

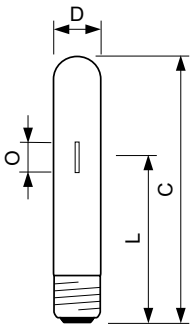
MASTER HPI-T Plus

Versions



HPI-T Plus, E39/E40

Dimensional drawing



Product	D (max)	O	L	C (max)
MASTER HPI-T Plus 250W/645 E40 1SL	47 mm	29 mm	155 mm	255 mm
MASTER HPI-T Plus 400W/643 CL 1SL	47 mm	30.5 mm	168 mm	286 mm
MASTER HPI-T Plus 250W/645 E40 1SL/12	47 mm	29 mm	155 mm	255 mm
HPI-T Plus 250W/645 E40 1SL/12	47 mm	29 mm	155 mm	255 mm
MASTER HPI-T Plus 250W/645 E40 1SL/12	47 mm	29 mm	155 mm	255 mm
MASTER HPI-T Plus 400W/645 E40 1SL/12	47 mm	30.5 mm	168 mm	286 mm
HPI-T Plus 400W/645 E40 1SL/12	47 mm	30.5 mm	168 mm	286 mm
MASTER HPI-T Plus 400W/645 E40 1SL/12	47 mm	30.5 mm	168 mm	286 mm
MASTER HPI-T Plus 400W/643 E39 1SL	47 mm	30.5 mm	165 mm	283 mm

Controls and Dimming

Dimmable	No
----------	----

General Information

Life To 50% Failures (Nom)	20000 h
Life To 5% Failures (Nom)	5000 h
Operating Position	P20

Light Technical

Color Designation	Cool White (CW)
-------------------	-----------------

Mechanical and Housing

Bulb Finish	Clear
Bulb Shape	T46

Approval and Application

MASTER HPI-T Plus

Order Code	Full Product Name	Energy	Energy	Mercury
		Consumption	Efficiency	(Hg)
		kWh/1000 h	Label (EEL)	Content (Nom)
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	269 kWh	A+	33 mg
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	429 kWh	A+	-
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	272 kWh	A	36 mg
928481300097	HPI-T Plus 250W/645 E40 1SL/12	272 kWh	A	36 mg
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	272 kWh	A	36 mg

Order Code	Full Product Name	Energy	Energy	Mercury
		Consumption	Efficiency	(Hg)
		kWh/1000 h	Label (EEL)	Content (Nom)
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	424 kWh	A	29.5 mg
928481600095	HPI-T Plus 400W/645 E40 1SL/12	424 kWh	A	29.5 mg
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	424 kWh	A	29.5 mg
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	420 kWh	-	29.5 mg

Operating and Electrical

Order Code	Full Product Name	Lamp Current (EM) (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Power (Rated) (Nom)
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	2.1 A	138 V	118 V	128 V	245 W
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	3.4 A	135 V	115 V	125 V	390 W
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	2.1 A	138 V	118 V	128 V	247 W
928481300097	HPI-T Plus 250W/645 E40 1SL/12	2.1 A	138 V	118 V	128 V	247 W
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	2.1 A	138 V	118 V	128 V	247 W
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	3.4 A	135 V	115 V	125 V	385 W
928481600095	HPI-T Plus 400W/645 E40 1SL/12	3.4 A	135 V	115 V	125 V	385 W
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	3.4 A	135 V	115 V	125 V	385 W
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	3.4 A	135 V	115 V	125 V	385 W

General Information (1/2)

Order Code	Full Product Name	Cap-Base (Nom)	Life To 10% Failures	Life To 20% Failures	LSF 12000 h	LSF 16000 h	LSF 2000 h	LSF 20000 h
			(Nom)	(Nom)	Rated	Rated	Rated	Rated
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	E40	7500 h	11000 h	76 %	63 %	99 %	50 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	E40	-	5000 h	-	-	-	-
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	E40	7500 h	11000 h	-	-	-	-
928481300097	HPI-T Plus 250W/645 E40 1SL/12	E40	7500 h	11000 h	-	-	-	-
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	E40	7500 h	11000 h	-	-	-	-
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	E40	7500 h	11000 h	-	-	-	-
928481600095	HPI-T Plus 400W/645 E40 1SL/12	E40	7500 h	11000 h	-	-	-	-
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	E40	7500 h	11000 h	-	-	-	-
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	E39	7500 h	11000 h	-	-	-	-

General Information (2/2)

Order Code	Full Product Name	LSF	LSF	LSF	System Description
		4000 h	6000 h	8000 h	
		Rated	Rated	Rated	
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	96 %	93 %	88 %	-
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	-	-	-	Horizontal Operating Position

Order Code	Full Product Name	LSF	LSF	LSF	System Description
		4000 h	6000 h	8000 h	
		Rated	Rated	Rated	
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	-	-	-	Horizontal Operating Position

MASTER HPI-T Plus

Order Code	Full Product Name	LSF	LSF	LSF	System Description
		4000 h Rated	6000 h Rated	8000 h Rated	
928481300097	HPI-T Plus 250W/645 E40 1SL/12	-	-	-	Horizontal Operating Position
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	-	-	-	Horizontal Operating Position
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	-	-	-	Horizontal Operating Position

Order Code	Full Product Name	LSF	LSF	LSF	System Description
		4000 h Rated	6000 h Rated	8000 h Rated	
928481600095	HPI-T Plus 400W/645 E40 1SL/12	-	-	-	Horizontal Operating Position
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	-	-	-	Horizontal Operating Position
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	-	-	-	Horizontal Operating Position

Luminaire Design Requirements

Order Code	Full Product Name	Bulb Temperature (Max)
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	550 °C
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	600 °C
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	550 °C
928481300097	HPI-T Plus 250W/645 E40 1SL/12	550 °C
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	550 °C

Order Code	Full Product Name	Bulb Temperature (Max)
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	600 °C
928481600095	HPI-T Plus 400W/645 E40 1SL/12	600 °C
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	600 °C
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	600 °C

Light Technical (1/3)

Order Code	Full Product Name	Chromaticity		Color Code	Correlated Color Temperature (Nom)	Color Rendering Index (Nom)	LLMF 12000 h Rated	LLMF 16000 h Rated
		Coordinate X (Nom)	Coordinate Y (Nom)					
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	365	377	645	4500 K	65	68 %	63 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	369	375	643	4300 K	65	-	-
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	365	377	645	4500 K	65	-	-
928481300097	HPI-T Plus 250W/645 E40 1SL/12	365	377	645	4500 K	65	-	-
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	365	377	645	4500 K	65	-	-
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	361	372	645	4500 K	65	-	-
928481600095	HPI-T Plus 400W/645 E40 1SL/12	361	372	645	4500 K	65	-	-
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	361	372	645	4500 K	65	-	-
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	361	372	645	4500 K	69	-	-

Light Technical (2/3)

Order Code	Full Product Name	LLMF	LLMF	LLMF	LLMF	LLMF	Lumen	Lumen	Lumen	Lumen
		2000 h Rated	20000 h Rated	4000 h Rated	6000 h Rated	8000 h Rated	Maintenance 10000 h (Nom)	Maintenance 2000 h (Min)	Maintenance 2000 h (Nom)	Maintenance 20000 h
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	90 %	60 %	82 %	77 %	73 %	-	-	-	-
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	-	-	-	-	-	75 %	80 %	90 %	-
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	-	-	-	-	-	70 %	75 %	90 %	60 %
928481300097	HPI-T Plus 250W/645 E40 1SL/12	-	-	-	-	-	70 %	75 %	90 %	60 %
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	-	-	-	-	-	70 %	75 %	90 %	60 %

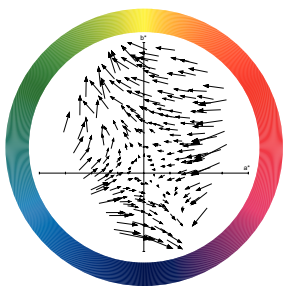
MASTER HPI-T Plus

Order Code	Full Product Name	LLMF 2000 h Rated	LLMF 20000 h Rated	LLMF 4000 h Rated	LLMF 6000 h Rated	LLMF 8000 h Rated	Lumen Maintenance 10000 h (Nom)	Lumen Maintenance 2000 h (Min)	Lumen Maintenance 2000 h (Nom)	Lumen Maintenance 20000 h
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	-	-	-	-	-	70 %	75 %	90 %	60 %
928481600095	HPI-T Plus 400W/645 E40 1SL/12	-	-	-	-	-	70 %	75 %	90 %	60 %
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	-	-	-	-	-	70 %	75 %	90 %	60 %
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	-	-	-	-	-	70 %	75 %	90 %	60 %

Light Technical (3/3)

Order Code	Full Product Name	Lumen Maintenance 5000 h (Min)	Lumen Maintenance 5000 h (Nom)	Luminous Efficacy (rated) (Nom)	Luminous Flux (Rated) (Min)	Luminous Flux (Rated) (Nom)	Ratio Scotopic/ Photopic Lumens
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	-	-	84 lm/W	-	20500 lm	1.50
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	70 %	85 %	90 lm/W	30000 lm	35000 lm	1.50
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL/12	65 %	80 %	79 lm/W	17550 lm	19500 lm	-
928481300097	HPI-T Plus 250W/645 E40 1SL/12	65 %	80 %	79 lm/W	17550 lm	19500 lm	-
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL/12	65 %	80 %	79 lm/W	17550 lm	19500 lm	-
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL/12	65 %	80 %	83 lm/W	30000 lm	32000 lm	-
928481600095	HPI-T Plus 400W/645 E40 1SL/12	65 %	80 %	83 lm/W	30000 lm	32000 lm	-
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL/12	65 %	80 %	83 lm/W	30000 lm	32000 lm	-
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	65 %	80 %	83 lm/W	30000 lm	32000 lm	-

Color Rendering Diagrams



LDCR_HPI-T_250W_400W-Colour rendering
diagram

MASTER HPI-T Plus

