



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

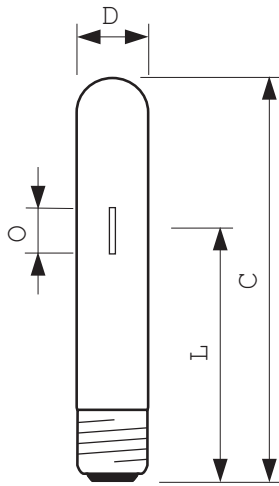
- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- For use with control gear designed for high-pressure mercury or sodium lamps

Related products



HPI-T Plus, E39/E40

Dimensional drawing



HPI-T Plus, E39/E40

Product	C (Max)	D (Max)	L (Norm)	O (Norm)
HPI-T Plus 400W/645 E40	286	47	180	40
HPI-T Plus 400W/645 E40	286	47	180	40
HPI-T Plus 250W/645 E40	257	47	158	29
HPI-T Plus 250W/645 E40	257	47	158	29
HPI-T Plus 250W/645 E40	257	47	158	29
HPI-T Plus 400W/643 E40	286	47	168	-
HPI-T Plus 250W/645 E40	255	47	155	29
HPI-T Plus 250W/645 E40	255	47	155	29
HPI-T Plus 250W/645 E40	255	47	155	29
HPI-T Plus 400W/645 E40	286	47	168	40
HPI-T Plus 400W/645 E40	286	47	168	40
HPI-T Plus 250W/645 E39	252	47	152	29
HPI-T Plus 400W/645 E39	283	47	165	40

General Characteristics (1/2)

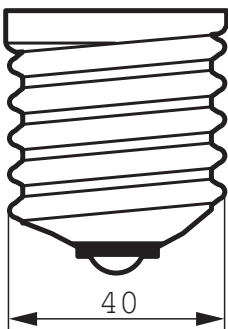
Order code	Full product name	Bulb	Bulb Finish	Cap-Base	Operating Position	System Description	Life to 10% failures	Life to 20% failures	Life to 5% failures	Life to 50% failures	LSF EM 12000h Rated, 12h cycle
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	T46	Clear	E40	p20	na	7500 hr	11000 hr	5000 hr	20000 hr	76 %
928073709278	MASTER HPI-T Plus 400W/645 E40	T46	Clear	E40	p20	na	7500 hr	11000 hr	5000 hr	20000 hr	76 %
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	T46	Clear	E40	p20	na	7500 hr	11000 hr	5000 hr	20000 hr	76 %
928076109278	MASTER HPI-T Plus 250W/645 E40	T46	Clear	E40	p20	na	7500 hr	11000 hr	5000 hr	20000 hr	76 %
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	T46	Clear	E40	p20	na	7500 hr	11000 hr	5000 hr	20000 hr	76 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	T46	Clear	E40	p20	Horizontal	hr	5000 hr	5000 hr	20000 hr	%
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	T46	Clear	E40	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	T46	Clear	E40	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%
928481300096	MASTER HPI-T Plus 250W E40 1SL	T46	Clear	E40	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	T46	Clear	E40	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%

Order code	Full product name	Bulb	Bulb Finish	Cap-Base	Operating Position	System Description	Life to 10% failures	Life to 20% failures	Life to 5% failures	Life to 50% failures	LSF EM 12000h Rated, 12h cycle
928481600094	MASTER HPI-T Plus 400W E40 1SL	T46	Clear	E40	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	T46	Clear	E39	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	T46	Clear	E39	p20	Horizontal	7500 hr	11000 hr	5000 hr	20000 hr	%

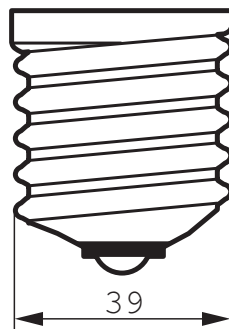
General Characteristics (2/2)

Order code	Full product name	LSF EM 16000h Rated, 12h cycle	LSF EM 20000h Rated, 12h cycle	LSF EM 2000h Rated, 12h cycle	LSF EM 4000h Rated, 12h cycle	LSF EM 6000h Rated, 12h cycle	LSF EM 8000h Rated, 12h cycle
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	63 %	50 %	99 %	96 %	93 %	88 %
928073709278	MASTER HPI-T Plus 400W/645 E40	63 %	50 %	99 %	96 %	93 %	88 %
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	63 %	50 %	99 %	96 %	93 %	88 %
928076109278	MASTER HPI-T Plus 250W/645 E40	63 %	50 %	99 %	96 %	93 %	88 %
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	63 %	50 %	99 %	96 %	93 %	88 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	%	%	%	%	%	%
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	%	%	%	%	%	%
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	%	%	%	%	%	%
928481300096	MASTER HPI-T Plus 250W E40 1SL	%	%	%	%	%	%
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	%	%	%	%	%	%
928481600094	MASTER HPI-T Plus 400W E40 1SL	%	%	%	%	%	%
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	%	%	%	%	%	%
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	%	%	%	%	%	%

Installation diagrams

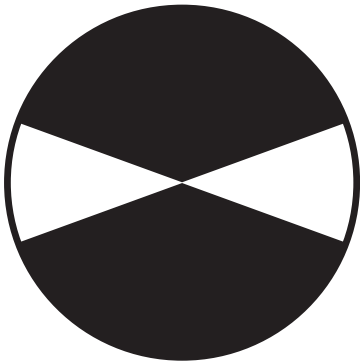


E40



E39

Installation diagrams



p20

Light Technical Characteristics (1/3)

Order code	Full product name	Color Code	Color Designation (text)	Luminous Flux Lamp EM	Chromaticity Coordinate X	Chromaticity Coordinate Y	Color Rendering Index	Lumen Maintenance 10000h	Lumen Maintenance 2000h	Lumen Maintenance 5000h	Luminous Efficacy Lamp EM
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	645	Cool White	-	361 -	372 -	65 Ra8	-	-	-	-
928073709278	MASTER HPI-T Plus 400W/645 E40	645	Cool White	-	361 -	372 -	65 Ra8	-	-	-	-
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	645	Cool White	-	365 -	377 -	65 Ra8	-	-	-	-
928076109278	MASTER HPI-T Plus 250W/645 E40	645	Cool White	-	365 -	377 -	65 Ra8	-	-	-	-
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	645	Cool White	-	365 -	377 -	65 Ra8	-	-	-	-
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	643	Cool White	35000 Lm	369 -	375 -	65 Ra8	75 %	90 %	85 %	90 Lm/W
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	645	Cool White	20500 Lm	365 -	377 -	65 Ra8	70 %	90 %	80 %	84 Lm/W
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	645	Cool White	20500 Lm	365 -	377 -	65 Ra8	70 %	90 %	80 %	84 Lm/W
928481300096	MASTER HPI-T Plus 250W E40 1SL	645	Cool White	20500 Lm	365 -	377 -	65 Ra8	70 %	90 %	80 %	84 Lm/W
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	645	Cool White	32000 Lm	361 -	372 -	65 Ra8	70 %	90 %	80 %	89 Lm/W
928481600094	MASTER HPI-T Plus 400W E40 1SL	645	Cool White	32000 Lm	361 -	372 -	65 Ra8	70 %	90 %	80 %	89 Lm/W
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	645	Cool White	20500 Lm	365 -	377 -	65 Ra8	70 %	90 %	80 %	84 Lm/W
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	645	Cool White	32000 Lm	361 -	372 -	65 Ra8	70 %	90 %	80 %	89 Lm/W

Light Technical Characteristics (2/3)

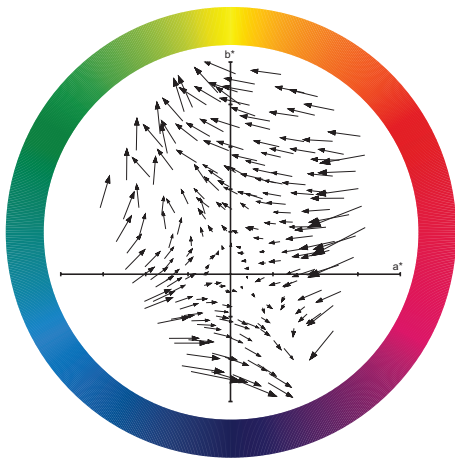
Order code	Full product name	Color Temperature	Lumen Maintenance 20000h	Lum Efficacy Rated EM 25°C	LLMF EM 20000h Rated	LLMF EM 16000h Rated	LLMF EM 12000h Rated	LLMF EM 8000h Rated	LLMF EM 6000h Rated	LLMF EM 4000h Rated	LLMF EM 2000h Rated
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	4500 K	-	84 Lm/W	60 %	63 %	68 %	73 %	77 %	82 %	90 %
928073709278	MASTER HPI-T Plus 400W/645 E40	4500 K	-	84 Lm/W	60 %	63 %	68 %	73 %	77 %	82 %	90 %
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	4500 K	-	84 Lm/W	60 %	63 %	68 %	73 %	77 %	82 %	90 %
928076109278	MASTER HPI-T Plus 250W/645 E40	4500 K	-	84 Lm/W	60 %	63 %	68 %	73 %	77 %	82 %	90 %
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	4500 K	-	84 Lm/W	60 %	63 %	68 %	73 %	77 %	82 %	90 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	4300 K	%	Lm/W	%	%	%	%	%	%	%
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%
928481300096	MASTER HPI-T Plus 250W E40 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%
928481600094	MASTER HPI-T Plus 400W E40 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	4500 K	60 %	Lm/W	%	%	%	%	%	%	%

Light Technical Characteristics (3/3)

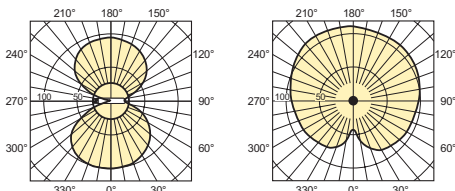
Order code	Full product name	Luminous Flux EM 25°C, Rated
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	32000 Lm
928073709278	MASTER HPI-T Plus 400W/645 E40	32000 Lm
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	20500 Lm
928076109278	MASTER HPI-T Plus 250W/645 E40	20500 Lm
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	20500 Lm
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	Lm
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	Lm

Order code	Full product name	Luminous Flux EM 25°C, Rated
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	Lm
928481300096	MASTER HPI-T Plus 250W E40 1SL	Lm
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	Lm
928481600094	MASTER HPI-T Plus 400W E40 1SL	Lm
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	Lm
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	Lm

Light technical



HPI-T 250W, 400W

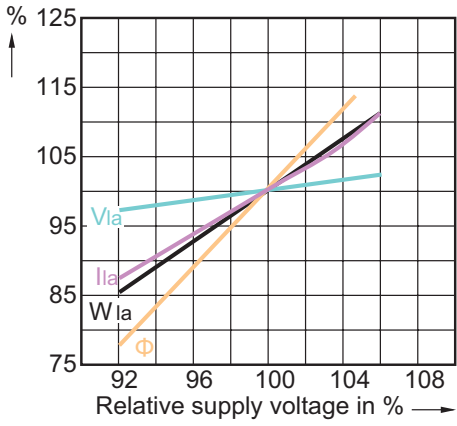


HPI-T

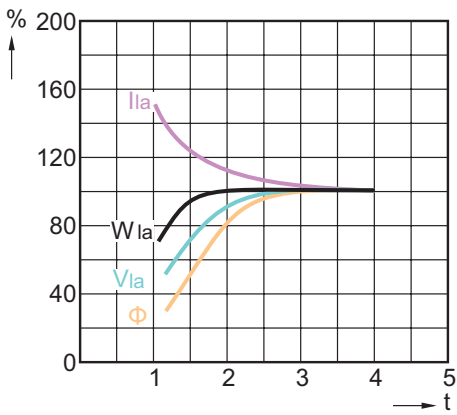
Electrical Characteristics

Order code	Full product name	Lamp Wattage	Lamp Wattage EM	Lamp Voltage	Lamp Current EM	Dimmable	Lamp Wattage EM 25°C, Rated	Lamp Wattage EM 25°C, Nominal	Ratio scotopic/ photopic lumens
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	400 W	-	125 V	3.4 A	No	382 W	400 W	1.50 -
928073709278	MASTER HPI-T Plus 400W/645 E40	400 W	-	125 V	3.4 A	No	382 W	400 W	1.50 -
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	-	128 V	2.10 A	No	245 W	250 W	1.50 -
928076109278	MASTER HPI-T Plus 250W/645 E40	250 W	-	128 V	2.10 A	No	245 W	250 W	1.50 -
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	-	128 V	2.10 A	No	245 W	250 W	1.50 -
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	400 W	390 W	125 V	3.4 A	No	W	W	1.50 -
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	245 W	128 V	2.1 A	No	W	W	-
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	245 W	128 V	2.1 A	No	W	W	-
928481300096	MASTER HPI-T Plus 250W E40 1SL	250 W	245 W	128 V	2.1 A	No	W	W	-
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	400 W	382 W	125 V	3.4 A	No	W	W	-
928481600094	MASTER HPI-T Plus 400W E40 1SL	400 W	382 W	125 V	3.4 A	No	W	W	-
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	250 W	245 W	128 V	2.1 A	No	W	W	-
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	400 W	382 W	125 V	3.4 A	No	W	W	-

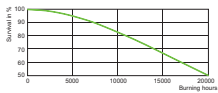
Performance diagrams



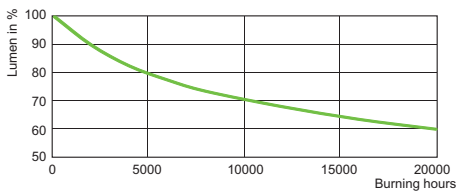
HPI-T



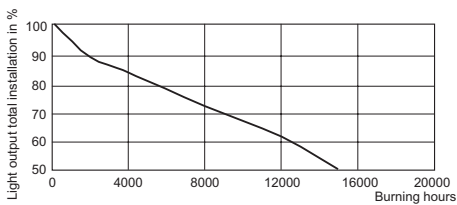
HPI-T



HPI-T



HPI-T



HPI-T

Environmental Characteristics

Order code	Full product name	Mercury (Hg) Content
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	27 mg
928073709278	MASTER HPI-T Plus 400W/645 E40	27 mg
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	33 mg
928076109278	MASTER HPI-T Plus 250W/645 E40	33 mg
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	33 mg
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	mg
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	36 mg
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	36 mg
928481300096	MASTER HPI-T Plus 250W E40 1SL	36 mg
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	29.5 mg
928481600094	MASTER HPI-T Plus 400W E40 1SL	29.5 mg
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	36 mg
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	29.5 mg

Order code	Full product name	Cap-Base Temperature	Bulb Temperature
928076109230	MASTER HPI-T Plus 250W/645 E40 1SL	250 (max) C	550 (max) C
928076109278	MASTER HPI-T Plus 250W/645 E40	250 (max) C	550 (max) C
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	250 (max) C	550 (max) C
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	250 (max) C	600 (max) C
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	250 (max) C	550 (max) C
928481300095	MASTER HPI-T Plus 250W/645 E40 1SL	250 (max) C	550 (max) C
928481300096	MASTER HPI-T Plus 250W E40 1SL	250 (max) C	550 (max) C
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	250 (max) C	600 (max) C
928481600094	MASTER HPI-T Plus 400W E40 1SL	250 (max) C	600 (max) C
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	250 (max) C	550 (max) C
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	250 (max) C	600 (max) C

Luminaire Design Requirements

Order code	Full product name	Cap-Base Temperature	Bulb Temperature
928073709230	MASTER HPI-T Plus 400W/645 E40 1SL	250 (max) C	600 (max) C
928073709278	MASTER HPI-T Plus 400W/645 E40	250 (max) C	600 (max) C



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2012, June 28
data subject to change