



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

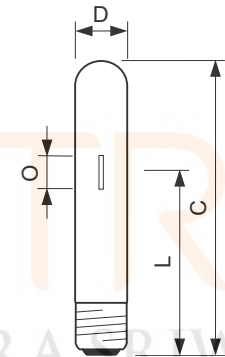
PHILIPS

Related products



HPI-T Plus, E39/E40

Dimensional drawing



MASTER HPI-T Plus 250W/645 E40 1SL

Product	C (Max)	D (Max)	L (Norm)	O (Norm)
HPI-T Plus 250W/645 E40	257	47	158	29
HPI-T Plus 400W/643 E40	286	47	168	30.5
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 250W/645 E40	255	47	155	29
HPI-T Plus 400W/645 E40	286	47	168	30.5
HPI-T Plus 400W/645 E40	286	47	168	30.5
HPI-T Plus 400W/645 E40	286	47	168	30.5
HPI-T Plus 400W/645 E40	286	47	168	30.5
HPI-T Plus 250W/645 E39	252	47	152	29
HPI-T Plus 400W/645 E39	283	47	165	30.5

General Characteristics (1/2)

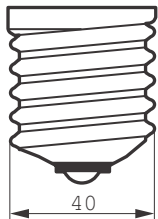
Order code	Full product name	System Description	Cap-Base	Bulb	Bulb Finish	Operating Position	Life to 5% failures	Life to 10% failures	Life to 20% failures	Life to 50% failures	LSF EM 2000h Rated, 12h cycle
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	na	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	99 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	hr	5000 hr	20000 hr	%
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%

Order code	Full product name	System Description	Cap-Base	Bulb	Bulb Finish	Operating Position	Life to 5% failures	Life to 10% failures	Life to 20% failures	Life to 50% failures	LSF EM 2000h Rated, 12h cycle
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	Horizontal	E40	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	Horizontal	E39	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	Horizontal	E39	T46	Clear	p20	5000 hr	7500 hr	11000 hr	20000 hr	%

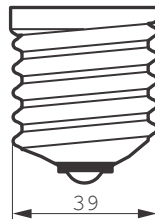
General Characteristics (2/2)

Order code	Full product name	LSF EM 4000h Rated, 12h cycle	LSF EM 6000h Rated, 12h cycle	LSF EM 8000h Rated, 12h cycle	LSF EM 12000h Rated, 12h cycle	LSF EM 16000h Rated, 12h cycle	LSF EM 20000h Rated, 12h cycle
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	96 %	93 %	88 %	76 %	63 %	50 %
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	%	%	%	%	%	%
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	%	%	%	%	%	%
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	%	%	%	%	%	%
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	%	%	%	%	%	%
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	%	%	%	%	%	%
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	%	%	%	%	%	%
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	%	%	%	%	%	%
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	%	%	%	%	%	%
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	%	%	%	%	%	%
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	%	%	%	%	%	%
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	%	%	%	%	%	%

Installation diagrams

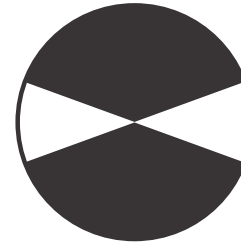


E40



E39

Installation diagrams



p20

Light Technical Characteristics (1/3)

Order code	Full product name	Color Code	Color Rendering Index	Color Designation (text)	Color Temperature	Luminous Flux Lamp EM	Luminous Flux EM 25°C, Rated	Luminous Efficacy Lamp EM	Lum Efficacy Rated EM 25°C	Lumen Maintenance 2000h	Lumen Maintenance 5000h
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	-	20500 Lm	-	84 Lm/W	-	-
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	643	65 Ra8	Cool White	4300 K	35000 Lm	Lm	90 Lm/W	Lm/W	90 %	85 %
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	20500 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	20500 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	20500 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	20500 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	32000 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	32000 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	32000 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	645	65 Ra8	Cool White	4500 K	32000 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	645	69 Ra8	Cool White	4500 K	20500 Lm	Lm	84 Lm/W	Lm/W	90 %	80 %
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	645	69 Ra8	Cool White	4500 K	32000 Lm	Lm	89 Lm/W	Lm/W	90 %	80 %

Light Technical Characteristics (2/3)

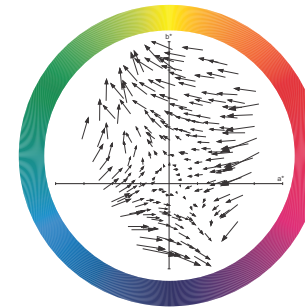
Order code	Full product name	Lumen Maintenance 10000h	Lumen Maintenance 20000h	LLMF EM 2000h Rated	LLMF EM 4000h Rated	LLMF EM 6000h Rated	LLMF EM 8000h Rated	LLMF EM 12000h Rated	LLMF EM 16000h Rated	LLMF EM 20000h Rated	Chromaticity Coordinate X
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	-	-	90 %	82 %	77 %	73 %	68 %	63 %	60 %	365 -
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	75 %	%	%	%	%	%	%	%	%	369 -
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	365 -
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	365 -
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	365 -
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	365 -
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	361 -
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	361 -
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	361 -
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	70 %	60 %	%	%	%	%	%	%	%	361 -
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	70 %	60 %	%	%	%	%	%	%	%	365 -
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	70 %	60 %	%	%	%	%	%	%	%	361 -

Light Technical Characteristics (3/3)

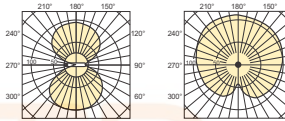
Order code	Full product name	Chromaticity Coordinate Y
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	377 -
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	375 -
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	377 -
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	377 -
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	377 -
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	377 -
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	372 -

Order code	Full product name	Chromaticity Coordinate Y
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	372 -
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	372 -
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	372 -
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	377 -
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	372 -

Light technical



HPI-T 250W, 400W

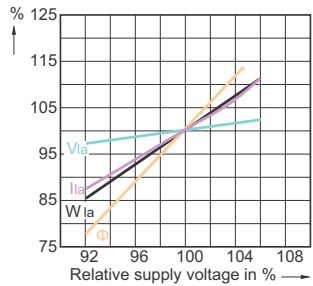


HPI-T

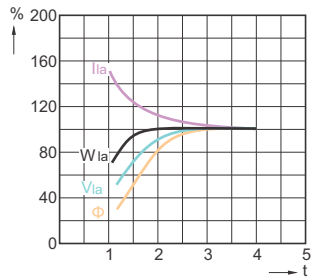
Electrical Characteristics

Order code	Full product name	Lamp Wattage	Lamp Wattage EM	Lamp Wattage EM 25°C, Nominal	Lamp Wattage EM 25°C, Rated	Lamp Voltage	Lamp Current EM	Dimmable	Ratio scotopic/ photopic lumens
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	250 W		250 W	245 W	128 V	2.10 A	No	1.50 -
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	400 W	390 W	W	W	125 V	3.4 A	No	1.50 -
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	245 W	W	W	128 V	2.1 A	No	-
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	245 W	W	W	128 V	2.1 A	No	-
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	245 W	W	W	128 V	2.1 A	No	-
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	250 W	245 W	W	W	128 V	2.1 A	No	-
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	400 W	382 W	W	W	125 V	3.4 A	No	-
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	400 W	382 W	W	W	125 V	3.4 A	No	-
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	400 W	382 W	W	W	125 V	3.4 A	No	-
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	400 W	382 W	W	W	125 V	3.4 A	No	-
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	250 W	245 W	W	W	128 V	2.1 A	No	-
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	400 W	382 W	W	W	125 V	3.4 A	No	-

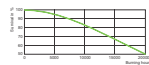
Performance diagrams



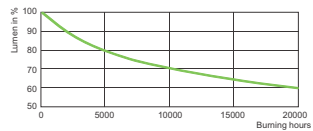
HPI-T



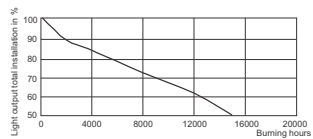
HPI-T



HPI-T



HPI-T



HPI-T

MANTRA
PT. MANTRA WIRA SRIWIJAYA

Environmental Characteristics

Order code	Full product name	Energy Efficiency Label (EEL)	Mercury (Hg) Content	Energy consumption kWh/1000h
928076109299	MASTER HPI-T Plus 250W/645 E40 1SL	A+	33 mg	269 kWh
928473709299	MASTER HPI-T Plus 400W/643 CL 1SL	A+	mg	429 kWh
928481300092	MASTER HPI-T Plus 250W/645 E40 1SL	A+	36 mg	269 kWh
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	A+	36 mg	269 kWh
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	A+	36 mg	269 kWh
928481300098	MASTER HPI-T Plus 250W/645 E40 1SL	A+	36 mg	269 kWh
928481600092	MASTER HPI-T Plus 400W/645 E40 1SL	A+	29.5 mg	420 kWh
928481600094	MASTER HPI-T Plus 400W/645 E40 1SL	A+	29.5 mg	420 kWh
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	A+	29.5 mg	420 kWh
928481600096	MASTER HPI-T Plus 400W/645 E40 1SL	A+	29.5 mg	420 kWh
928483400191	MASTER HPI-T Plus 250W/643 E39 1SL	-	36 mg	-
928483500191	MASTER HPI-T Plus 400W/643 E39 1SL	-	29.5 mg	-

Luminaire Design Requirements

Order code	Full product name	Cap-Base Temperature	Bulb Temperature
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
928481300096	MASTER HPI-T Plus 250W/645 E40 1SL	250 (max) C	550 (max) C
928481300097	MASTER HPI-T Plus 250W/645 E40 1SL	250 (max) C	550 (max) C
928481300098	MASTER HPI-T Plus 250W/645 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/645 E40 1SL	250 (max) C	600 (max) C
928481600095	MASTER HPI-T Plus 400W/645 E40 1SL	250 (max) C	600 (max) C
928481600096	MASTER HPI-T Plus 400W/645 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



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www.philips.com/lighting

2013, November 8
data subject to change