

POWERSTAR[®] HQI[®]-T

Technical Information

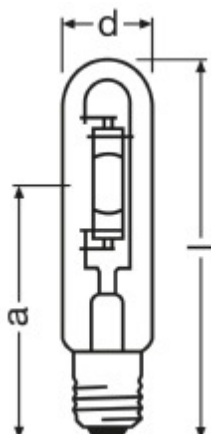


POWERSTAR[®] HQI[®]-T

General product description

- Metal halide lamp POWERSTAR® HQI® with quartz technology
- Neutral white light N, daylight D and coloured lamps
- UV filter technology

Basic technical description



Product reference	Nominal lamp wattage	Cap	Cor-related colour temp	Comp. Cap. @50hz, cos φ ≈0.9	Light colour code	Length max. (l)	Diameter (d)	Weight per piece	Light centre length (a)	Typical lamp voltage ¹	Typical lamp current ¹
	[W]		[K]	[μF]		[mm]	[mm]	[g]	[mm]	[V]	[A]
HQI-T 250/D/PRO	250	E40	5500	32	960	226	46	150.0	150	98	3.0
HQI-T 400/N	400	E40	3700	45	742	273	46	179.4	175	126	3.9
HQI-T 400 GREEN	400	E40	monochro	35	n.a.	273	46	179.0	175	130	3.6
HQI-T 400 BLUE	400	E40	monochro	35	n.a.	273	46	176.0	175	117	3.6
HQI-T 400 MAGENTA	400	E40	monochro	35	n.a.	273	46	191.0	175	107	4.2
HQI-BT 400/D/PRO	400	E40	5500	45	960	285	62	200.0	175	115	4.0

Performance specification²

Product reference	Rated lamp wattage	Rated system wattage ³	Luminous flux	Luminous efficacy	Colour rendering index Ra	Colour rendering level	Average life (B50) [h]
	[W]	[W]	[lm]	[lm/W]			
HQI-T 250W/D/PRO	250	n.a.	19000	76	92	1A	12000
HQI-T 400W/N	448	n.a.	40000	90	62	2B	12000
HQI-T 400W GREEN	360	n.a.	Not relevant	Not relevant	Not relevant	Not relevant	6000
HQI-T 400W BLUE	360	n.a.	Not relevant	Not relevant	Not relevant	Not relevant	6000
HQI-T 400W MAGENTA	400	n.a.	Not relevant	Not relevant	Not relevant	Not relevant	6000
HQI-BT 400W/D/PRO	420	n.a.	34000	81	92	1A	16000

¹ Refers to 50 Hz operation with a reference electromagnetic ballast (IEC 60923).

² The specified values refer to 50 Hz operation with electromagnetic control gear at rated wattage, unless otherwise stated. They refer to horizontal burning position, in line with IEC 61167. Other burning positions may result in differing values.

³ With OSRAM POWERTRONIC PTi, PT-FIT or PTo

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Product reference	Lamp lumen maintenance factor (LLMF) vs. operation hours					
	2000h	4000h	6000h	8000h	12000h	16000h
HQI-T 250W/D/PRO	84%	76%	74%	72%	68%	-
HQI-T 400W/N	85%	75%	68%	65%	62%	-
HQI-T 400W GREEN	not relevant	not relevant	not relevant	-	-	-
HQI-T 400W BLUE	not relevant	not relevant	not relevant	-	-	-
HQI-T 400W MAGENTA	not relevant	not relevant	not relevant	-	-	-
HQI-BT 400W/D/PRO	83%	76%	70%	65%	55%	50%

Product reference	Lamp survival factor ⁴ (LSF) vs. operation hours					
	2000h	4000h	6000h	8000h	12000h	16000h
HQI-T 250W/D/PRO	95%	90%	80%	70%	50%	-
HQI-T 400W/N	99%	98%	93%	83%	50%	-
HQI-T 400W GREEN	81%	68%	56%	-	-	-
HQI-T 400W BLUE	85%	71%	46%	-	-	-
HQI-T 400W MAGENTA	87%	79%	77%	-	-	-
HQI-BT 400W/D/PRO	99%	98%	95%	90%	80%	50%

Operation conditions

Product reference	Burning position	Max. permitted outer bulb temperature [°C]	Max. permitted base edge temperature [°C]	Ignition voltage min. / max. ⁵ [kV]	Required control gear ⁶	Suitable OSRAM electronic control gear	Dimming
HQI-T 250W/D/PRO	universal	400	250	4 / 5	CCG	n.a.	Not allowed ⁷
HQI-T 400W/N	p45	500	250	4 / 5	CCG	n.a.	Not allowed
HQI-T 400W GREEN	p55	500	250	4 / 5	CCG	n.a.	Not allowed
HQI-T 400W BLUE	p55	500	250	4 / 5	CCG	n.a.	Not allowed
HQI-T 400W MAGENTA	p55	500	250	4 / 5	CCG	n.a.	Not allowed
HQI-BT 400W/D/PRO	universal	400	250	4 / 5	CCG	n.a.	Not allowed

⁴ Indicates the percentage of operational lamps after a given period of operation time.

⁵ This limit is for safety reasons.

⁶ ECG stands for low frequency square wave electronic ballast. See the respective lamp data sheet in IEC 61167 and Annexes G and H, therein.

CCG stands for electromagnetic ballast (see IEC 61347).

⁷ Depending on the dimming level both correlated colour temperature and colour rendering index Ra may substantially change. Average life may not increase.

Safety, materials and environment

Product description	Typical specific effective radiant UV power [mW/1000 lm]	Typical mercury content [mg]
HQI-T 250W/D/PRO	<2	18
HQI-T 400W/N	<2	52
HQI-T 400W GREEN	<2	52
HQI-T 400W BLUE	<2	53
HQI-T 400W MAGENTA	<2	52
HQI-BT 400W/D/PRO	<2	59

- Compliant with safety specifications according to EN 62035
- Compliant with RoHS.
- Only for luminaires with protective shield according to IEC 60598-1
- For operation with an electromagnetic ballast⁸ a protection against rectifying effect at end-of-life required
- Staring to operating light source to be avoided because of high brightness

Energy labelling⁹

Product description	Energy efficiency class	Weighted energy consumption E _c [kWh/1000h]
HQI-T 250W/D/PRO	A	275
HQI-T 400W/N	A+	493
HQI-T 400W GREEN	A+	407
HQI-T 400W BLUE	C	423
HQI-T 400W MAGENTA	B	484
HQI-BT 400W/D/PRO	A	462

Logistics data

Product description	ILCOS	EAN 10	EAN 40	Standard pack quantity
HQI-T 250W/D/PRO	MT/UB-250/52/1A-H-E40-46/225	4008321677846	4008 321677853	12
HQI-T 400W/N	MT/UB-400/35=40/2B-H-E40-46/273/p45	4008321526786	4008321526793	12
HQI-T 400W GREEN	MT/UB-400/35=40/2B-H-E40-46/273/p45	4008321526847	4008321526854	12
HQI-T 400W BLUE	MT/UB-400/35=40/2B-H-E40-46/273/p45	4008321526861	4008321526878	12
HQI-T 400W MAGENTA	MT/UB-400/35=40/2B-H-E40-46/273/p45	4008321526885	4008321526892	12
HQI-BT 400W/D/PRO	MT/UB-400/35=40/2B-H-E40-46/273/p45	4008321677860	4008 321677877	12

⁸ See IEC 61347.

⁹ According to Regulation (EU) No 874/2012 of July 12, 2012

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Typical spectral power distribution

Light colour code	Fig. no.
D/PRO	1
N	2
GREEN	3
BLUE	4
MAGENTA	

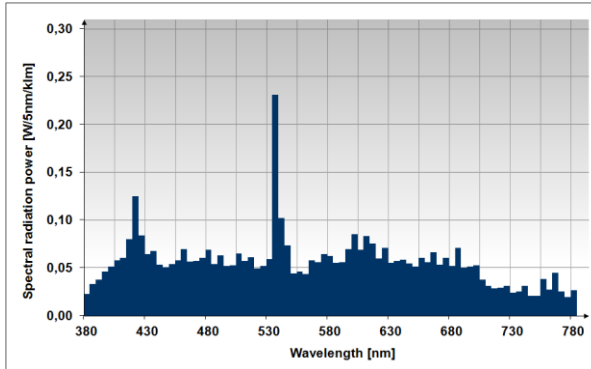


Fig 1

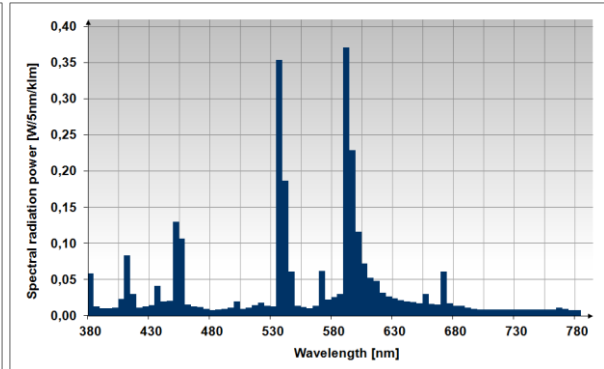


Fig 2

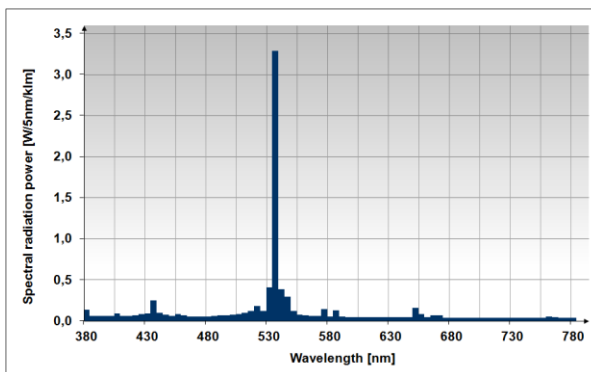


Fig 3

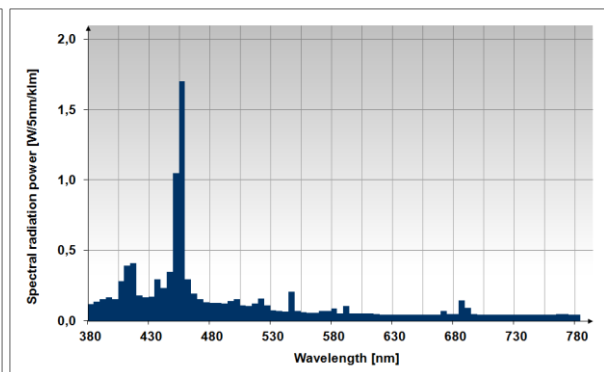


Fig 4

References

Reference	
Brochure "Metal halide lamps. Instructions for the use and application"	www.osram.com
Brochure "High Intensity Discharge lamps. Technical information on reducing the wattage"	www.osram.com
Ray data (e.g. ASAP, SPEOS, LightTools)	available on request
3D data (e.g. Parasolid, STEP)	available on request
System ⁺ guarantee	level 3C, see www.osram.com