

# POWERSTAR® HQI®-TS EXCELLENCE

Technical Information

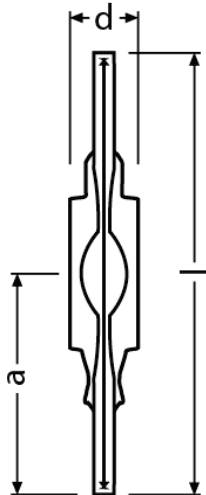


POWERSTAR® HQI®-TS EXCELLENCE

## General product description

- Metal halide lamp with POWERSTAR® HQI® with quartz technology
- UV filter technology
- Warm white light WDL, neutral white light NDL, daylight D and cool daylight CD

## Basic technical description



Product reference	Nominal lamp wattage [W]	Cap RX7s	Cor-related color temp [K]	Comp. Cap. @50hz, cos φ ≈0.9 [μF]	Light color code	Length max. (l) [mm]	Dia-meter (d) [mm]	Weight per piece [g]	Light centre length (a) [mm]	Typical lamp voltage <sup>1</sup> [V]	Typical lamp current <sup>1</sup> [A]
HQI-TS 70W/WDL EXCELLENCE	70	RX7s	3300	12	630	117	19	15	57	98	0.9
HQI-TS 70W/NDL EXCELLENCE	70	RX7s	4200	12	742	117	19	17	57	93	0.9
HQI-TS 70W/D EXCELLENCE	70	RX7s	5350	12	753	117	19	17	57	92	0.9
HQI-TS 70W/CD EXCELLENCE	70	RX7s	6500	12	765	117	19	17	57	87	0.9
HQI-TS 150W/WDL EXCELLENCE	150	RX7s-24	3100	20	730	135	23	22	66	93	1.8
HQI-TS 150W/NDL EXCELLENCE	150	RX7s-24	4200	20	842	135	23	22	66	95	1.8
HQI-TS 150W/D EXCELLENCE	150	RX7s-24	5500	20	855	135	23	22	66	100	1.8
HQI-TS 150W/CD EXCELLENCE	150	RX7s-24	6500	20	865	135	23	22	66	100	1.8

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

## Performance specification<sup>2</sup>

Product reference	Rated lamp wattage	Rated system wattage <sup>3</sup>	Luminous flux	Luminous efficacy	Colour rendering index Ra	Colour rendering level	Average life (B50) [h]
	[W]	[W]	[lm]	[lm/W]			
HQI-TS 70W/WDL EXCELLENCE	78	80	5925	76	67	2B	12000
HQI-TS 70W/NDL EXCELLENCE	78	80	6500	83	78	2A	12000
HQI-TS 70W/D EXCELLENCE	78	80	6200	80	75	2A	12000
HQI-TS 70W/CD EXCELLENCE	75	80	5530	74	76	2A	12000
HQI-TS 150W/WDL EXCELLENCE	150	160	12000	80	70	2A	12000
HQI-TS 150W/NDL EXCELLENCE	150	160	12500	83	80	1B	12000
HQI-TS 150W/D EXCELLENCE	150	160	13000	86	81	1B	12000
HQI-TS 150W/CD EXCELLENCE	150	160	12500	83	81	1B	12000

Product reference	Lamp lumen maintenance factor (LLMF) vs. operation hours				
	2000h	4000h	6000h	8000h	12000h
HQI-TS 70W/WDL EXCELLENCE	68%	64%	56%	50%	45%
HQI-TS 70W/NDL EXCELLENCE	92%	90%	85%	78%	73%
HQI-TS 70W/D EXCELLENCE	95%	93%	85%	82%	75%
HQI-TS 70W/CD EXCELLENCE	95%	93%	85%	82%	75%
HQI-TS 150W/WDL EXCELLENCE	79%	75%	67%	60%	50%
HQI-TS 150W/NDL EXCELLENCE	86%	84%	80%	77%	73%
HQI-TS 150W/D EXCELLENCE	86%	84%	77%	74%	70%
HQI-TS 150W/CD EXCELLENCE	86%	84%	77%	74%	70%

Product reference	Lamp survival factor <sup>4</sup> (LSF) vs. operation hours				
	2000h	4000h	6000h	8000h	12000h
HQI-TS 70W/WDL EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 70W/NDL EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 70W/D EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 70W/CD EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 150W/WDL EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 150W/NDL EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 150W/D EXCELLENCE	95%	90%	85%	80%	50%
HQI-TS 150W/CD EXCELLENCE	95%	90%	85%	80%	50%

<sup>2</sup> 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.

<sup>3</sup> With OSRAM POWERTRONIC PTi, PT-FIT or PTo

<sup>4</sup> Indicates the percentage of operational lamps after a given period of operation time.

Edition December 3, 2013; replaces edition August 30, 2013. Subject to change without notice. Errors and omissions excepted. Make sure to use the most recent edition.

## Operation conditions

Product reference	Burning position	Max. permitted outer bulb temperature [°C]	Max. permitted pinch Temperature [°C]	Ignition voltage min. <sup>5</sup> / max. <sup>6</sup> [kV]	Required control gear <sup>7</sup>	Suitable OSRAM electronic control gear	Dimming
HQI-TS 70/WDL EXCELLENCE	p45	500	280	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 70/NDL EXCELLENCE	p45	500	280	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 70/D EXCELLENCE	p45	500	280	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 70/CD EXCELLENCE	p45	500	280	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 150/WDL EXCELLENCE	p45	650	350	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 150/NDL EXCELLENCE	p45	650	350	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 150/D EXCELLENCE	p45	650	350	3.6 / 25	ECG, CCG	PTi, PTo	not allowed
HQI-TS 150/CD EXCELLENCE	p45	650	350	3.6 / 25	ECG, CCG	PTi, PTo	not allowed

## Safety, materials and environment

Product description	Typical specific effective radiant UV power [mW/1000 lm]	Typical mercury content [mg]
HQI-TS 70W/WDL EXCELLENCE	<2	12.6
HQI-TS 70W/NDL EXCELLENCE	<2	10.6
HQI-TS 70W/D EXCELLENCE	<2	9.9
HQI-TS 70W/CD EXCELLENCE	<2	9.3
HQI-TS 150W/WDL EXCELLENCE	<2	16.7
HQI-TS 150W/NDL EXCELLENCE	<2	12.1
HQI-TS 150W/D EXCELLENCE	<2	12.1
HQI-TS 150W/CD EXCELLENCE	<2	12.2

- 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 ballast<sup>8</sup> a protection against rectifying effect at end-of-life required
- Staring to operating light source to be avoided because of high brightness

<sup>5</sup> For superimposed ignition with square wave electronic ballast 3.0 kV are sufficient.

<sup>6</sup> This limit is for safety reasons.

<sup>7</sup> 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).

<sup>8</sup> See IEC 61347.

## Energy labelling<sup>9</sup>

Product description	Energy efficiency class	Weighted energy consumption E <sub>c</sub> [kWh/1000h]
HQI-TS 70W/WDL EXCELLENCE	A	86
HQI-TS 70W/NDL EXCELLENCE	A	86
HQI-TS 70W/D EXCELLENCE	A	86
HQI-TS 70W/CD EXCELLENCE	A	83
HQI-TS 150W/WDL EXCELLENCE	A	165
HQI-TS 150W/NDL EXCELLENCE	A	165
HQI-TS 150W/D EXCELLENCE	A+	165
HQI-TS 150W/CD EXCELLENCE	A	165

## Logistics data

Product description	ILCOS	EAN 10	EAN 40	Standard pack quantity
HQI-TS 70W/WDL EXCELLENCE	MD/UB-70/630-H/E/SL-RX7s-19/117/H	4008321678300	4008321678317	12
HQI-TS 70W/NDL EXCELLENCE	MD/UB-70/742-H/E/SL- RX7s-19/117/H	4008321678324	4008321678331	12
HQI-TS 70W/D EXCELLENCE	MD/UB-70/753-H/E/SL- RX7s-19/117/H	4008321678348	4008321678355	12
HQI-TS 70W/CD EXCELLENCE	MD/UB-70/765-H/E/SL- RX7s-19/117/H	4008321624758	4008321624765	12
HQI-TS 150W/WDL EXCELLENCE	MD/UB-150/730-H/E/SL-RX7s=24-23/135/H	4008321678362	4008321678379	12
HQI-TS 150W/NDL EXCELLENCE	MD/UB-150/842-H/E/SL-RX7s=24-23/135/H	4008321678386	4008321678393	12
HQI-TS 150W/D EXCELLENCE	MD/UB-150/855-H/E/SL-RX7s=24-23/135/H	4008321678409	4008321678416	12
HQI-TS 150W/CD EXCELLENCE	MD/UB-150/865-H/E/SL-RX7s=24-23/135/H	4008321624789	4008321624796	12

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

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## Typical spectral power distribution

Light colour code	Fig. no.
WDL	1
NDL	2
D	3
CD	4

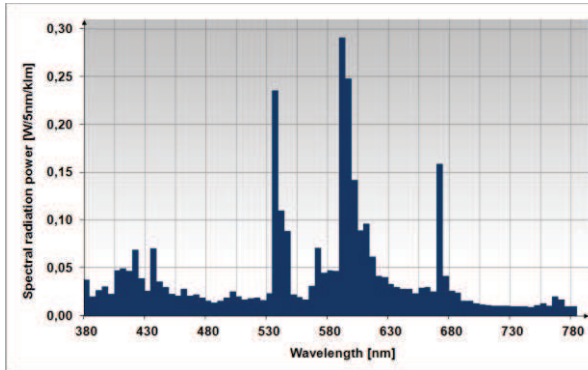


Fig 1

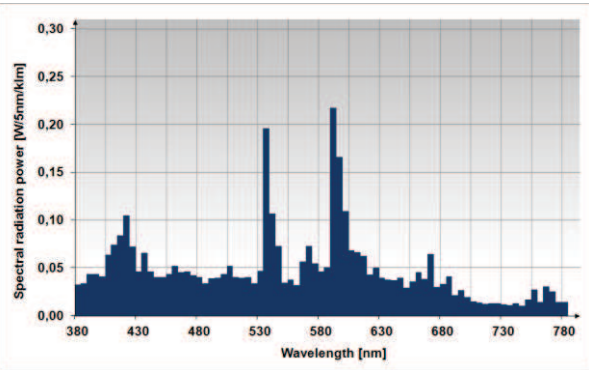


Fig 2

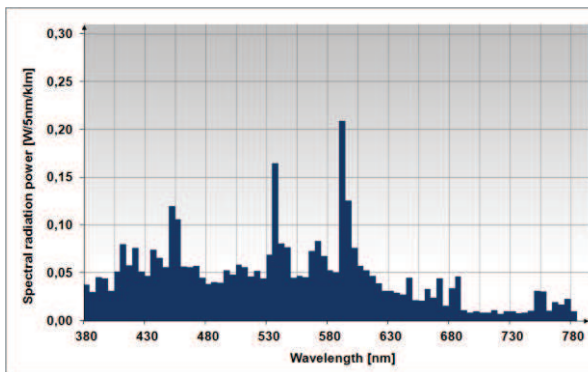


Fig 3

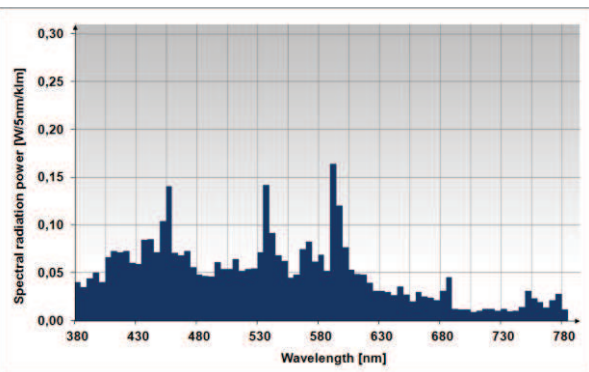


Fig 4

## References

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