



Whatever your lamps
destination is –
we have the right lamp.

The POWERSTAR® HQI® range

SEE THE WORLD IN A NEW LIGHT

OSRAM





Straight to the point: POWERSTAR® HQI®

POWERSTAR® HQI® metal halide lamps are perfect for all applications in which special attention is given to an optimum balance between quality of light on the one hand and economy on the other.

- They combine intense light with excellent colour rendering
- As point light sources, they offer excellent directability and high luminaire efficiency
- They provide brilliant economy and long life
- They are available in an impressive range
 - Wattages from 70 to 400 W
 - Three basic shapes (T, TS, E)
 - Four light colours (WDL, NDL, N, D)

In view of their obvious benefits, POWERSTAR® HQI® open up a wide range of applications, particularly in professional sectors where the requirements are many and varied. For example, they are used for

- prestige general lighting
- powerful accent lighting
- shop lighting
- lighting in the work place
- trade fair lighting
- architectural lighting
- industrial and commercial lighting
- street and park lighting

Four light colours – excellent colour rendering

Light colour plays an important role in shop lighting and in lighting for rooms that are designed to impress. The right light colour helps create a positive atmosphere and contribute to sales success. OSRAM therefore offers HQI® metal halide lamps in four different light colours.

Warm White DE LUXE (WDL)

The light colour that is warm and welcoming but still cool enough to display the benefits of brilliant white halogen light in all its glory. It is therefore ideal for combining with other types of halogen light.

Neutral White DE LUXE (NDL)

The universal light colour at 4200 K with very good colour rendering. White and coloured objects come to life in its cool light. Light colour NDL is the most versatile light colour for all types of sales lighting and is excellent for high-quality outdoor spotlighting and for mixed lighting with daylight.

Neutral White (N)

High initial luminous flux and colour stability are the compelling reasons for selecting this light colour. With a colour temperature of between 4000 K and 5000 K, this light colour is above all used in industrial and commercial lighting.

Daylight (D)

The fresh light colour that brings daylight and correct colour rendering indoors. A colour temperature of more than 5000 K makes colours look as vibrant as they do outdoors, gives reflective surfaces a fascinating brilliance, makes whites radiate and adds sparkle.





Double-ended and restartable whilst still hot: POWERSTAR® HQI®-TS

The double-ended POWERSTAR® HQI® TS 70, 150, 250 and 400 W lamps are available in Warm White DE LUXE, Neutral White DE LUXE and Daylight. Lamps with ≤ 250 W also have a UV-reducing outer bulb, so both the Warm White DE LUXE and Neutral White DE LUXE light colours are perfect for all combinations of light from halogen lamps, incandescent lamps and daylight.

Not only can HQI®-TS lamps be used in spotlights, they are ideal for indirect luminaires. With a suitable igniter the lamps can also be instantly restarted whilst still being hot.



Single-ended and super-compact: POWERSTAR® HQI®-T

The single-ended POWERSTAR® HQI®-T 70 and 150 W lamps are among the most compact metal halide lamps in the world with a length of only 84 mm and an average diameter of 25 mm. Their Warm White DE LUXE and Neutral White DE LUXE light colours combine beautifully with tungsten-halogen lamps such as HALOSTAR®. And of course there is Neutral White DE LUXE that goes superbly with daylight. With their single-ended design and clear outer bulb, HQI®-T lamps are particularly suitable for use in rotationally symmetrical reflectors where they can provide a highly focused beam for display lighting for example.

POWERSTAR® HQI®-T 70 to 400 W lamps are equipped with UV-reducing outer bulbs.





Clear bulbs for demonstration only. Normally coated white.

High power for open luminaires: POWERSTAR® HQI®-E/P 250 and 400 W

POWERSTAR® HQI®-E/P lamps are available in two wattages, 250 and 400 W, and are the first lamps of their class to meet the strict criteria of the planned IEC standard for operation in open luminaires. They are packed with the latest safety features:

- Thicker outer bulb wall
- Protective glass tube around the discharge vessel
- Protective glass tube with wire spiral for added safety

Thanks to the POWERSTAR® HQI®-E/P, safe open luminaires that comply with all the relevant standards can now be designed and built without any temperature problems, costly covers or complicated constructions. Replacing and upgrading existing luminaires and systems will be just as quick and easy. These innovative ellipsoidal metal halide lamps meet the UV standard ($UV \leq 2 \text{ mW/Klm}$) and thanks to identical electrical data can be directly interchanged with other HQI®-E lamps with E40 bases.



The compact lamp for open luminaires: POWERSTAR® HQI®-E 70 to 150 W

The more compact POWERSTAR® HQI®-E ellipsoidal lamps (70, 100 and 150 W) are also approved for use in open unshielded luminaires. With this lamp, the function of the luminaire shield is performed by an integrated glass tube.

Their E27 screw bases and suitability for use as free-burning lamps means that relamping is quick and easy. With open luminaires there is no problem of dust build-up on the shield. POWERSTAR® HQI®-E lamps therefore provide the basis for new low-maintenance lighting solutions.

The HQI®-E is particularly suitable for rotationally symmetrical reflectors in recessed ceiling downlights for general lighting in factories, offices, warehouses and trade fair halls.

Ideal for enclosed luminaires: POWERSTAR® HQI®-E 250 and 400 W

POWERSTAR® HQI®-E lamps in the higher wattages of 250 and 400 W are the best possible alternatives for all applications in which it is not essential for the lamps to be used in open luminaires but higher luminous efficacies are required than can be achieved with the P versions.



Impressive economy and extremely long life

Thanks to their high luminous efficacy, HQI® lamps offer considerable savings on electricity costs. Their long average life of 9000 hours also contributes to their overall economy. These lamps are economical when compared to other modern light sources. Further advantages can be achieved when these lamps are used in conjunction with electronic control gear (such as POWERTRONIC® from OSRAM for HQI® lamps). HQI® lamps are also available in higher wattages, which reduces the number of luminaires needed even further. This in turn makes the installation even more cost-effective.

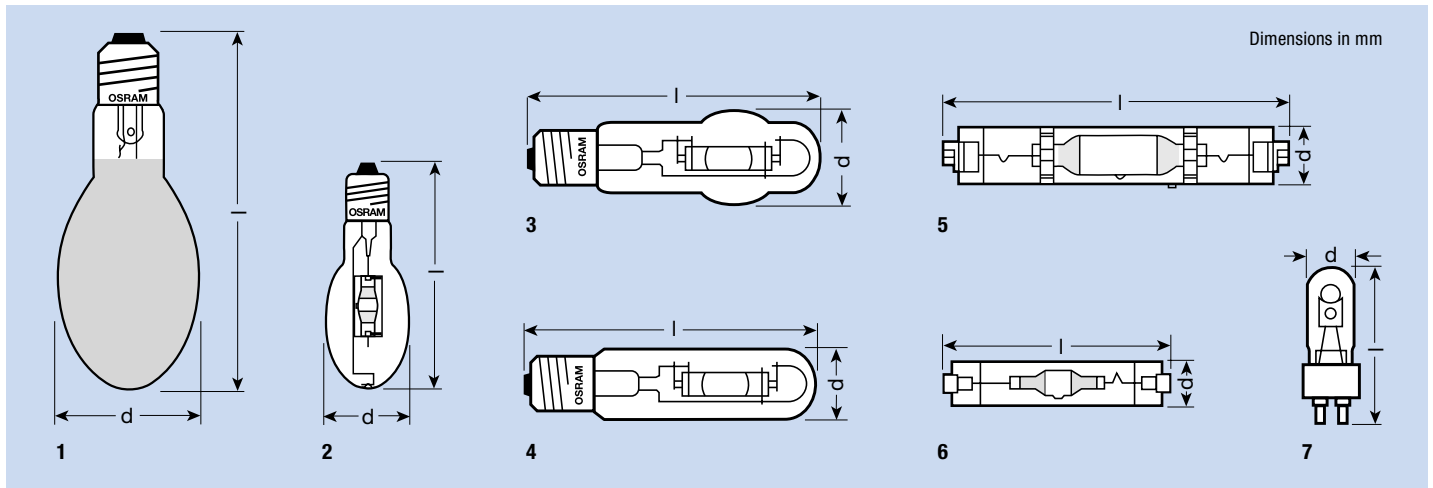
Cost/benefit analysis

based on an installation with a lighting requirement of 100,000 lm, an annual operating time of 4000 hours and an electricity price of 0.1 €/KWh

	HALOSTAR IRC 50 W	DULUX T/E 32 W	DULUX T/E 42 W	HQI-T 70 W/WDL	HQI-T 150 W/WDL
Luminous flux per lamp	1200 lm	2400 lm	3200 lm	5200 lm	13000 lm
No. of lamps	84	42	32	20	8
Power consumption incl. ECG	53 W	36 W	46 W	80 W	163 W
Average lamp life	4000 hours	10000 hours	10000 hours	9000 hours	9000 hours
Energy costs per year	1781 €	605 €	589 €	640 €	522 €
Percentage comparison	100%	34%	33%	36%	29%



Technical Data



Dimensions in mm

POWERSTAR® HQI®-TS												
	70 W/WDL	70 W/NDL	70 W/D	150 W/WDL	150 W/NDL	150 W/D	250 W/WDL	250 W/NDL	250 W/D	400 W/NDL	400 W/D NAV-VG	400 W/D HQI-VG
Product reference	HQI-TS 70/WDL	HQI-TS 70/NDL	HQI-TS 70/D	HQI-TS 150/WDL	HQI-TS 150/NDL	HQI-TS 150/D	HQI-TS 250/WDL	HQI-TS 250/NDL	HQI-TS 250/D	HQI-TS 400/NDL NAV-VG	HQI-TS 400/D NAV-VG	HQI-TS 400/D HQI-VG
Product number (EAN)	4050300 412955	4050300 421931	4050300 437521	4050300 412979	4050300 362380	4050300 437545	4050300 436012	4050300 436036	4050300 436050	4050300 304090	4050300 015385	4050300 015385
Lamp wattage	75 W	73 W	75 W	150 W	150 W	150 W	250 W	250 W	250 W	400 W	400 W	350 W
Luminous flux	5000 lm	5500 lm	5000 lm	11000 lm	11250 lm	11000 lm	22000 lm	20000 lm	20000 lm	35000 lm	36000 lm	28000 lm
Luminous efficacy	64 lm/W	75 lm/W	67 lm/W	73 lm/W	75 lm/W	73 lm/W	88 lm/W	80 lm/W	80 lm/W	88 lm/W	90 lm/W	77 lm/W
Colour temperature	3000 K	4000 K	5200 K	3000 K	4200 K	5200 K	3200 K	4200 K	5100 K	4200 K	5200 K	5600 K
Light colour	WDL	NDL	D	WDL	NDL	D	WDL	NDL	D	NDL	D	D
Colour rendering*	2A	1B	1B	2A	1B	1B	1B	1A	1B	1A	1A	1A
Base	RX7s	RX7s	RX7s	RX7s-24	RX7s-24	RX7s-24	Fc2	Fc2	Fc2	Fc2	Fc2	Fc2
Length l	114.2 mm	114.2 mm	114.2 mm	132 mm	132 mm	132 mm	163 mm	163 mm	163 mm	206 mm	206 mm	206 mm
Outer diameter d	20 mm	20 mm	20 mm	23 mm	23 mm	23 mm	25 mm	25 mm	25 mm	31 mm	31 mm	31 mm
Fig. no.	6	6	6	6	6	6	5	5	5	5	5	5
POWERSTAR® HQI®-T												
	70 W/WDL	70 W/NDL	150 W/WDL	150 W/NDL	250 W/D	400 W/N NAV-VG	400 W/N HQI-VG	POWERSTAR® HQI®-BT				400 W MAGENTA
Product reference	HQI-T 70/WDL	HQI-T 70/NDL	HQI-T 150/WDL	HQI-T 150/NDL	HQI-T 250/D	HQI-T 400/N NAV-VG	HQI-T 400/N HQI-VG	HQI-BT 400/D NAV-VG	HQI-BT 400/D HQI-VG	400 W BLUE	400 W GREEN	HQI-T 400 MAGENTA
Product number (EAN)	4050300 412993	4050300 488424	4050300 413013	4050300 488448	4050300 015293	4050300 324647	4050300 324647	4050300 468471	4050300 468471	4050300 258300	4050300 258287	4050300 649535
Lamp wattage	75 W	75 W	150 W	150 W	250 W	420 W	380 W	420 W	360 W	360 W	360 W	440 W
Luminous flux	5200 lm	5500 lm	13000 lm	13000 lm	20000 lm	42000 lm	34000 lm	32000 lm	25000 lm	-	-	-
Luminous efficacy	69 lm/W	73 lm/W	87 lm/W	87 lm/W	80 lm/W	100 lm/W	89 lm/W	76 lm/W	69 lm/W	-	-	-
Colour temperature	3000 K	4200 K	3000 K	4200 K	5300 K	3700 K	3800 K	5200 K	6100 K	-	-	-
Light colour	WDL	NDL	WDL	NDL	D	N	N	D	D	-	-	-
Colour rendering*	1B	1B	2A	1B	1A	2B	2B	1A	1A	-	-	-
Base	G12	G12	G12	G12	E40	E40	E40	E40	E40	E40	E40	E40
Length l	84 mm	84 mm	84 mm	84 mm	225 mm	275 mm	275 mm	285 mm	285 mm	255 mm	255 mm	268 mm
Outer diameter d	25 mm	25 mm	250 mm	25 mm	46 mm	46 mm	46 mm	62 mm	62 mm	46 mm	46 mm	46 mm
Fig. no.	7	7	7	7	4	4	4	3	3	4	4	4
POWERSTAR® HQI®-E for open luminaires												
	70 W/WDL clear	70 W/NDL coated	70 W/NDL clear	70 W/NDL coated	100 W/WDL clear	100 W/WDL coated	100 W/NDL clear	100 W/NDL coated	150 W/WDL clear	150 W/WDL coated	150 W/NDL clear	150 W/NDL coated
Product reference	HQI-E 70/WDL clear	HQI-E 70/NDL	HQI-E 70/NDL clear	HQI-E 70/NDL coated	HQI-E 100/WDL clear	HQI-E 100/WDL coated	HQI-E 100/NDL clear	HQI-E 100/NDL coated	HQI-E 150/WDL clear	HQI-E 150/WDL coated	HQI-E 150/NDL clear	HQI-E 150/NDL coated
Product number (EAN)	4050300 39778	4050300 397801	4050300 397825	4050300 397849	4050300 351537	4050300 351551	4050300 345871	4050300 345833	4050300 433974	4050300 433998	4050300 434018	4050300 434032
Lamp wattage	73 W	73 W	73 W	73 W	100 W	100 W	100 W	100 W	150 W	150 W	150 W	150 W
Luminous flux	4700 lm	4900 lm	5200 lm	4900 lm	8500 lm	8000 lm	7800 lm	7300 lm	12000 lm	12000 lm	11400 lm	10500 lm
Luminous efficacy	64 lm/W	67 lm/W	71 lm/W	67 lm/W	85 lm/W	80 lm/W	78 lm/W	73 lm/W	80 lm/W	80 lm/W	76 lm/W	70 lm/W
Colour temperature	3200 K	3100 K	4000 K	3800 K	3000 K	2900 K	4000 K	3800 K	2900 K	2900 K	4000 K	3800 K
Light colour	WDL	WDL	NDL	NDL	WDL	WDL	NDL	NDL	WDL	WDL	NDL	NDL
Colour rendering*	1B	1B	1B	1B	1B	1B	1B	1B	1B	1B	1B	1B
Base	E27	E27	E27	E27	E27	E27	E27	E27	E27	E27	E27	E27
Length l	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm	144 mm
Outer diameter d	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm	54 mm
Fig. no.	2	2	2	2	2	2	2	2	2	2	2	2
POWERSTAR® HQI®-E/P for open luminaires				POWERSTAR® HQI®-E for enclosed luminaires								
	250 W/D coated	400 W/D coated	400 W/D coated	250 W/D coated	400 W/N clear	400 W/N clear	400 W/N coated	400 W/N coated	400 W/D coated	400 W/D coated		
Product reference	HQI-E/P 250/D	HQI-E/P 400/D NAV-VG	HQI-E/P 400/D HQI-VG	HQI-E 250/D	HQI-E 400/N NAV-VG	HQI-E 400/N HQI-VG	HQI-E 400/N NAV-VG	HQI-E 400/N HQI-VG	HQI-E 400/D NAV-VG	HQI-E 400/D HQI-VG		
Product number (EAN)	4050300 637457	4050300 637433	4050300 637433	4050300 015248	4050300 292632	4050300 292632	4050300 305431	4050300 305431	4050300 019727	4050300 019727		
Lamp wattage	250 W	400 W	400 W	250 W	420 W	420 W	460 W	460 W	460 W	400 W		
Luminous flux	17000 lm	27000 lm	23000 lm	19000 lm	45000 lm	36000 lm	43000 lm	34000 lm	30000 lm	26000 lm		
Luminous efficacy	71 lm/W	68 lm/W	67 lm/W	76 lm/W	112 lm/W	92 lm/W	107 lm/W	92 lm/W	76 lm/W	72 lm/W		
Colour temperature	6000 K	4500 K	5000 K	5200 K	4000 K	3600 K	4000 K	3600 K	5900 K	5800 K		
Light colour	D	D	D	D	N	N	N	N	D	D		
Colour rendering*	1A	1A	1A	1A	2A	2B	2A	2B	1A	1A		
Base	E40	E40	E40	E40/45	E40	E40	E40	E40	E40/45	E40/45		
Length l	226 mm	290 mm	290 mm	226 mm	290 mm	290 mm	290 mm	290 mm	290 mm	290 mm		
Outer diameter d	90 mm	120 mm	120 mm	90 mm	120 mm	120 mm	120 mm	120 mm	120 mm	120 mm		
Fig. no.	1	1	1	1	1	1	1	1	1	1		

* 1A = R_a ≥ 90 2A = R_a 70-79
1B = R_a 80-89 2B = R_a 60-69

