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# VIALOX<sup>®</sup> NAV<sup>®</sup>-T Standard

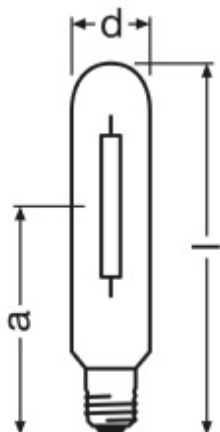
Technical Information



## General product description

- High-pressure sodium vapor lamps
- NAV-T 1000W ErP compliant (EU Regulation 245/2009)
- For open and closed luminaires

## Basic technical description



Product reference	Nominal lamp wattage [W]	Cap	Correlated colour temperature [K]	Length max. (l) [mm]	Diameter (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]
NAV-T 50W	50	E27	2000	156	39	53	104	85	0.77
NAV-T 70W	70	E27	2000	156	39	77	104	90	0.98
NAV-T 100W	100	E40	2000	210	47	130	132	100	1.20
NAV-T 150W	150	E40	2000	210	47	154	132	100	1.80
NAV-T 250W	250	E40	2000	257	47	148	158	100	3.00
NAV-T 400W	400	E40	2000	285	47	191	175	100	4.60
NAV-T 1000W	1000	E40	2000	360	66	300	240	110	10.60
NAV-T 1000W Long	1000	E40/80	2000	390	66	320	240	110	10.60

## Performance specification<sup>1</sup>

Product reference	Rated lamp wattage CCG/ECG [W]	Rated system wattage CCG/ECG <sup>2</sup> [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Colour rendering index Ra	B5 [h]	B10 [h]	Average life (B50) [h]
NAV-T 50W	50 / 52	63 / 55	3800	76	≤ 25	9000	13000	24000
NAV-T 70W	70 / 72	83 / 80	6000	86	≤ 25	12000	14000	24000
NAV-T 100W	97 / 97	114 / 106	9000	93	≤ 25	12000	14000	24000
NAV-T 150W	150 / 147	170 / 163	15000	100	≤ 25	12000	16000	24000
NAV-T 250W	250 / -	275 / -	28000	112	≤ 25	12000	16000	24000
NAV-T 400W	392 / -	440 / -	48000	122	≤ 25	12000	16000	24000
NAV-T 1000W	960 / -	1075 / -	130000	135	≤ 25	8000	11000	20000
NAV-T 1000W Long	960 / -	1075 / -	130000	135	≤ 25	8000	11000	20000

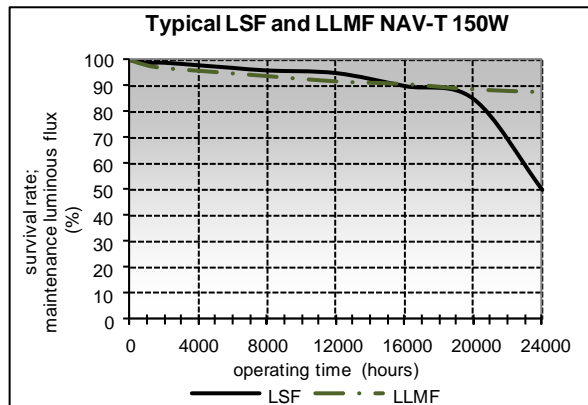
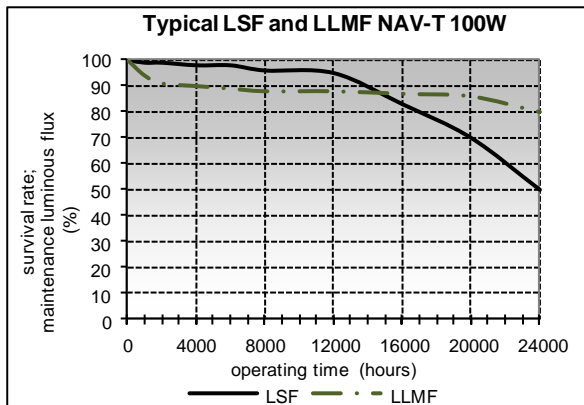
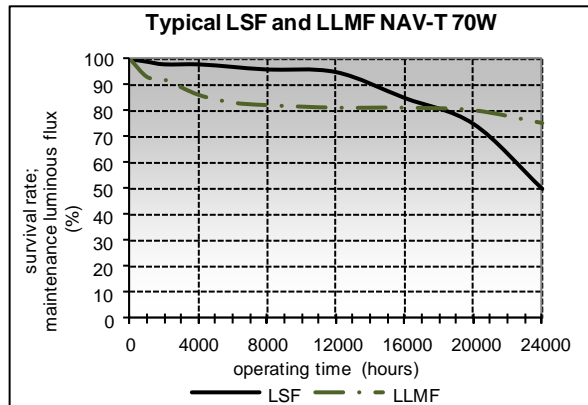
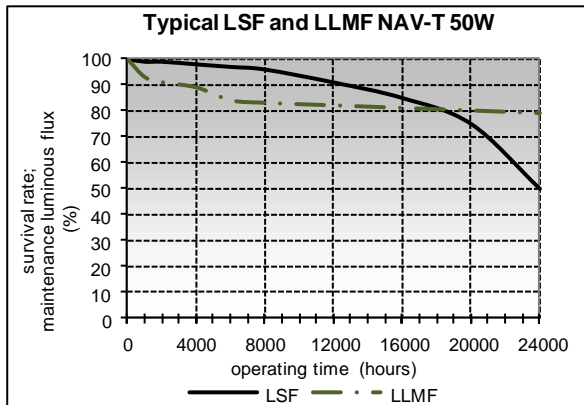
<sup>1</sup> Refers to operation with a reference electromagnetic ballast (IEC 60622).

<sup>2</sup> With OSRAM POWERTRONIC PTo

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Product reference	Lamp lumen maintenance factor <sup>3</sup> (LLMF) vs. operation hours							
	2000h	4000h	6000h	8000h	12000h	16000h	20000h	24000h
NAV-T 50W	91%	89%	84%	83%	82%	81%	80%	79%
NAV-T 70W	92%	86%	83%	82%	81%	81%	80%	75%
NAV-T 100W	91%	90%	89%	88%	88%	87%	86%	80%
NAV-T 150W	97%	96%	95%	94%	92%	91%	89%	88%
NAV-T 250W	97%	96%	95%	94%	92%	91%	89%	88%
NAV-T 400W	97%	96%	95%	94%	92%	91%	89%	88%
NAV-T 1000W	96%	93%	91%	89%	84%	81%	79%	-
NAV-T 1000W Long	96%	93%	91%	89%	84%	81%	79%	-

Product reference	Lamp survival factor <sup>4</sup> (LSF) vs. operation hours							
	2000h	4000h	6000h	8000h	12000h	16000h	20000h	24000h
NAV-T 50W	99%	98%	97%	96%	91%	85%	75%	50%
NAV-T 70W	98%	98%	97%	96%	95%	85%	75%	50%
NAV-T 100W	99%	98%	98%	96%	95%	83%	70%	50%
NAV-T 150W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-T 250W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-T 400W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-T 1000W	99%	98%	97%	95%	87%	74%	50%	-
NAV-T 1000W Long	99%	98%	97%	95%	87%	74%	50%	-

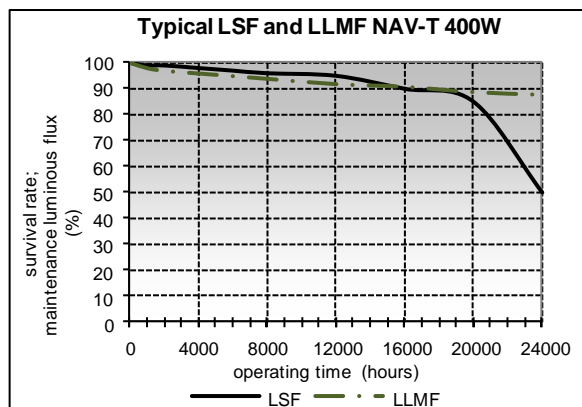
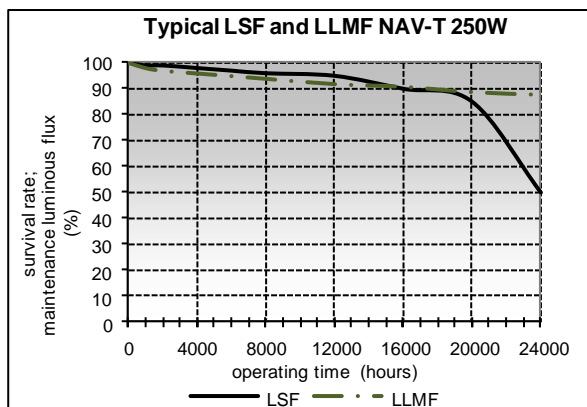


<sup>3</sup> Indicates the percentage of luminous flux after a given period of operation time relative to the 100h values

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

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## Operation conditions

Product reference	Burning position	Max. permitted outer bulb temperature [°C]	Max. permitted base 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
NAV-T 50W	universal	310	210	1.8 / 4.5	ECG, CCG	PTo	Yes
NAV-T 70W	universal	310	210	1.8 / 4.5	ECG, CCG	PTo	Yes
NAV-T 100W	universal	310	210	3.0 / 5.0	ECG, CCG	PTo	Yes
NAV-T 150W	universal	310	210	3.0 / 5.0	ECG, CCG	PTo	Yes
NAV-T 250W	universal	400	250	3.0 / 5.0	ECG, CCG	-	Yes
NAV-T 400W	universal	400	250	3.0 / 5.0	ECG, CCG	-	Yes
NAV-T 1000W	universal	400	250	3.6 / 5.0	ECG, CCG	-	Yes
NAV-T 1000W Long	universal	400	250	3.6 / 5.0	ECG, CCG	-	Yes

## Safety, materials and environment

Product description	Typical mercury content [mg]
NAV-T 50W	17.0
NAV-T 70W	17.0
NAV-T 100W	17.0
NAV-T 150W	21.0
NAV-T 250W	21.0
NAV-T 400W	21.0
NAV-T 1000W	39.0
NAV-T 1000W Long	39.0

- Compliant with safety specifications according to EN 62035
- Compliant with RoHS.

<sup>5</sup> Maximum Ignition voltage according to IEC 60662

<sup>6</sup> Maximum ignition voltage for the lamp

<sup>7</sup> ECG stands for low frequency square wave electronic ballast, CCG stands for electromagnetic ballast according to IEC 61347 Edition January 31, 2014; replaces edition December 01, 2013. Subject to change without notice. Errors and omissions excepted. Make sure to use the most recent edition.

## Energy labelling<sup>8</sup>

Product description	Energy efficiency class	Weighted energy consumption E <sub>c</sub> [kWh/1000h]
NAV-T 50W	A	55
NAV-T 70W	A+	77
NAV-T 100W	A+	107
NAV-T 150W	A+	165
NAV-T 250W	A+	275
NAV-T 400W	A+	431
NAV-T 1000W	A++	1056
NAV-T 1000W Long	A++	1056

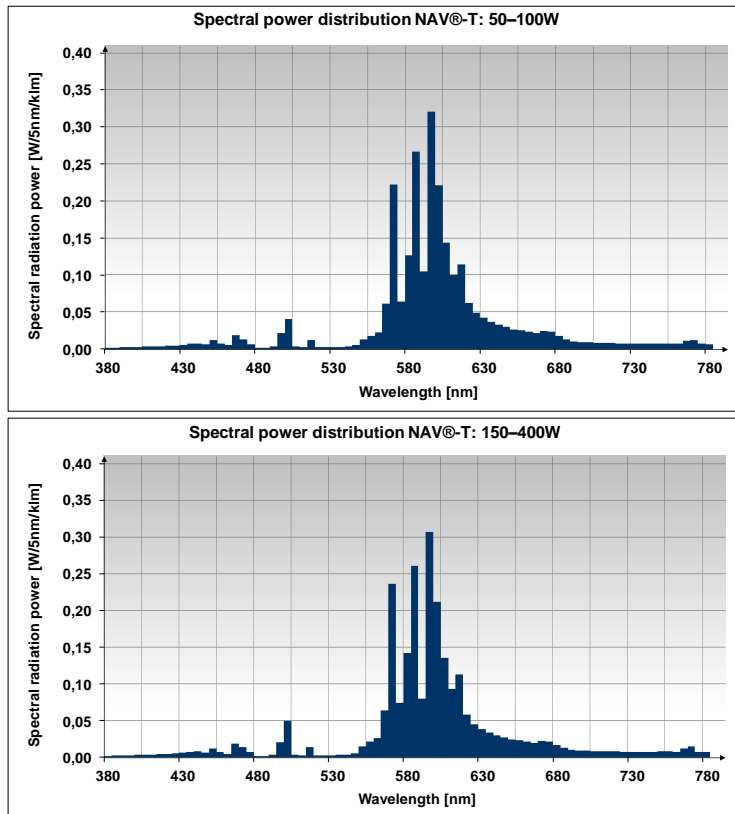
## Logistics data

Product description	ILCOS	EAN 10	EAN 40	Standard pack quantity
NAV-T 50W	ST-50-H/E/SL-E27-39/156	4008321337986	4008321337993	12
NAV-T 70W	ST-70-H/E/SL-E27-39/156	4050300255590	4050300255606	12
NAV-T 100W	ST-100-H/E/SL-E40-47/210	4008321087287	4008321087294	12
NAV-T 150W	ST-150-H/E/SL-E40-47/210	4050300015668	4050300220321	12
NAV-T 250W	ST-250-H/E/SL-E40-47/257	4050300015675	4050300214009	12
NAV-T 400W	ST-400-H/E/SL-E40-47/285	4050300015682	4050300212425	12
NAV-T 1000W	ST-1000-H/E/SL-E40-66/360	4050300251417	4050300615288	12
NAV-T 1000W Long	ST-1000-H/E/SL-E40-66/390	4050300666549	4050300666556	12

<sup>8</sup> According to Regulation (EU) No 874/2012 of July 12, 2012

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## Typical spectral power distribution



## References

Reference	Location
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