

VIALOX[®] NAV[®]-T Standard

Technical Information

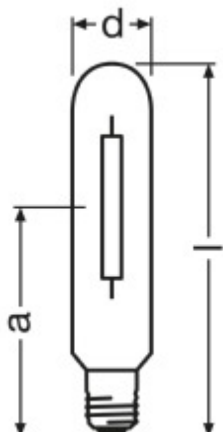


VIALOX[®] NAV[®]-T

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 ¹ [V]	Typical lamp current ¹ [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 specification¹

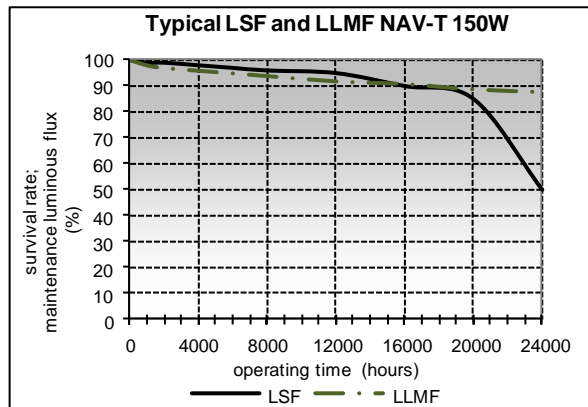
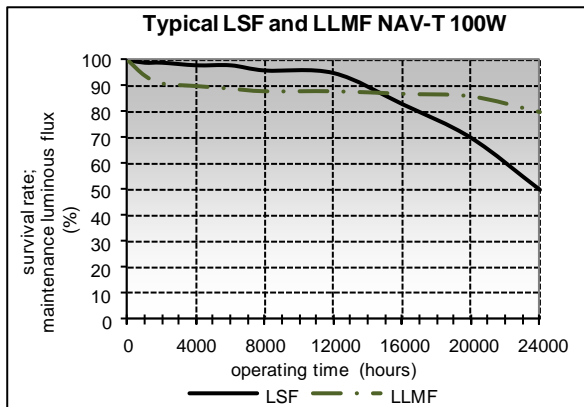
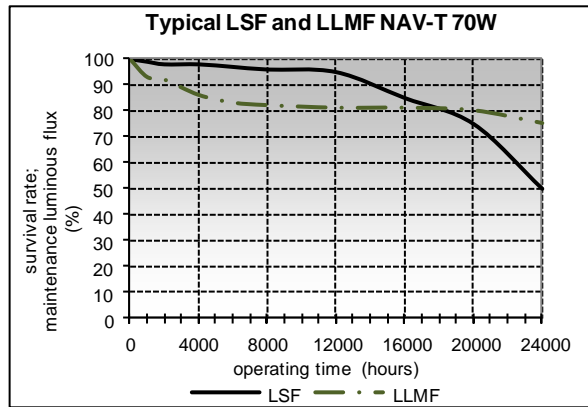
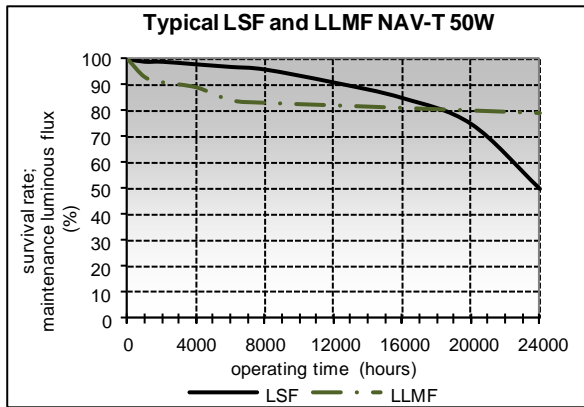
Product reference	Rated lamp wattage CCG/ECG [W]	Rated system wattage CCG/ECG ² [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Colour rendering index Ra	B5 [h]	B10 [h]	Average life (B50) [h]
NAV-T 50W	50 / 52	63 / 55	3800	76	≤ 20	9000	13000	24000
NAV-T 70W	70 / 72	83 / 80	6000	86	≤ 20	12000	14000	24000
NAV-T 100W	97 / 97	114 / 106	9000	93	≤ 20	12000	14000	24000
NAV-T 150W	150 / 147	170 / 163	15000	100	≤ 20	12000	16000	24000
NAV-T 250W	250 / -	275 / -	28000	112	≤ 20	12000	16000	24000
NAV-T 400W	392 / -	440 / -	48000	122	≤ 20	12000	16000	24000
NAV-T 1000W	960 / -	1075 / -	130000	130	≤ 20	8000	11000	20000
NAV-T 1000W Long	960 / -	1075 / -	130000	130	≤ 20	8000	11000	20000

¹ Refers to operation with a reference electromagnetic ballast (IEC 60622).

² With OSRAM POWERTRONIC PTo

Product reference	Lamp lumen maintenance factor ³ (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%	-

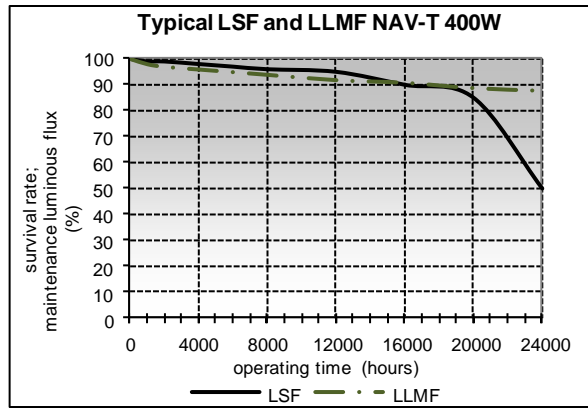
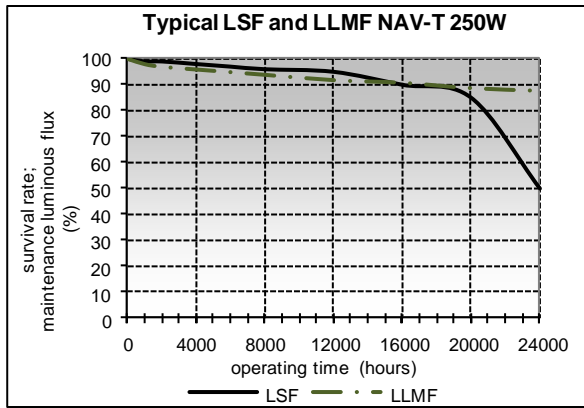
Product reference	Lamp survival factor ⁴ (LSF) vs. operation hours							
	2000h	4000h	6000h	8000h	12000h	16000h	20000h	24000h
NAV-T 50W	99%	98%	97%	96%	91%	85%	75%	50%
NAV-T 70W	98%	98%	97%	96%	95%	85%	75%	50%
NAV-T 100W	99%	98%	98%	96%	95%	83%	70%	50%
NAV-T 150W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-T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



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

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

Edition August 28, 2013; replaces edition January 29, 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 base Temperature [°C]	Ignition voltage min. ⁵ /max. ⁶ [kV]	Required control gear ⁷	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.

⁵ Minimum Ignition voltage according to IEC 60662

⁶ Maximum ignition voltage for the lamp

⁷ ECG stands for low frequency square wave electronic ballast, CCG stands for electromagnetic ballast according to IEC 61347

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Energy labelling⁸

Product description	Energy efficiency class	Weighted energy consumption E _c [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

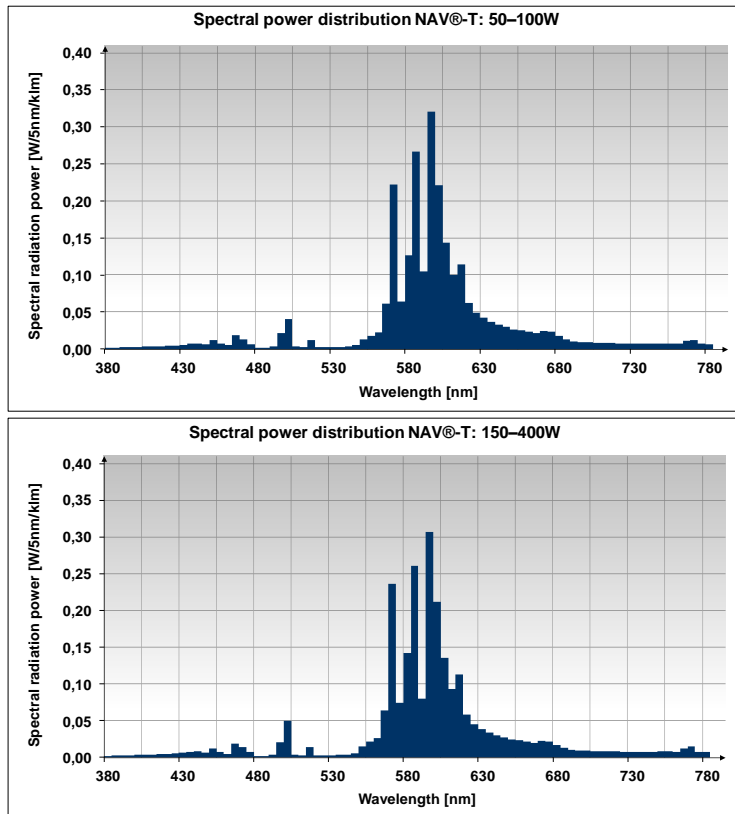
Logistics data

Product description	ILCOS	EAN 10	EAN 40	Standard pack quantity
NAV-T 50W	ST-50/20/4-H/SL-E27-39/156	4008321337986	4008321337993	12
NAV-T 70W	ST-70/20/4-H/SL-E27-39/156	4050300255590	4050300255606	12
NAV-T 100W	ST-100/20/4-H/SL-E40-47/210	4008321087287	4008321087294	12
NAV-T 150W	ST-150/20/4-H/SL-E40-47/210	4050300015668	4050300220321	12
NAV-T 250W	ST-250/21/4-H/SL-E40-47/257	4050300015675	4050300214009	12
NAV-T 400W	ST-400/20/4-H/SL-E40-47/285	4050300015682	4050300212425	12
NAV-T 1000W	ST-1000/20/4-H-E40-66/360	4050300666549	4050300666556	12
NAV-T 1000W Long	ST-1000/20/4-H-E40-66/390	4050300251417	4050300615288	12

⁸ 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"	www.osram.com
Ray data (e.g. ASAP, SPEOS, LightTools)	available on request
3D data (e.g. Parasolid, STEP)	available on request