

VIALOX[®] NAV[®]-E Standard

Technical Information

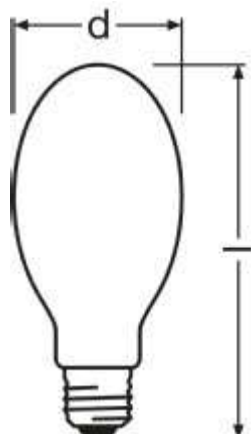


VIALOX[®] NAV[®]-E

General product description

- High-pressure sodium vapor lamps
- NAV-E 50W; NAV-E 70W and NAV-E 1000W are 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-E 50W	50	E27	2000	156	70	52.0	n.a.	85	0.77
NAV-E 70W	70	E27	2000	156	70	56.1	n.a.	90	0.98
NAV-E 100W	100	E40	2000	186	75	80.0	n.a.	100	1.20
NAV-E 150W	150	E40	2000	226	90	200.0	n.a.	100	1.80
NAV-E 250W	250	E40	2000	226	90	158.0	n.a.	100	3.00
NAV-E 400W	400	E40	2000	290	120	229.0	n.a.	105	4.45
NAV-E 1000W	1000	E40	2000	370	165	365.3	n.a.	110	10.30

Performance specification¹

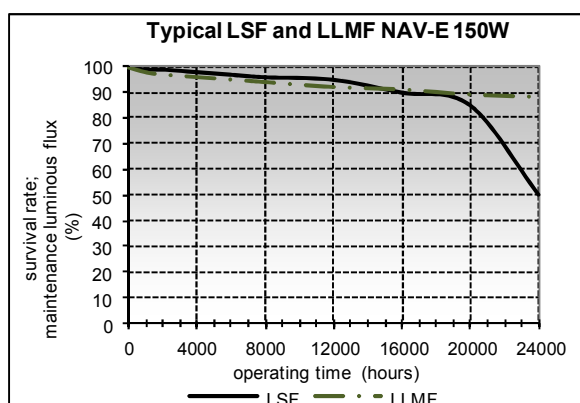
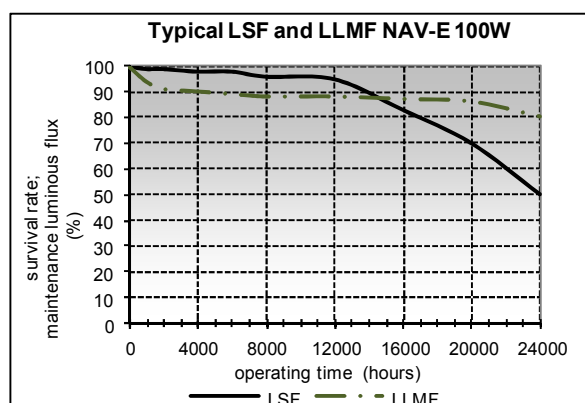
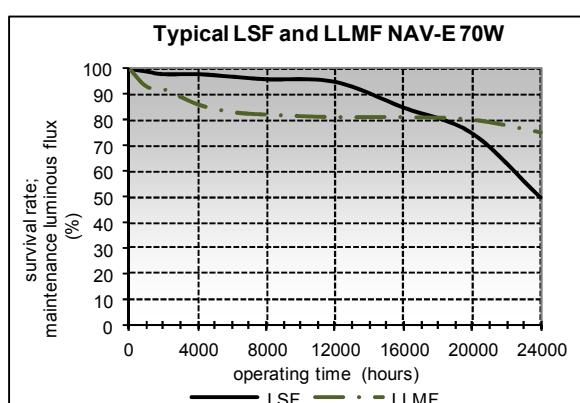
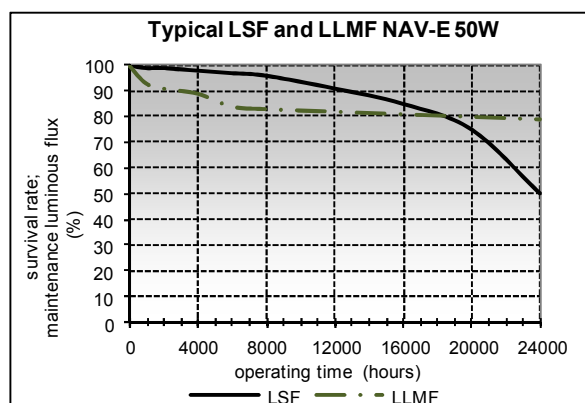
Product reference	Rated lamp wattage CCG/ECG [W]	Rated system wattage CCG/ECG ² [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Colour rendering index Ra	B5 [h]	B10 [h]	Average life (B50) [h]
NAV-E 50W	50 / 50	62 / 55	3600	72	≤ 20	9000	13000	24000
NAV-E 70W	70 / 72	83 / 80	5900	85	≤ 20	12000	14000	24000
NAV-E 100W	97 / 97	114 / 106	8800	81	≤ 20	12000	14000	24000
NAV-E 150W	150 / 147	170 / 160	14500	97	≤ 20	12000	16000	24000
NAV-E 250W	250 / -	275 / -	27000	108	≤ 20	12000	16000	24000
NAV-E 400W	400 / -	440 / -	48000	120	≤ 20	12000	16000	24000
NAV-E 1000W	1000 / -	1075 / -	128000	128	≤ 20	7000	10000	20000

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

² With OSRAM POWERTRONIC PTo

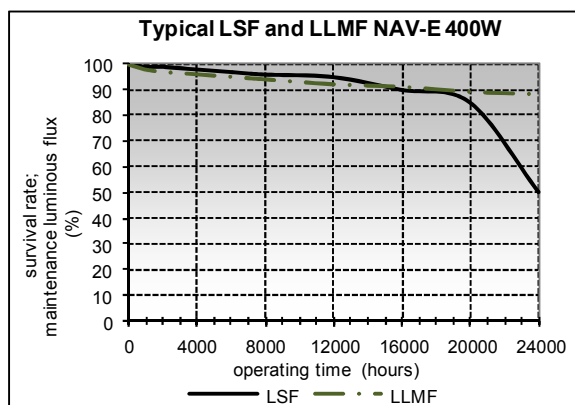
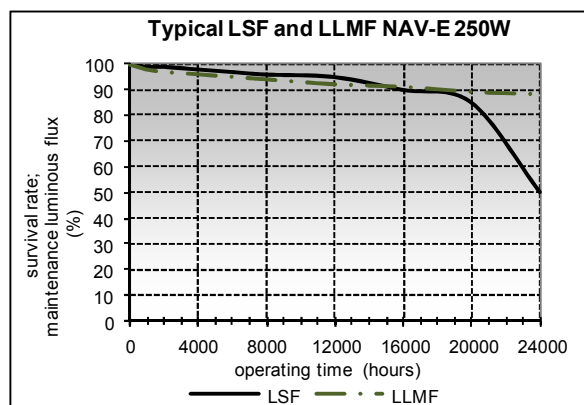
Product reference	Lamp lumen maintenance factor ³ (LLMF) vs. operation hours							
	2000h	4000h	6000h	8000h	12000h	16000h	20000h	24000h
NAV-E 50W	91%	89%	84%	83%	82%	81%	80%	79%
NAV-E 70W	92%	86%	83%	82%	81%	81%	80%	75%
NAV-E 100W	91%	90%	89%	88%	88%	87%	86%	80%
NAV-E 150W	97%	96%	95%	94%	92%	91%	89%	88%
NAV-E 250W	97%	96%	95%	94%	92%	91%	89%	88%
NAV-E 400W	97%	96%	95%	94%	92%	91%	89%	88%
NAV-E 1000W	98%	95%	93%	91%	86%	80%	70%	-

Product reference	Lamp survival factor ⁴ (LSF) vs. operation hours							
	2000h	4000h	6000h	8000h	12000h	16000h	20000h	24000h
NAV-E 50W	99%	98%	97%	96%	91%	85%	75%	50%
NAV-E 70W	98%	98%	97%	96%	95%	85%	75%	50%
NAV-E 100W	99%	98%	98%	96%	95%	83%	70%	50%
NAV-E 150W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-E 250W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-E 400W	99%	98%	97%	96%	95%	90%	85%	50%
NAV-E 1000W	99%	98%	96%	93%	86%	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.



Operation conditions

Product reference	Burning position	Max. permitted outer bulb temperature [°C]	Max. permitted pinch temperature [°C]	Ignition voltage min. ⁵ /max. ⁶ [kV]	Required control gear ⁷	Suitable OSRAM electronic control gear	Dimming
NAV-E 50W	universal	310	210	1.8 / 5.0	ECG, CCG	PTo	Yes
NAV-E 70W	universal	310	210	1.8 / 5.0	ECG, CCG	PTo	Yes
NAV-E 100W	universal	310	210	3.0 / 5.0	ECG, CCG	PTo	Yes
NAV-E 150W	universal	310	210	3.0 / 5.0	ECG, CCG	PTo	Yes
NAV-E 250W	universal	400	250	3.0 / 5.0	ECG, CCG	-	Yes
NAV-E 400W	universal	400	250	3.0 / 5.0	ECG, CCG	-	Yes
NAV-E 1000W	universal	400	250	3.0 / 5.0	ECG, CCG	-	Yes

Safety, materials and environment

Product description	Typical mercury content [mg]
NAV-E 50W	20.0
NAV-E 70W	20.0
NAV-E 100W	20.0
NAV-E 150W	20.0
NAV-E 250W	20.0
NAV-E 400W	20.0
NAV-E 1000W	39.0

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

⁵ Minimum Ignition voltage according to IEC 60662

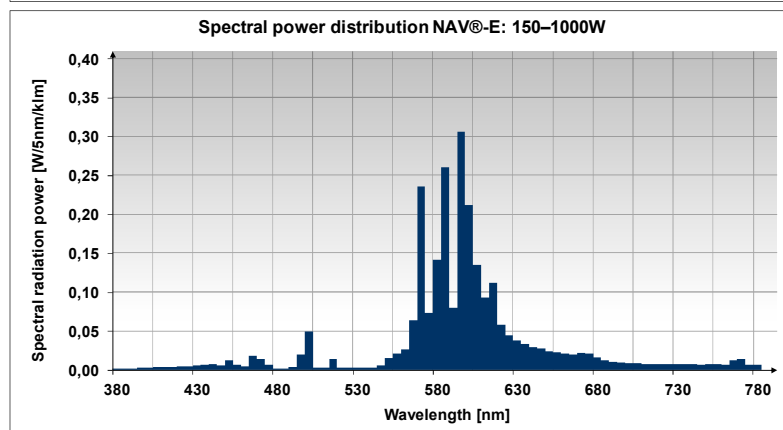
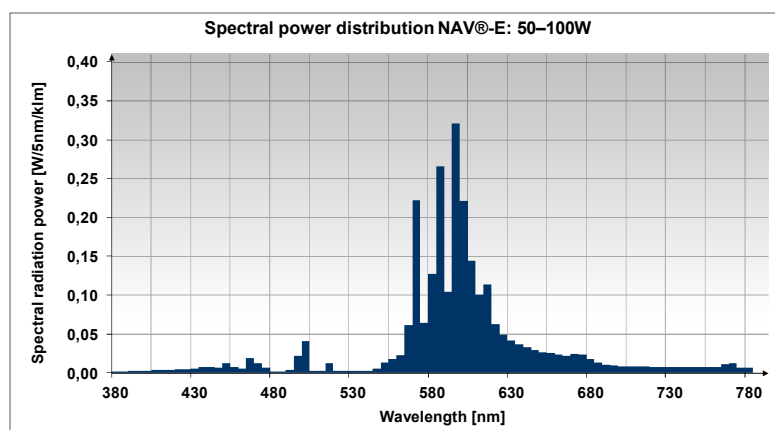
⁶ Maximum ignition voltage

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

Logistics data

Product description	ILCOS	EAN 10	EAN 40	Standard pack quantity
NAV-E 50W	SE-50/20/4-H-E27-71/156	4050300015750	4050300334424	24
NAV-E 70W	SE-70/20/4-H-E27-71/156	4050300015767	4050300227504	24
NAV-E 100W	SE-100/20/4-H-E40-76/183	4008321087300	4008321087317	12
NAV-E 150W	SE-150/20/4-H-E40-91/226	4050300015613	4050300219837	12
NAV-E 250W	SE-250/20/4-H-E40-91/226	4050300015620	4050300214092	12
NAV-E 400W	SE-400/20/4-H-E40-122/290	4050300015637	4050300213958	12
NAV-E 1000W	SE-1000/20/4-H-E40-165/370	4050300015644	4050300216805	6

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