

Low Pressure Sodium Lamps (SOX-E, SOX)

High energy efficiency low pressure sodium lamps
for indoor and outdoor applications



***Ideal for roadway lighting, bridge
and tunnel lighting, security lighting,
area floodlighting, railway crossing
lighting and airport lighting***

▶ Excellent Energy Efficiency

Up to 180 lumens per watt

▶ Long Life

18,000 hours rated average life

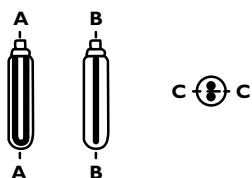
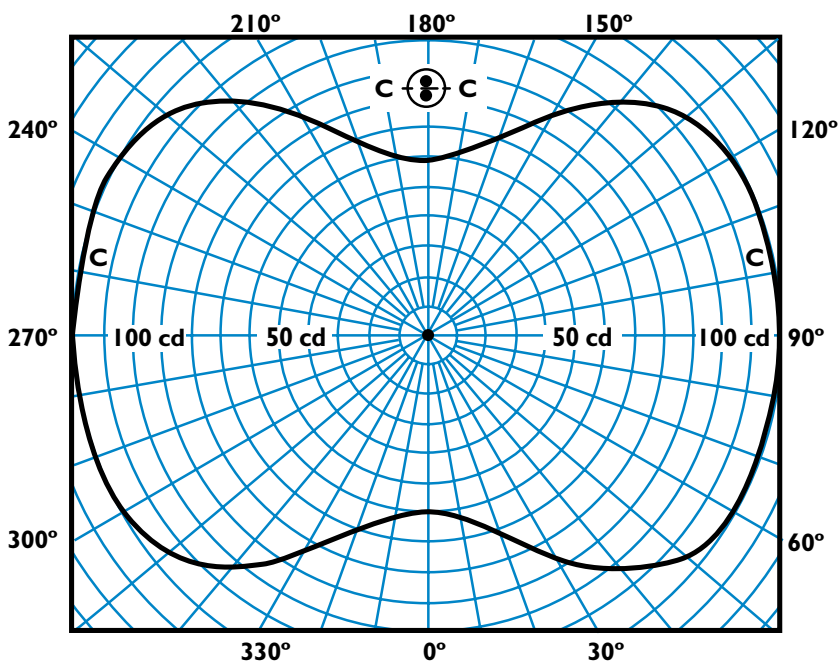
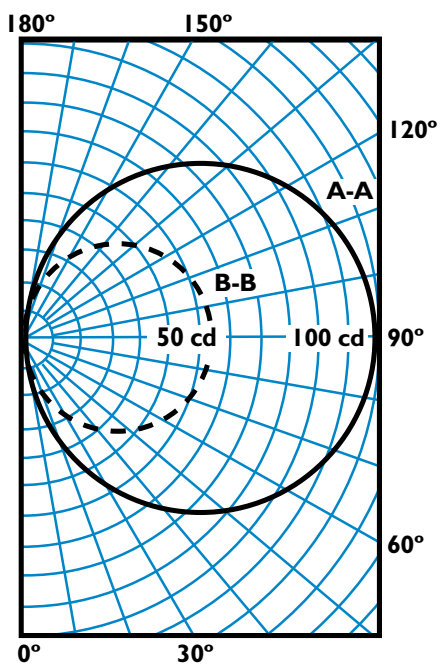
▶ Vibration Resistant

Rough service arc tube support system provides protection against shock and vibration



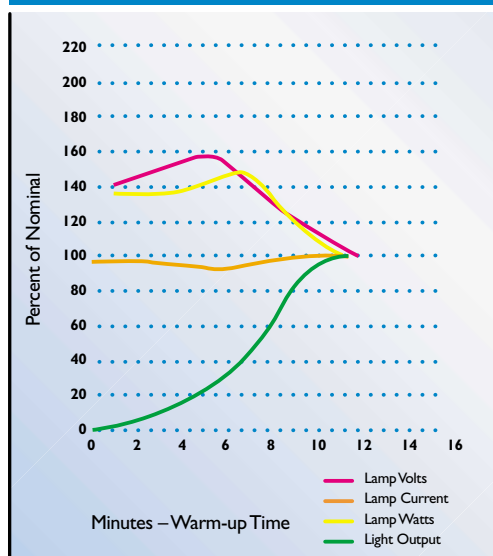
PHILIPS

Candlepower Distribution Curves (cd/1000 lm—candelas per 1000 lumens)

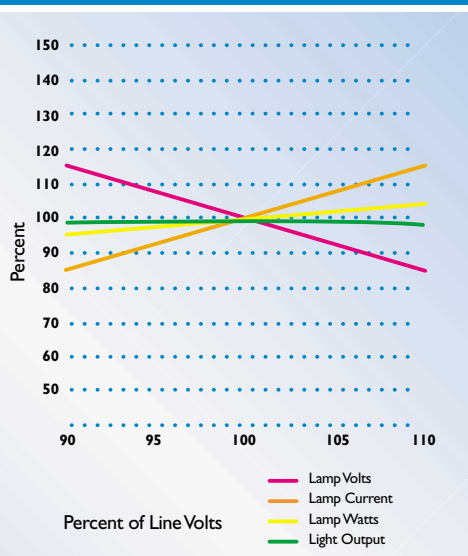


LOW PRESSURE SODIUM LAMPS (SOX-E AND SOX)

Warm-Up Characteristics



Effects of Input Voltage Variations



Low Pressure Sodium Lamp Construction

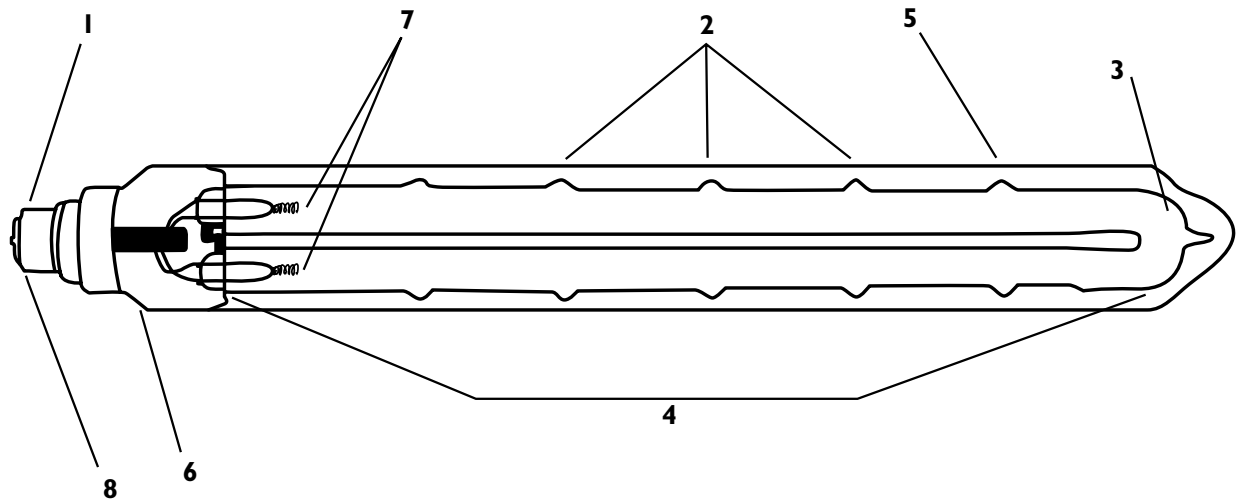
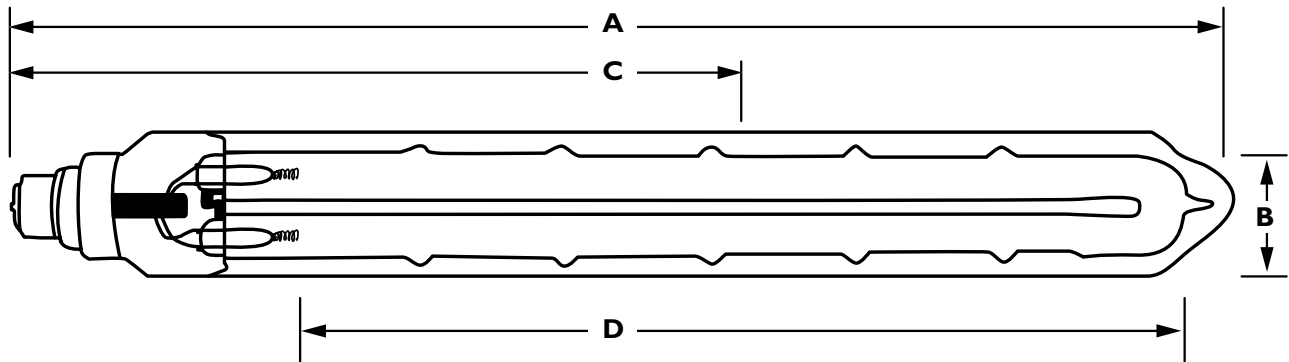
Physical Dimensions—SOX-E and SOX Lamps

Ordering Code	Bulb	MOL ¹ (A)		Max. Diameter (B)		LCL ² (C)		Light Length (D)	
		In.	mm	In.	mm	In.	mm	In.	mm
SOX-E 18	T-17	8 ½	216	2 ⅞	54	5 ½	141	3 ⅝	92
SOX 35	T-17	12 ¾	310	2 ⅞	54	7 ¼	184	7 ½	192
SOX 55	T-17	16 ¾	425	2 ⅞	54	9 ½	243	12	305
SOX 90	T-21	20 ¾	528	2 11/16	68	11 ½	292	5 7/16	403
SOX 135	T-21	30 ½	775	2 11/16	68	16 ⅝	416	25 7/16	646
SOX 180	T-21	44 ⅞	1120	2 11/16	68	23	584	38	965

1. MOL = Maximum Overall Length

2. LCL = Light Center Length

Base: Double Contact Bayonet-Medium (BY-22d)



- 1. Non-Metallic-Bayonet Base** will not corrode or stick in lamp socket, providing quick, safe relamping. Locking pins on lamp base assure the lamp locks in socket and cannot vibrate loose. SOX-E lamps are distinguished by the use of the black bases compared to the tan bases used on SOX lamps.
- 2. Sodium Retaining Reservoirs** provide even distribution of sodium for 100% lumen maintenance, long lamp life and lamp wattage control.
- 3. U-Bend Insulation Feature** controls lamp wattage rise and helps provide more consistent lamp life.
- 4. Rough Service Arc Tube Support System** eliminates arc tube movement along lamp axis yet allows radial arc tube flex. It provides highest protection from shock and vibration.

- 5. Uniform Indium Oxide Heat Reflecting Coating** creates highest luminous efficacy of all light sources and contributes to 100% lumen maintenance by keeping arc tube at the optimum temperature.
- 6. Barium Getter** absorbs trace gases to properly maintain correct arc tube temperature and maximize light output.
- 7. Triple Coil Electrode** with full tungsten support holds more emission paste for superior life. Tungsten supports prevent electrode vibration keeping emissive paste on the electrode.
- 8. Fuse Coil** in lamp base provides additional protection to ballast. By preventing D.C. currents that may occur at end of lamp life, ballast currents are lower, ballast temperatures are lower and ballast life is longer.

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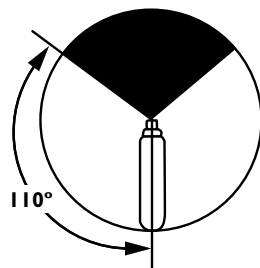
Low Pressure Sodium Lamps (SOX-E and SOX)

Electrical, Technical and Ordering Data (Subject to change without notice)

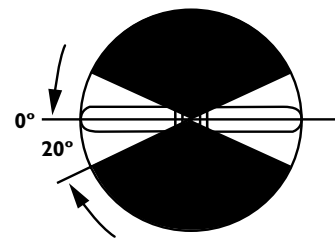
Product Number	Ordering Code	ANSI Ballast Code	Operating on Ballast For	Nominal Lamp Watts	Nominal System Watts	Lumens	Nominal Lamp Volts	Nominal Lamp Current	Max. Starting Current	Rated Average Life (Hrs.)	Run Up Time (Minutes)
23404-7	SOX-E 18	L69	SOX 18	18		1800	55	0.36	0.42	18000	15
32781-7	SOX 35	L70	SOX 35	35	60	4550	70	0.6	0.60	18000	7
32151-3	SOX 55	L71	SOX 55	55	80	7800	109	0.59	0.59	18000	7
32152-1	SOX 90	L72	SOX 90	90	125	14300	112	0.91	0.94	18000	9
32153-9	SOX 135	L73	SOX 135	135	178	22600	164	0.95	0.95	18000	9
32799-9	SOX 180	L74	SOX 180	180	220	32000	240	0.91	0.91	18000	9

Operating Positions

Light Output Over Life 100%
Base Temperature Limit 150° C
Bulb Temperature Limit 150° C
Lamp Brightness (SOX) 10 cd/cm²



SOX-E 18
SOX 35
SOX 55



SOX 90
SOX 135
SOX 180

