

Biax™ S & S/E

Compact Fluorescent Lamps

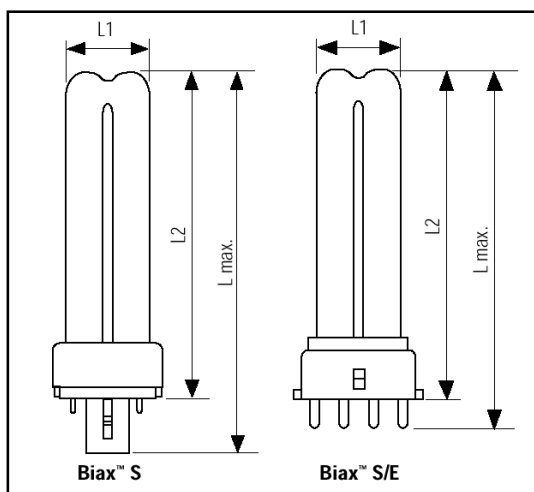
DESCRIPTION

Biax™ S Compact Fluorescent lamps can provide savings of up to 73% in energy costs compared to GLS lamps. Available in 5, 7, 9 and 11 watt ratings, low wattage Biax™ S lamps are ideal for new installations or to replace existing incandescent lamps. These lamps are available in 2700, 3000, 3500, 4000, 5000 and 6500K colour temperatures.

The Biax™ S lamps have built-in internal starters. They have a rated average life of 10000 hours, which results in fewer lamp changes and a reduction in maintenance costs over the life of an installation.

The Biax™ S/E lamps are available in 5, 7, 9 and 11 watt ratings. However, the Biax™ S/E lamps have four-pin caps without built-in capacitors and starters. They are therefore suitable for operation with electronic control gear and can be used for dimming and emergency lighting applications.

Biax™ S/E lamps have the same energy saving benefits and high quality colour rendering as the Biax™ S range.



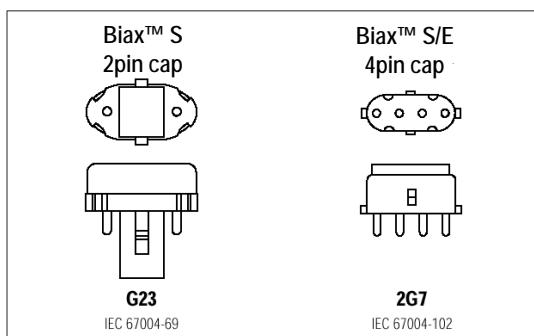
	L max (mm)	L1 (mm)	L2 (mm)		L max (mm)	L1 (mm)	L2 (mm)
5W	107.5	27	85	5W	92	27	84
7W	136.5	27	114	7W	121	27	113
9W	167	27	144.5	9W	151	27	143
11W	237	27	214.5	11W	222	27	214

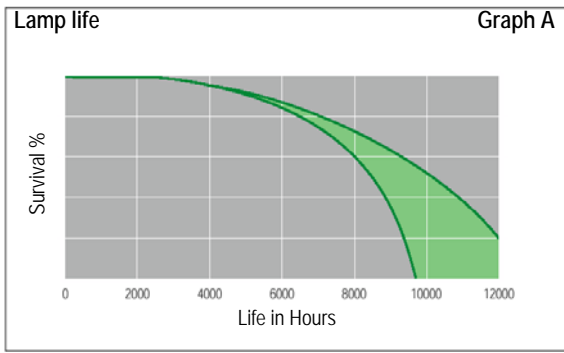
Features

- Flat and compact
- High luminous efficacy
- Up to 73% energy-saving compared to GLS lamps
- 10 times the lamp life of GLS lamps
- Pleasant light, excellent colour rendering.

Applications

- Wall & ceiling luminaires
- In hotels, motels, office buildings, apartments
- Building, public areas
- Ideal for task light applications also
- Emergency lighting
- Closed outdoor fixtures.



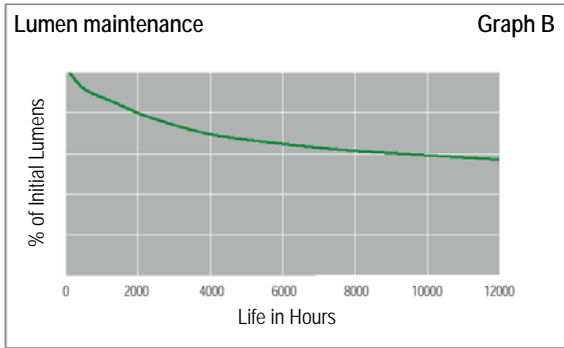


Lamp Life

Rated Average Life for Biax™ S & S/E lamps is 10000 hours (switching cycle: 3 Hrs: 165 Mins ON / 15 Mins OFF). See Graph A.

Lumen Maintenance

Lumen Maintenance curve presented for Biax™ S & S/E lamps is based on lumen readings in a photometric sphere under laboratory conditions, in cap up position. In actual use, lumen output is a function of burning hours and lamp operating watts throughout life. See Graph B.

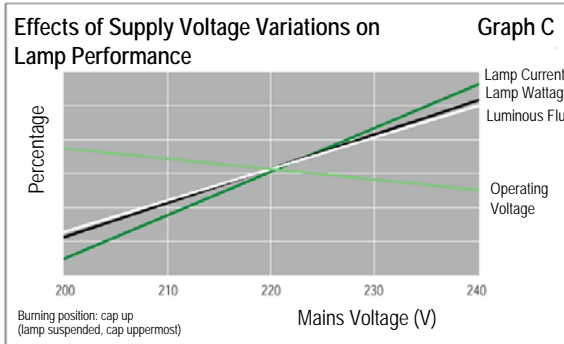


Effect of Frequent Switching

Lamps survive min. 20000 switching cycles with appropriate electronic gear or external starter.

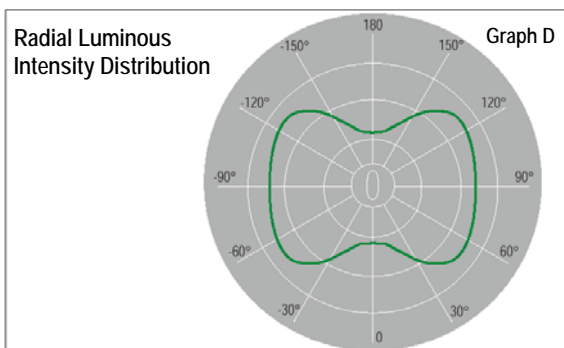
Effects of Supply Voltage Variations on Lamp Performance

Biax™ S & S/E lamps are suitable for supplies in the range 200V to 240V, 50Hz for appropriately rated series choke (reactor) ballasts. Supplies outside this range require a transformer (conventional, high reactance or CWA) to ensure correct lamp operation. Lamps start and operate at 10% below the rated supply voltage when the correct control gear is used. However, in order to maximise lamp survival, lumen maintenance and colour uniformity the supply voltage and ballast design voltage should be within $\pm 3\%$. Supply variations of $\pm 5\%$ are permissible for short periods only. This may be achieved by measuring mean supply voltage at the installation and selecting ballasts with appropriate settings. See Graph C.



Luminous Intensity Distribution

The Luminous Intensity Distribution curve shows the horizontal light intensity of Biax™ S & S/E lamps. See Graph D.

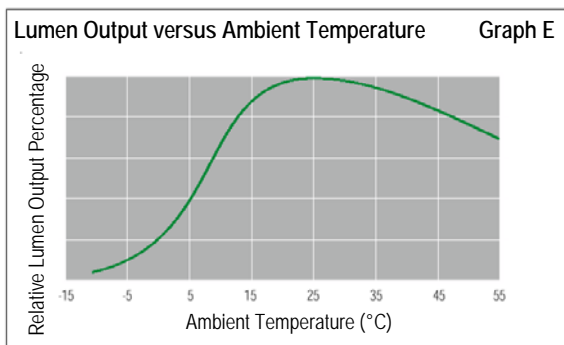


Effects of Temperature Changes

When installed in a luminaire, the temperature of the air surrounding the lamp cap changes and this can affect the light output of the lamp. The effects of changes in ambient temperature for a typical lamp are in Graph E.

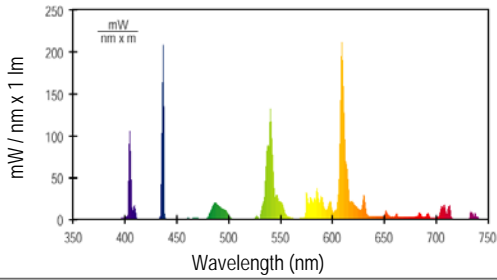
Standards

Biax™ S & S/E lamps comply with the relevant clauses of all applicable safety and performance specifications including IEC 61199, IEC 60901.

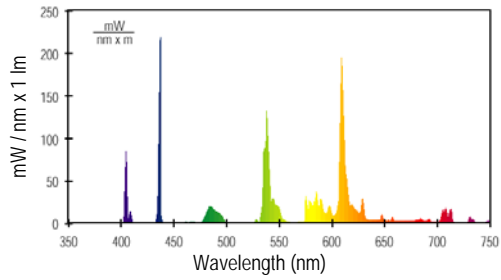


Burning position: cap up

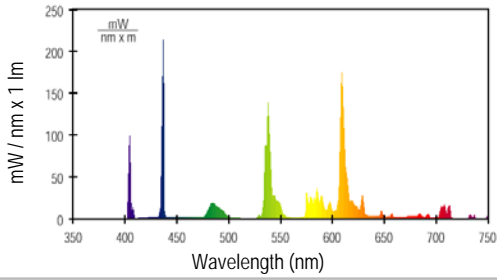
Spectral Power Distribution (2700K)



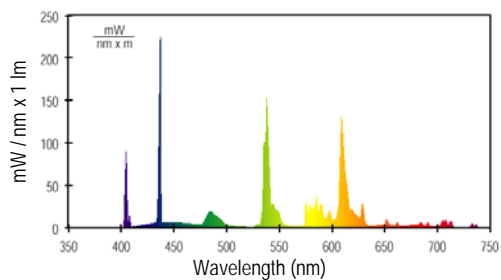
Spectral Power Distribution (3000K)



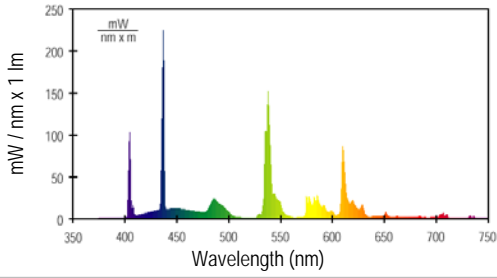
Spectral Power Distribution (3500K)



Spectral Power Distribution (4000K)

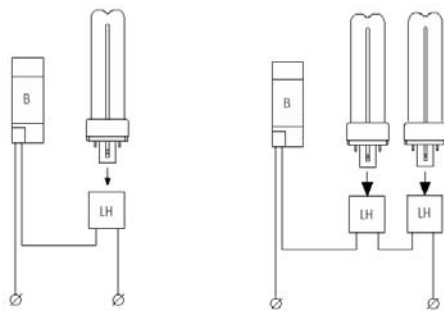


Spectral Power Distribution (6500K)



Circuit Diagram

Parallel compensated
 B = Ballast (50Hz)
 LH = Lamp Holder

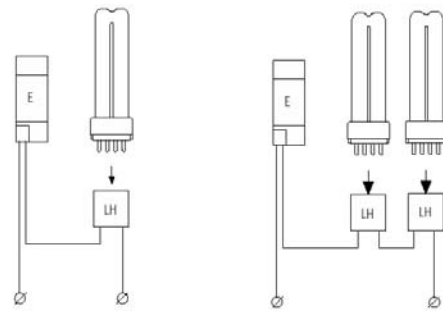


Supply Voltage

Supply Voltage

Biax™ S
 5W, 7W, 9W & 11W

Parallel compensated
 E = Electronic Gear (50Hz)
 LH = Lamp Holder



Supply Voltage

Supply Voltage

Biax™ S/E
 5W, 7W, 9W & 11W

Watts	Volts	Amps	L max. [mm]	L1 [mm]	L2 [mm]	Cap	Order Code	Lumen	Colour Temp. [K]	Ra	Rated Life [h]
Biax™ S 2pin with internal starter • cap G23 • 10000 hours											
5	35	0.18	107.5	27	85	G23	F5BX/827/2P	265	2700	82	10000
5	35	0.18	107.5	27	85	G23	F5BX/830/2P	265	3000	82	10000
5	35	0.18	107.5	27	85	G23	F5BX/835/2P	265	3500	82	10000
5	35	0.18	107.5	27	85	G23	F5BX/840/2P	265	4000	82	10000
7	47	0.175	136.5	27	114	G23	F7BX/827/2P	425	2700	82	10000
7	47	0.175	136.5	27	114	G23	F7BX/830/2P	425	3000	82	10000
7	47	0.175	136.5	27	114	G23	F7BX/835/2P	425	3500	82	10000
7	47	0.175	136.5	27	114	G23	F7BX/840/2P	425	4000	82	10000
7	47	0.175	136.5	27	114	G23	F7BX/850/2P	425	5000	82	10000
7	47	0.175	136.5	27	114	G23	F7BX/865/2P	425	6500	82	10000
9	60	0.17	167	27	144.5	G23	F9BX/827/2P	600	2700	82	10000
9	60	0.17	167	27	144.5	G23	F9BX/830/2P	600	3000	82	10000
9	60	0.17	167	27	144.5	G23	F9BX/835/2P	600	3500	82	10000
9	60	0.17	167	27	144.5	G23	F9BX/840/2P	600	4000	82	10000
9	60	0.17	167	27	144.5	G23	F9BX/850/2P	600	5000	82	10000
9	60	0.17	167	27	144.5	G23	F9BX/865/2P	600	6500	82	10000
11	91	0.155	237	27	214.5	G23	F11BX/827/2P	900	2700	82	10000
11	91	0.155	237	27	214.5	G23	F11BX/830/2P	900	3000	82	10000
11	91	0.155	237	27	214.5	G23	F11BX/835/2P	900	3500	82	10000
11	91	0.155	237	27	214.5	G23	F11BX/840/2P	900	4000	82	10000
11	91	0.155	237	27	214.5	G23	F11BX/850/2P	900	5000	82	10000
11	91	0.155	237	27	214.5	G23	F11BX/865/2P	900	6500	82	10000
Biax™ S/E 4pin without internal starter • cap 2G7 • 10000 hours											
5	35	0.18	92	27	84	2G7	F5BX/827/4P	265	2700	82	10000
5	35	0.18	92	27	84	2G7	F5BX/830/4P	265	3000	82	10000
5	35	0.18	92	27	84	2G7	F5BX/840/4P	265	4000	82	10000
7	47	0.175	121	27	113	2G7	F7BX/827/4P	425	2700	82	10000
7	47	0.175	121	27	113	2G7	F7BX/830/4P	425	3000	82	10000
7	47	0.175	121	27	113	2G7	F7BX/835/4P	425	3500	82	10000
7	47	0.175	121	27	113	2G7	F7BX/840/4P	425	4000	82	10000
9	60	0.17	151	27	143	2G7	F9BX/827/4P	600	2700	82	10000
9	60	0.17	151	27	143	2G7	F9BX/830/4P	600	3000	82	10000
9	60	0.17	151	27	143	2G7	F9BX/835/4P	600	3500	82	10000
9	60	0.17	151	27	143	2G7	F9BX/840/4P	600	4000	82	10000
11	91	0.155	222	27	214	2G7	F11BX/827/4P	900	2700	82	10000
11	91	0.155	222	27	214	2G7	F11BX/830/4P	900	3000	82	10000
11	91	0.155	222	27	214	2G7	F11BX/835/4P	900	3500	82	10000
11	91	0.155	222	27	214	2G7	F11BX/840/4P	900	4000	82	10000
11	91	0.155	222	27	214	2G7	F11BX/865/4P	900	6500	82	10000

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