



Energy efficiency and long life

Ceramalux ALTO

These lamps pass the EPA's TCLP test for non-hazardous materials. Ideal for industrial applications, warehouses, post top applications and parking lots.

Benefits

- Low mercury - better for the environment.
- Long Life - 24,000 hours Rated Average Life.
- High efficacy up to 140 LPW.

Features

- Low total cost of ownership.
- Long life—up to 24,000 hours.
- High efficacy up to 140 LPW.
- ALTO® Lamp Technology - Sustainable solution.
- ED 18 Available in 200, 250 and 400 watt; ED-23 1/2 Available in 50, 70,100, and 150 watt

Application

- Ideal for street and roadway lighting, parking lots and garages, warehouses and manufacturing facilities where lower maintenance costs are desired.

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Versions



E39, ED-23 1/2, Coated



E39, E-25, Clear

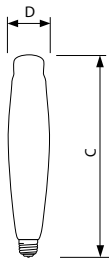


E39, ED-18, Clear



E39, ED-23 1/2, Clear

Dimensional drawing



Product		
C70S62 3PK		
C100S54 3PK	75 mm	192 mm
C150S55 3PK		
C100S54/D ALTO PH 12PK		
SON 100W E39 ED75 CL SL/12	75 mm	192 mm
C50S68/ALTO 12PK		
SON 150W E39 ED75 CL SL/12		
SON 70W E39 ED75 CL SL/12		

Product		
C400S51 3PK		
C200S66/ALTO 12PK		
SON 400W E39 ED58 CL SL/12		
SON 250W E39 ED58 CL SL/12	57.2 mm	243 mm

Product		
C1000S52/ALTO		

Ceramalux ALTO

General Information	
Cap-Base	E39
Main Application	General and Street Lighting
Operating Position	UNIVERSAL
Luminaire Design Requirements	
Bulb Temperature (Max)	400 °C
Light Technical	
Correlated Color Temperature (Nom)	2100 K
Mechanical and Housing	
Bulb Material	Hard Glass

Approval and Application

Order Code	Full Product Name	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)	Picogram Per Lumen Hour
928601139205	C100S52/ALTO	-	32 mg	11.3 pg/lm.h
928601139305	C400S51 3PK	23.5 mg	-	26.4 pg/lm.h
928601139391	SON 400W E39 ED58 CL SL/12	23.5 mg	-	26.4 pg/lm.h
928601139490	SON 250W E39 ED58 CL SL/12	23.5 mg	-	-
928601139590	C200S66/ALTO 12PK	31 mg	-	-
928601139706	C150S55 3PK	17 mg	-	-

Order Code	Full Product Name	Mercury (Hg) Content (Max)	Mercury (Hg) Content (Nom)	Picogram Per Lumen Hour
928601139806	C100S54 3PK	22.1 mg	-	-
928601139890	SON 100W E39 ED75 CL SL/12	22.1 mg	-	-
928601139906	C70S62 3PK	17 mg	-	-
928601139990	SON 70W E39 ED75 CL SL/12	17 mg	-	-
928601140090	C50S68/ALTO 12PK	17.7 mg	-	-

Operating and Electrical

Order Code	Full Product Name	Lamp Current (Nom)	Voltage (Max)	Voltage (Min)	Voltage (Nom)	Re-Ignition Time (Min) (Max)
928601107702	C100S54/D ALTO PH 12PK	2.1 A	62 V	45 V	55 V	2 min
928601139205	C100S52/ALTO	4.7 A	275 V	210 V	250 V	3 min
928601139305	C400S51 3PK	4.6 A	115 V	84 V	100 V	1 min
928601139391	SON 400W E39 ED58 CL SL/12	4.6 A	115 V	84 V	100 V	1 min
928601139490	SON 250W E39 ED58 CL SL/12	3.0 A	110 V	79 V	95 V	2 min
928601139590	C200S66/ALTO 12PK	2.4 A	115 V	90 V	100 V	1 min
928601139706	C150S55 3PK	3.2 A	62 V	48 V	55 V	2 min
928601139790	SON 150W E39 ED75 CL SL/12	3.2 A	62 V	48 V	55 V	2 min
928601139806	C100S54 3PK	2.1 A	62 V	45 V	55 V	2 min
928601139890	SON 100W E39 ED75 CL SL/12	2.1 A	62 V	45 V	55 V	2 min
928601139906	C70S62 3PK	1.6 A	60 V	44 V	52 V	2 min
928601139990	SON 70W E39 ED75 CL SL/12	1.6 A	60 V	44 V	52 V	2 min
928601140090	C50S68/ALTO 12PK	1.18 A	62 V	46 V	52 V	2 min

Light Technical (1/2)

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Order Code	Full Product Name	Chromaticity	Chromaticity	Color	Luminous Efficacy (rated) (Min)	Luminous Efficacy (rated) (Nom)	Design Mean Lumens	Luminous Flux (Rated) (Min)
		Coordinate X (Nom)	Coordinate Y (Nom)	Rendering Index (Nom)				
928601107702	C100S54/D ALTO PH 12PK	523	417	21	83 lm/W	93 lm/W	7750 lm	8300 lm
928601139205	C100S52/ALTO	515	420	21	121.5 lm/W	135 lm/W	126000 lm	121500 lm
928601139305	C400S51 3PK	515	420	20	112.5 lm/W	125 lm/W	45000 lm	45000 lm
928601139391	SON 400W E39 ED58 CL SL/12	515	420	20	112.5 lm/W	125 lm/W	45000 lm	45000 lm
928601139490	SON 250W E39 ED58 CL SL/12	523	412	26	102 lm/W	114 lm/W	24300 lm	25600 lm
928601139590	C200S66/ALTO 12PK	521	420	16	104 lm/W	115 lm/W	19260 lm	20700 lm
928601139706	C150S55 3PK	514	424	17	96 lm/W	107 lm/W	14220 lm	14400 lm
928601139790	SON 150W E39 ED75 CL SL/12	514	424	17	96 lm/W	107 lm/W	14220 lm	14400 lm
928601139806	C100S54 3PK	520	420	18	85 lm/W	94 lm/W	8460 lm	8500 lm
928601139890	SON 100W E39 ED75 CL SL/12	520	420	18	85 lm/W	94 lm/W	8460 lm	8500 lm
928601139906	C70S62 3PK	522	425	13	86 lm/W	94 lm/W	5670 lm	6000 lm
928601139990	SON 70W E39 ED75 CL SL/12	522	425	13	86 lm/W	94 lm/W	5670 lm	6000 lm
928601140090	C50S68/ALTO 12PK	529	420	16	74 lm/W	82 lm/W	3600 lm	3700 lm

Light Technical (2/2)

Order Code	Full Product Name	Luminous Flux (Rated) (Nom)	Photosynthetic Photon Flux (PPF)
928601107702	C100S54/D ALTO PH 12PK	9300 lm	-
928601139205	C100S52/ALTO	135000 lm	1550 µmol/s
928601139305	C400S51 3PK	50000 lm	595 µmol/s
928601139391	SON 400W E39 ED58 CL SL/12	50000 lm	595 µmol/s
928601139490	SON 250W E39 ED58 CL SL/12	28500 lm	-
928601139590	C200S66/ALTO 12PK	23000 lm	-
928601139706	C150S55 3PK	16000 lm	-

Order Code	Full Product Name	Luminous Flux (Rated) (Nom)	Photosynthetic Photon Flux (PPF)
928601139790	SON 150W E39 ED75 CL SL/12	16000 lm	-
928601139806	C100S54 3PK	9400 lm	-
928601139890	SON 100W E39 ED75 CL SL/12	9400 lm	-
928601139906	C70S62 3PK	6600 lm	-
928601139990	SON 70W E39 ED75 CL SL/12	6600 lm	-
928601140090	C50S68/ALTO 12PK	4100 lm	-

Mechanical and Housing

Order Code	Full Product Name	Bulb Finish	Bulb Shape
928601107702	C100S54/D ALTO PH 12PK	Coated glass	ED-23 1/2
928601139205	C100S52/ALTO	Clear	E-25
928601139305	C400S51 3PK	Clear	ED-18
928601139391	SON 400W E39 ED58 CL SL/12	Clear	ED-18
928601139490	SON 250W E39 ED58 CL SL/12	Clear	ED-18
928601139590	C200S66/ALTO 12PK	Clear	ED-18
928601139706	C150S55 3PK	Clear	ED-23 1/2

Order Code	Full Product Name	Bulb Finish	Bulb Shape
928601139790	SON 150W E39 ED75 CL SL/12	Clear	ED-23 1/2
928601139806	C100S54 3PK	Clear	ED-23 1/2
928601139890	SON 100W E39 ED75 CL SL/12	Clear	ED-23 1/2
928601139906	C70S62 3PK	Clear	ED-23 1/2
928601139990	SON 70W E39 ED75 CL SL/12	Clear	ED-23 1/2
928601140090	C50S68/ALTO 12PK	Clear	ED-23 1/2

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