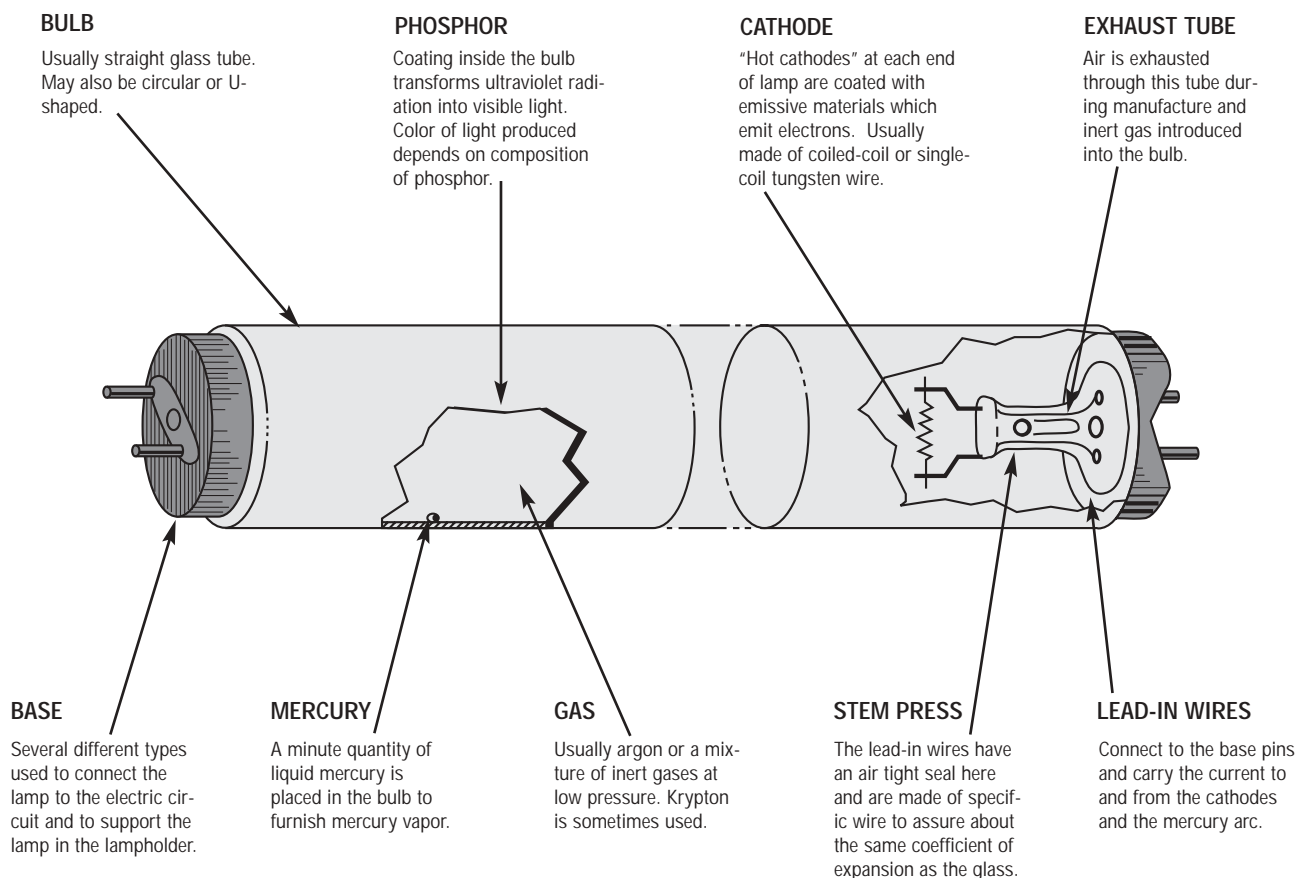


## OSRAM SYLVANIA: THE LEADER IN ENERGY SAVING FLUORESCENT LAMPS

The fluorescent lamp is an electric discharge device which utilizes a low pressure mercury vapor arc to generate ultra-violet (plus a little visible) energy. The ultra-violet energy is absorbed by a phosphor coat on the inside of the glass tube and converted by the phosphor to visible wavelengths; the wavelengths of the light generated are determined by the composition of the phosphor. In addition to the small amount of mercury vapor, the fluorescent tube contains an atmosphere of an inert gas, usually argon, krypton, neon, or a mixture of two or more of these gases. The pressure of the gases contained in the lamp is very low, usually from 2 to 3 torr. Atmospheric pressure is 760 torr.



## HOW TO READ PRODUCT INFORMATION - COMPACT FLUORESCENT

Nominal Wattage	Bulb	MOL (in)	MOL (mm)	Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Initial Lumens @25°C/77°F	Approx Mean Lumens	Symbols & Footnotes
20	T4	6.3	160	Med	29296	CF20EL/830/MED		6	6000	3000	82	1280	1101	2,21,28, 36,63,64
26	T4	6.8	173	G24D-3	20710	CF26DD/830	CFQ26W/G24D/30	50	10000	3000	82	1800	1548	2,21,28, 34,37
32	T4	5.5	140	GX24Q-3	20885	CF32DT/E/IN/835	CFTR32W/GX24Q/35	50	10000	3500	82	2400	2064	2,21,28, 33,35,59
40	T5	22.6	573	2G11	20586	FT40DL/841/RS	FT40W/2G11/RS/41	10	20000	4100	82	3150	2709	2,21,28

<b>Nominal Wattage</b>	Design wattage on reference ballast. Actual wattage dependent on ballast.
<b>Bulb</b>	Describes the shape of the bulb followed by the bulb's diameter at its widest point. The diameter value is expressed in eighths of an inch. Ex. T = Tubular, 4 = 4/8 inch = 1/2 inch. Please see page 103 for bulb illustrations.
<b>Base</b>	Base designations for compact fluorescent lamps are the NEMA designations. Please see page 104 for base illustrations.
<b>MOL</b>	Maximum overall length. The actual length of the lamp measured from the bottom of the base to the top outside edge of the glass. In many cases, the bottom of the base is the bottom of the center post of the base of the lamp.
<b>Symbols &amp; Footnotes</b>	Most symbols and footnotes that apply to a specific product will appear in this space. The explanations of the symbols and footnotes are at the end of the fluorescent section.
<b>Ordering Abbreviation</b>	A text description of the lamp. Please see below for several examples and explanations of some of the codes.
<b>NEMA Generic Designation</b>	Designation assigned by NEMA (National Electrical Manufacturers Association).
<b>CCT</b>	Correlated Color Temperature. The degree of "whiteness" of the light. Expressed in kelvins (K). Please see page 99 for more information.
<b>CRI</b>	Color Rendering Index. A numbering system for rating the relative color rendering quality of a light source compared to a standard. Please see page 99 for more information.
<b>Initial &amp; Mean Lumens</b>	Initial lumens are measured when the lamp has been operating for 100 hours. Mean lumens are typically measured at 40% of the rated life of the lamp. Compact Fluorescent lamp lumens are measured at 25°C (77°F).

### How to Read Ordering Abbreviations

CF26DD/830		CF32DT/E/IN/835		FT40DL/841/RS		CF20EL/830/MED	
CF	Compact Fluorescent	CF	Compact Fluorescent	FT	Fluorescent Twin	CF	Compact Fluorescent
26	Nominal lamp wattage	32	Nominal lamp wattage	40	Nominal lamp wattage	20	Nominal lamp wattage
DD	DULUX Double	DT	DULUX Triple	DL	DULUX Long	EL	Electronic Lamp
8	82 CRI	E	Electronic or dimming operation	8	82 CRI	8	82 CRI
30	3000K CCT	IN	Amalgam	41	4100K CCT	30	3000K CCT
		8	82 CRI	RS	Rapid Start	MED	Medium screw base
		35	3500K CCT				

### DULUX® LAMP FAMILIES

- CF... DS = DULUX Single, 2-pin for magnetic operation, ECOLOGIC®
- CF... DS/E = DULUX Single, 4-pin for electronic or dimming operation
- CF... DD = DULUX Double, 2-pin for magnetic operation, ECOLOGIC
- CF... DD/E = DULUX Double, 4-pin for electronic or dimming operation, ECOLOGIC
- CF... DT = DULUX Triple, 2-pin for magnetic operation, ECOLOGIC
- CF... DT/E = DULUX Triple, 4-pin for electronic or dimming operation, ECOLOGIC
- CF... DT/E/IN = DULUX Triple, 4-pin for electronic or dimming operation, amalgam, ECOLOGIC
- FT... DL = Fluorescent Twin, DULUX Long, 4-pin
- CF... DF = DULUX Flat, 4-pin
- CF... EL = DULUX self-ballasted, medium screw base

## HOW TO READ PRODUCT INFORMATION - FLUORESCENT

Nominal Wattage	Bulb	Nominal Length(in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Initial Lumens @25°C/77°F	Approx Mean Lumens @35°C/95°F	Symbols & Footnotes
32	T8	48	47.78	Med Bipin	21763	F032/835XP/ECO	30	24000	3500	85	3000	2850	Ⓢ, Ⓜ, Ⓛ 2,21,31,35,39,60,70
34	T12	48	47.78	Med Bipin	24594	F34CW/SS Formerly F40CW/SS	30	20000	4200	62	2650	2279	Ⓢ 2,10,13,19,21,42
54	T5	48	45.5	Mini Bipin	20857	FP54/830/HO	40	20000	3000	82	4450 5000	4228 4750	Ⓛ 2,21,26,35,59
60	T12	96	94	Single Pin	29815	F96T12/CW/SS	15	12000	4200	62	5300	4664	Ⓢ 2,15,21

<b>Nominal Wattage</b>	Design wattage on reference ballast. Actual wattage dependent on ballast.
<b>Bulb</b>	Describes the shape of the bulb followed by the bulb's diameter at its widest point. The diameter value is expressed in eighths of an inch. Ex. T = Tubular, 8 = 8/8 inch = 1 inch. Please see page 103 for bulb illustrations.
<b>Base</b>	Please see page 104 for base illustrations.
<b>Nominal Length</b>	The nominal length of linear fluorescent lamps is typically measured from back of lampholder to back of lampholder. PENTRON® linear lamp, CURVALUME® and Circline lamps are exceptions. The nominal length given for PENTRON linear lamps is the closest familiar nominal length. CURVALUME lamps are measured from the face of the bases to the outside of the glass bend. The measurement for Circline lamps is the outside diameter. Values are in inches.
<b>MOL</b>	Maximum overall length. The length of the lamp measured in inches.
<b>Symbols &amp; Footnotes</b>	Most symbols and footnotes that apply to a specific product will appear in this space. The explanations of the symbols and footnotes are at the end of the fluorescent section.
<b>Ordering Abbreviation</b>	A text description of the lamp. Please see below for several examples and explanations of some of the codes.
<b>CCT</b>	Correlated Color Temperature. The degree of "whiteness" of the light. Expressed in kelvins (K). Please see page 99 for more information.
<b>CRI</b>	Color Rendering Index. A numbering system for rating the relative color rendering quality of a light source compared to a standard. Please see page 99 for more information.
<b>Initial &amp; Mean Lumens</b>	Initial lumens are measured when the lamp has been operating for 100 hours. Mean lumens are typically measured at 40% of the rated life of the lamp. For longer life lamp such as the OCTRON® XP™ lamps, the mean lumens are measured at the same point in time as they are measured for the standard lamps they replace. Fluorescent lamp lumens are typically measured at 25°C (77°F). The lamp lumens are measured at both 25°C (77°F) and 35°C (95°F) for PENTRON linear lamps.

### How to Read Ordering Abbreviations

F032/835XP/ECO		F34CW/SS		FP54/830/HO		F96T12/CW/SS	
F	Fluorescent	F	Fluorescent	F	Fluorescent	F	Fluorescent
O	OCTRON	34	Nominal lamp	P	PENTRON	96	96" nominal length
32	Nominal lamp wattage	CW	Cool White phosphor	54	Nominal lamp wattage	T	Tubular Shape Bulb
8	85 CRI	SS	SUPERSAVER® - reduced wattage lamp	8	82 CRI	12	Bulb diameter; 1/8 inch = 1 1/2 inches
35	3500K CCT			30	3000K CCT	CW	Cool White phosphor
XP	EXtended Performance			HO	High Output	SS	SUPERSAVER - reduced wattage lamp
ECO®	ECOLOGIC® - TCLP passing lamp						



The following items were accepted into the 2003 IESNA Progress Report which recognizes innovative products introduced to the industry during that year.

OCTRON® 28-watt 4-foot XP™ SUPERSAVER®

OCTRON 8-foot XP SUPERSAVER

OCTRON CURVALUME®XP SUPERSAVER

5000K ICETRON®

Colored PENTRON®

For weight and measurement information, please visit [www.sylvania.com](http://www.sylvania.com)

### Lamp Disposal Labeling

The following information appears on the packages of fluorescent lamps. For more information on lamp disposal labeling, see the inside back cover of this catalog.



**Lamp Contains Mercury**

Manage in accordance with disposal laws  
See [www.lamprecycle.org](http://www.lamprecycle.org) or 1-866-666-6850

## FLUORESCENT LAMP COLORS

COLOR	COLOR ABBREVIATION	CORRELATED COLOR TEMPERATURE(1)	COLOR RENDERING INDEX(2)
DULUX® 2700K	827	2700	82
OCTRON® "800" 2700K	827	2700	84
OCTRON XP™ "800" 2700K	827	2700	85
INCANDESCENT FLUORESCENT	IF	2750	89
SOFT WHITE	Soft White	2900	82
DELUXE WARM WHITE	WWX	2900	82
WARM WHITE	WW	3000	52
WARM WHITE PLUS	WWP	3000	70
DESIGNER® 3000K	D30	3000	70
DESIGNER WARM WHITE	DWW	3000	70
DESIGNER "800" 3000K	D830	3000	80
DESIGNER WARM WHITE PLUS	DWWP	3000	80
DULUX SOFT WHITE	830	3000	82
DULUX 3000K	830	3000	82
OCTRON "700" 3000K	730	3000	75
OCTRON XP "700" 3000K	730	3000	78
OCTRON "800" 3000K	830	3000	82
OCTRON XP "800" 3000K	830	3000	85
OCTRON XPS® "800" 3000K	830	3000	86
PENTRON® 3000K	830	3000	82
GRO-LUX® Aquarium WIDE SPECTRUM	GRO/AQ/WS	3400	89
WHITE	W	3450	57
DESIGNER 3500K	D35	3500	70
DESIGNER "800" 3500K	D835	3500	80
DULUX 3500K	835	3500	82
ICETRON® 3500K	835	3500	80
PENTRON 3500K	835	3500	82
OCTRON "700" 3500K	735	3500	75
OCTRON XP "700" 3500K	735	3500	78
OCTRON "800" 3500K	835	3500	82
OCTRON XP "800" 3500K	835	3500	85
OCTRON XPS "800" 3500K	835	3500	86
NATURAL WHITE	N	3600	86
DESIGNER 4100K	D41	4100	70
DESIGNER COOL WHITE	DCW	4100	70
DESIGNER "800" 4100K	D841	4100	80
DESIGNER COOL WHITE PLUS	DCWP	4100	80
DULUX 4100K	841	4100	82
ICETRON 4100K	841	4100	80
PENTRON 4100K	841	4100	82
OCTRON "700" 4100K	741	4100	75
OCTRON XP "700" 4100K	741	4100	78
OCTRON "800" 4100K	841	4100	82
OCTRON XP "800" 4100K	841	4100	85
OCTRON XPS "800" 4100K	841	4100	86
DELUXE COOL WHITE	CWX	4100	87
LITE WHITE	LW	4150	48
COOL WHITE	CW	4200	62
COOL WHITE PLUS	CWP	4100	70
DULUX 5000K	850	5000	82
ICETRON 5000K	850	5000	80
OCTRON "700" 5000K	750	5000	75
OCTRON "800" 5000K	850	5000	80
OCTRON XP "800" 5000K	850	5000	85
OCTRON "900" 5000K	950	5000	90
DESIGN 50®	DSGN50	5000	90
DAYLIGHT™	D	6500	76
OCTRON "700" 6500K	765	6500	75
OCTRON XP "800" 6500K	865	6500	85
DESIGNER 6500K	865	6500	80
DAYLIGHT DELUXE	DX	6500	88

## FLUORESCENT COMPETITIVE GUIDES

NOTE: These tables are intended only as guides and may represent another lamp company's most similar product or product family rather than an identical match. Individual manufacturer's performance values should be consulted. Environmental conditions, ballast type, and other auxiliary equipment may affect lamp performance.

### FLUORESCENT BRAND NAMES

SYLVANIA	GE*	PHILIPS**
CURVALUME® (FB)	MOD-U-LINE (U)	U-Bent (FB)
CWX		Home Light Everywhere (HL Everywhere)
DESIGN 50® (DSGN50)	Chroma 50 (C50)	Colortone 50 (C50)
DESIGNER® Series	Specification Series (SP)	SPEC
DESIGNER 800 Series	Specification Series (SPX)	Ultralume
DESIGNER Cool White	SP41	Home Light Cool (HL Cool)
DESIGNER Cool White PLUS	SPX41	41U
DESIGNER Warm White	Kitchen and Bath ULTRA (70 CRI)	SPEC30
DESIGNER Warm White PLUS (DWWP)	Kitchen and Bath ULTRA (80 CRI)	Home Light WX (HL WX)
DESIGNER 700, 3500K (D35)	SP35	Home Light Warm (HL Warm)
DULUX®	BIAX	PL
DULUX S	BIAX	PL
DULUX D, D/E	Double BIAx	PL-C
DULUX T, T/E	Triple BIAx	PL-T
DULUX F	---	---
DULUX L	High Lumen BIAx	PL-L
DULUX EL	Electronic Self Ballasted Lamps(was Compax)	Earth Light Lamps (SLS)
---	2D	---
---	GENURA	---
ECOLOGIC® (ECO®)	Ecolux (ECO)	ALTO
GRO-LUX®	Gro & Sho/Plant & Aquarium/Terrarium	Agro-Lite (AGRO)
ICETRON®	---	---
OCTRON®	T8 (was Trimline)	TL70/TL80
OCTRON 700 XP™ ECO	SP Ecolux XL T8 Lamps with Starcoat	TL700 PLUS ALTO
OCTRON 800 XP ECO	SPX Ecolux XL T8 Lamps with Starcoat	TL800 PLUS ALTO
OCTRON 800 XPS ECO	---	---
OCTRON 950	---	TL950
PENTRON®	T5 Starcoat	SILHOUETTE™
---	---	QL (similar to ICETRON, but not interchangeable)
SAFELINE®	covRguard	---
SUN STICK®	SUN (Sunshine)	C50
SUPERSAVER® (SS)	Watt-Miser (WM)	Econ-o-Watt (EW)
HO (800mA)	HO (800mA)	HO (800mA)
VHO (1500mA)	1500 (1500mA) & Power Grove	VHO (1500mA) (was SHO)
VHO/LT	T10/1500MA	VHO-0
XP™	XL	Advantage
XPS®		

\* Trademarks or registered trademarks of General Electric Company \*\* Trademarks or registered trademarks of Philips

### FLUORESCENT COLOR CROSS REFERENCE

SYLVANIA	GE	PHILIPS	SYLVANIA	GE	PHILIPS
CW	CW	CW	D41	SP41	Spec 41
CWX		CWX, HL Everywhere		SP65	
D	D	D	D830	SPX30	30U
DX	DX	DX	D835	SPX35	35U
DSGN50	C50	50	D841	SPX41	41U
DSGN50	SGN	C50	D865		
DCW, D41	SP41	HL Cool	730	SP30	730
DCWP	SPX41	U41	735	SP35	735
DWW, D30	KB / 70 CRI, SP30	SPEC30	741	SP41	741
DWWP, D830	KB / 82 CRI, SPX30	HL WX	750	SP50	750
D35	SP35	HL Warm	765	SP65	
GRO/AQ		AGRO	827	SPX27	27
GRO/WS/AQ	PL/AQ		830	SPX30	30, 830
LW	LW	LW	835	SPX35	35, 835
N	N	N	841	SPX41	41, 841
SUN STICK	SUN	C50	850	SPX50	50, 850
WW	WW	WW	865	SPX65	865
D30	SP30	Spec 30	950		950
D35	SP35	Spec 35			

## FLUORESCENT COMPETITIVE GUIDES (continued)

### FLUORESCENT ELECTRICAL INTERCHANGEABILITY

SYLVANIA	GE	PHILIPS
<b>Linear Lamps</b>		
F18T8/CW/K/23	F24*T8/CW/4	F15T8/CW/24
F18T8/CW/K/26	F26*T8/CW/4	F16T8/CW/26
F18T8/CW/K/28	F28*T8/CW/4	F17T8/CW/28
F18T8/CW/K/30	F30*T8/CW/4	F18T8/CW/30
F34CW/SS	F34CW/WM	F34CW/EW
Formerly known as F40CW/SS	F40CW/WM	F40CW/EW
F96T12/CW/SS	F96T12/CW/WM	F96T12/CW/EW
FB40/D41/6	F40/SP41/U/6	FB40/SPEC41/6
FB40/CW/6/SS (new FB34/CW/6/SS)	F40CW/U/6/WM (new F34CW/U/6/WM)	FB40/CW/6/EW (new F34/CW/6/EW)
OCTRON®	T8 (was Trimline)	TL70/TL80
OCTRON 700 Series	T8 SP	TL70
OCTRON 800 Series	T8 SPX	TL80
FO17...	F17T8/SP(or SPX)...	F17T8/TL...
FO25...	F25T8/SP(or SPX)...	F25T8/TL...
FO32...	F32T8/SP(or SPX)...	F32T8/TL...
FO32/...XP™	F32T8/XL/SP (or SPX)	F32T8/TL...PLUS
FO32/...XPS®/ECO®	---	---
FO30...XP/SS/ECO	F32T8/SP.../IS/WM/ECO	F32T8/ADV8.../EW
FO28/8...XP/SS/ECO	---	---
FO40...	F40T8/SP... (or SPX)	F40T8/TL
FO72...	---	---
FO96...	F96T8/SP... (or SPX)	F96T8/TL...
FO96/7...XP/ECO	F96T8/XL.SP...	---
FO96/8...XP/ECO	F96T8/XL/SPX...	---
FO96/8...XP/SS/ECO	F96T8/SP.../WM	---
---	---	F48T8/TL.../HO
---	---	F60T8/TL.../HO
---	---	F72T8/TL.../HO
FO96.../HO	F96T8/SP (or SPX).../HO	F96T8/TL.../HO
---	F25T12/SP... (for T8 electronic ballasts)	---
FBO16...	---	---
FBO24...	---	---
FBO31...	F31T8/SPX.../U	---
FBO31...XP	---	---
FBO32...	F32T8/SP(or SPX).../U6	FB32T8/TL.../6
FBO32...XP	---	---
FBO31/...XPS/ECO	---	---
FBO32/...XPS/ECO	---	---
FBO32/8...XP/SS/ECO	---	---
FP14/8..	F14/T5/8..	F14T5/8..
FP21/8..	F21/T5/8..	F21T5/8..
FP28/8..	F28/T5/8..	F28T5/8..
FP35/8..	F35/T5/8..	F35T5/8..
FP24/8../HO	F24/T5/8../HO	F24T5/8../HO
FP39/8../HO	F39/T5/8../HO	F39T5/8../HO
FP54/8../HO	F54/T5/8../HO	F54T5/8../HO
FP80/8../HO	F80/T5/8../HO	F80T5/8../HO
---	F40T17/CW/IS	---
---	F96T17/...	---
HO (800mA)	HO (800mA)	HO (800mA)
F96T12/.../HO/COLDTEMP	F96T12/.../HO/CT	F96T12/.../HO-0
VHO (1500mA)	1500 or PG17 (both 1500mA)	VHO (1500mA)
VHO/LT (1500mA)	T10, 1500-0 (both1500mA)	VHO-0 (1500mA)
<b>Compact Fluorescent Lamps</b>		
DULUX®	BIAX®	PL
Medium Screw Base Lamps		
CF...EL/830/MED	FLE...TBX/LT	
CF...EL/830/MED/1	FLE...TBX/L	UNIVERSAL SLS ---
CF...EL/TWIST (15W, 20W, 23W, 27W, 30W)	FLE...HLX/8/SW/CD (Spiral17W, 21W, 27W)	Twister-BC-EL/DT... (15W, 20W, 23W)
CF...EL/MINITWIST (7, 11,13,19,23W)	---	---
---	---	UNIVERSAL/RH SLS.RH... (low THD)
CF28EL/3WAY/TWIST	FLE29QBX/D3 (3-Way Triple)	---
---	---	DIMMABLE SLS/D 20 (Dimmable)

## FLUORESCENT COMPETITIVE GUIDES (continued)

### FLUORESCENT ELECTRICAL INTERCHANGEABILITY (continued)

SYLVANIA	GE	PHILIPS
---	---	DIMMABLE SLS/D 23 (Dimmable)
---	FLE29QBX/DV (Dimmable Triple)	---
CF15EL/R30/830/MED	FLE15/TBX/L/R30	FLOOD SLS/R30 15
CF20EL/R40/830/MED	FLE20TBX/L/R40	FLOOD SLS/R40 20
CF15EL/BR30	---	Reflector Flood BC-EL/A BR30 16
CF15EL/G30/830/MED	FLE15TBX/L/G29	DÉCOR GLOBE SLS/30 15
CF15EL/G30/830/MED	FLG17 (magnetic)	DÉCOR GLOBE SLS/30 15
CF20EL/G40/830/MED	---	DÉCOR GLOBE SLS/40 15
CF15EL/G/830 (low profile Globe)	FLG15/E-120	---
CF15EL/B/830 (Bullet)	FLB17 (magnetic)	FLE15/6/TC19
CF15EL/ALINE	FLE15/L/TC16	OUTDOOR EL/O 15
CF14EL/A19/1/BL/YELLOW	FLE15/L/TC16/BUG	BUG-A-WAY EL/O 15 BAW
---	FLE15/L/TC16/DAY	---
---	---	OUTDOOR EL/O 18
---	FLE20/6/T19	---
CF9EL/C/830 (A23)	---	---
---	FLE15/A2/A23	HOUSEHOLD EL/A 16
---	FLE20/A2/A24	---
CF30EL/CIRC/830/MED	FEA30CIR	---
---	FEA382D/SW (2D w/adapter)	---
---	FEA382D/835 (2D w/adapter)	---

#### Pin Base Lamps

CF...DS... (2-pin)	F...BX...	PL-S...
CFT13WDS/EC	F13BX/E	---
CF...DS/E... (4 pin)	---	---
CF...DD/... (2 pin)	F...DBX...	PL-C...
CF...DD/E... (4 pin)	F...DBX.../4P	PL-C.../4P
CF...DT... (2 pin)	---	---
CF...DT/E... (4 pin)	F...TBX.../4P	PL-T.../4P
CF42DT/E... (4 pin)	F42QBX/SPX.../A/4P	PL42W.../4P/...
CF...DF...	---	---
---	F...TBX/I/8.../A/4P (inverted post)	---
FT18DL/8...	F18BX/SPX...	PL-L 18W/...
FT18DL/8.../RS	F18BX/SPX.../RS	---
FT24DL/8...	F27/24BX/SPX...	PL-L 24W/...
FT36DL/8...	F39/36BX/SPX...	PL-L 36W/...
FT40DL/8.../RS	F40/30BX/SPX...	PL-L 40W.../RS/IS
---	F50BX/SPX.../RS	PL-L 50W.../RS
FT55DL/8...	F55BX/8...	---
---	F...2D/...	---

#### Induction Lamps

ICE 70/8... (ICETRON®)	---	---
ICE 100/8... (ICETRON)	---	---
ICE 150/8... (ICETRON)	---	---
---	EL23/R25/... (Genura™)	---
---	---	QL55W/... (QL)
---	---	QL85W/... (QL)
---	---	QL165W/... (QL)

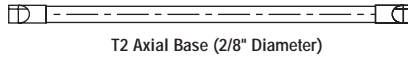
For a more complete manufacturers' cross reference, please see that section of this catalog or visit the electronic catalog at [www.sylvania.com](http://www.sylvania.com).



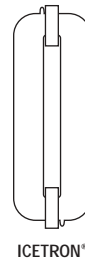
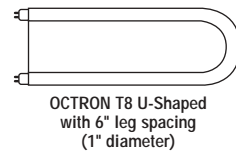
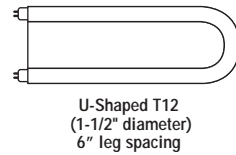
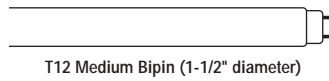
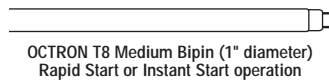
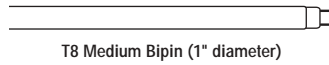
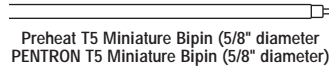
# FLUORESCENT LAMPS

The bulb shape and size of a fluorescent lamp are expressed by means of a code consisting of the letter "T" (which designates that the bulb is "tubular" in shape) followed by a number that expresses the diameter in eighths of an inch. Diameters range from T2 (1/4 inch) to T17 (2 1/8 inch). In nominal overall length, linear fluorescent lamps range from 6 to 96 inches. The nominal length is measured from back of lamp holder to back of lamp holder. For example, the actual overall length of the 40-watt rapid start T12 lamp with a nominal length of 48 inches is 47 3/4 inches. The nominal length given for PENTRON® linear lamps is the closest familiar nominal length. CURVALUME® U-shaped fluorescent lamps are available as OCTRON® T8 lamps with leg spacings of 1 1/2 inches and 6 inches and as rapid start T12 lamps with leg spacings of 3 1/2 inches and 6 inches. The leg spacing is measured from the center of one leg to the center of the other leg. The overall length of the CURVALUME lamps is measured from the face of the bases to the outside of the glass bend. Circline lamps, which are circular in shape, are available as T9 lamps with outside diameters of 6 1/2, 8, 12 and 16 inches as well as PENTRON T5 lamps with outside diameters of 8.85 and 11.77 inches. The overall length of DULUX® compact fluorescent lamps is measured from the bottom of the base to the outside edge of the glass. In many cases, the bottom of the base is the bottom of the center post of the base of the lamp.

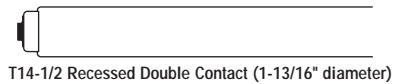
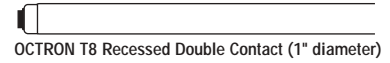
## T2 MINIATURE



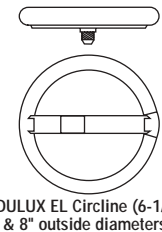
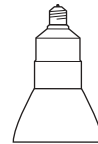
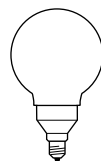
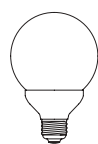
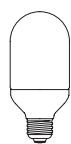
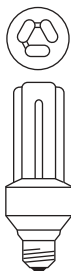
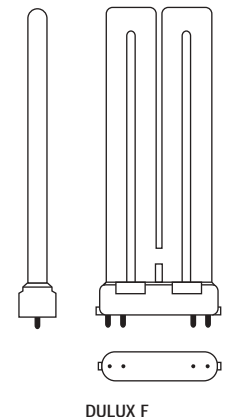
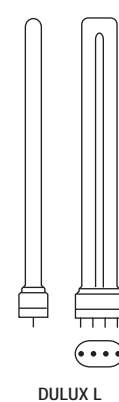
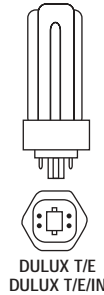
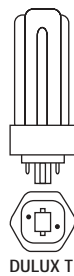
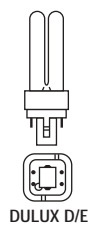
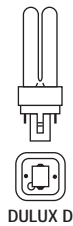
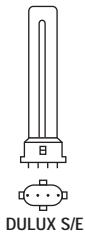
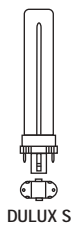
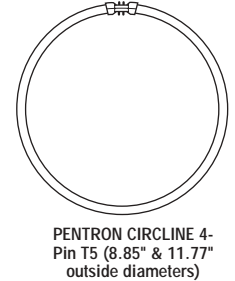
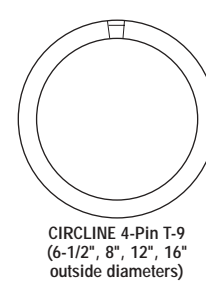
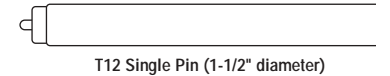
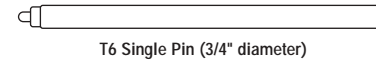
## PREHEAT, RAPID START



## HIGH OUTPUT AND VERY HIGH OUTPUT



## INSTANT START



## BASES

For linear Preheat and Rapid Start Lamps, four electrical contacts are required, two at each end of the lamp. This is accomplished in the standard line of lamps by the use of a miniature bipin base for T5 lamps and a medium bipin for T8 and T12 lamps. The OCTRON® T8 medium bipin lamps may also be operated as instant start lamps with the proper wiring and ballasts. When operating OCTRON bipin lamps with instant start ballasts, the two contacts in the lamp holder are shorted together and connected to the single circuit in the ballast. In Circline lamps, the cathodes are connected to a four-pin base located between the junction of the two ends of the lamp. High Output (HO) and Very High Output (VHO) lamps have recessed double contact (RDC) type bases. Slimline Instant Start lamps require only two electrical contacts, one on each lamp end and have single pin bases.

Pin-based compact fluorescent lamps have either 2 pins or 4 pins. Each 2-pin lamp has an internal starter and is designed for preheat, magnetic operation. The 4-pin lamps are designed for electronic ballast operation and are dimmable. These lamps have no internal starter; starting the lamps is a function of the ballast.

Medium screw base, compact fluorescent lamps have integral ballasts.

### SINGLE PIN



Single Pin for T6 Slimline



Single Pin for T8 Slimline & OCTRON



Single Pin for T12 Slimline

### BIPIN



Miniature Bipin for T5 Preheat & PENTRON®



Miniature Bipin for T8 Preheat & OCTRON



Medium Bipin for T12



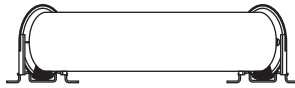
Axial T2 Subminiature



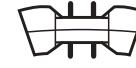
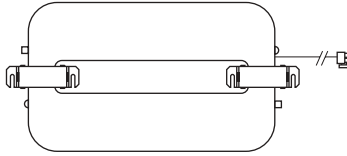
Recessed Double Contact for OCTRON T8 HO



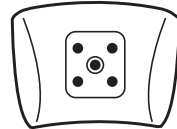
Recessed Double Contact for T12 HO & VHO



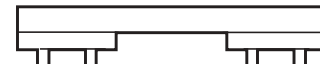
ICETRON® Mounting Brackets



4-pin for PENTRON Circline



4-pin for T9 Circline



OCTRON T8 & T12 Rapid Start CURVALUME

### FOR CHOKE/STARTER OPERATION



G 23



GX 23



G 23-2



GX 23-2



G 24 d2



G 24 d3

### FOR ELECTRONIC OR DIMMING OPERATION



G 24 q-1



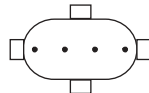
G 24 q-2



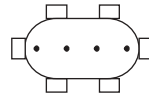
G 24 q-3



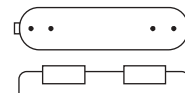
2 G 11



2 G 7



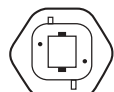
2 GX 7



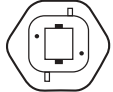
2G 10 DULUX F



Medium Screw Base or DULUX® EL



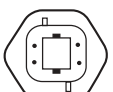
GX 24 d-2



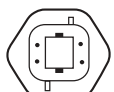
GX 24 d-3



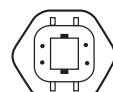
GX 24 q-1



GX 24 q-2



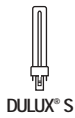
GX 24 q-3



GX 24 q-4



GX 24 q-5

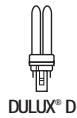


# DULUX® S PREHEAT 2-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

with Starter in Lamp Base for Magnetic Ballast

Nominal Wattage	Bulb	MOL			Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)	Base								Initial	Mean	
5	T4	4.2	107	G23	20325	CF5DS/827	CFT5W/G23/827	50	10000	2700	82	230	198	1,2,3,4,5,6
					20547	CF5DS/827/RP	CFT5W/G23/827	10	10000	2700	82	230	198	1,2,3,4,5,6
					20303	CF5DS/841	CFT5W/G23/841	50	10000	4100	82	230	198	1,2,3,4,5,6
7	T4	5.3	135	G23	20327	CF7DS/827	CFT7W/G23/827	50	10000	2700	82	400	344	1,2,3,4,5,6
					20548	CF7DS/827/RP	CFT7W/G23/827	10	10000	2700	82	400	344	1,2,3,4,5,6
					20310	CF7DS/835	CFT7W/G23/835	50	10000	3500	82	400	344	1,2,3,4,5,6
					20304	CF7DS/841	CFT7W/G23/841	50	10000	4100	82	400	344	1,2,3,4,5,6
					20307	CF7DS/850	CFT7W/G23/850	50	10000	5000	82	400	344	1,2,3,4,5,6
9	T4	6.5	165	G23	20536	CF9DS/827/RP	CFT9W/G23/827	10	10000	2700	82	580	499	1,2,3,4,5,6
					20333	CF9DS/835	CFT9W/G23/835	50	10000	3500	82	580	499	1,2,3,4,5,6
					20305	CF9DS/841	CFT9W/G23/841	50	10000	4100	82	580	499	1,2,3,4,5,6
					20308	CF9DS/850	CFT9W/G23/850	50	10000	5000	82	580	499	1,2,3,4,5,6
					20329	CF9DS/827	CFT9W/G23/827	50	10000	2700	82	800	688	1,2,3,4,5,6
					20299	DULUX S 9W/78		50	10000	BLK				
13	T4	7.1	180	GX23	20331	CF13DS/827	CFT13W/GX23/827	50	10000	2700	82	800	688	1,2,3,4,5,6
					20374*	CFT13WDS/EC/827	CFT13W/GX23/827	10	10000	2700	82	800	688	1,2,3,5,8
					20549	CF13DS/827/RP	CFT13W/GX23/827	10	10000	2700	82	800	688	1,2,3,4,5,6
					20283	CF13DS/830	CFT13W/GX23/830	50	10000	3000	82	800	688	1,2,3,4,5,6
					20397*	CFT13WDS/EC/830	CFT13W/GX23/830	10	10000	3000	82	800	688	1,2,3,5,8
					20335	CF13DS/835	CFT13W/GX23/835	50	10000	3500	82	800	688	1,2,3,4,5,6
					20368*	CFT13WDS/EC/835	CFT13W/GX23/835	10	10000	3500	82	800	688	1,2,3,5,8
					20306	CF13DS/841	CFT13DS/GX23/841	50	10000	4100	82	800	688	1,2,3,4,5,6
					20375*	CFT13WDS/EC/841	CFT13W/GX23/841	10	10000	4100	82	800	688	1,2,3,5,8
20309	CF13DS/850	CFT13W/GX23/850	50	10000	5000	82	800	688	1,2,3,4,5,6					

FLUORESCENT



## DULUX® S/E 4-PIN COMPACT FLUORESCENT LAMPS

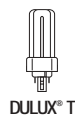
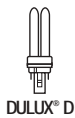
for Dimming and Electronic Ballast

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
5	T4	3.4	85	2G7	20311	CF5DS/E/827	CFT5W/2G7/827	50	10000	2700	82	230	198	1,2,3,8,9
					20315	CF5DS/E/841	CFT5W/2G7/841	50	10000	4100	82	230	198	1,2,3,8,9
7	T4	4.5	115	2G7	20312	CF7DS/E/827	CFT7W/2G7/827	50	10000	2700	82	400	344	1,2,3,8,9
					20316	CF7DS/E/841	CFT7W/2G7/841	50	10000	4100	82	400	344	1,2,3,8,9
9	T4	5.7	145	2G7	20313	CF9DS/E/827	CFT9W/2G7/827	50	10000	2700	82	580	499	1,2,3,8,9
					20317	CF9DS/E/841	CFT9W/2G7/841	50	10000	4100	82	580	499	1,2,3,8,9
13	T4	6.2	157	2GX7	20314	CF13DS/E/827	CFT13W/2GX7/827	50	10000	2700	82	800	688	1,2,3,8,9
					20284	CF13DS/E/830	CFT13W/2GX7/830	50	10000	3000	82	800	688	1,2,3,8,9
					20318	CF13DS/E/841	CFT13W/2GX7/841	50	10000	4100	82	800	688	1,2,3,8,9

## DULUX® D PREHEAT 2-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

with Starter in Lamp Base for Magnetic Ballast

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
9	T4	4.3	110	G23-2	20537	CF9DD/827/RP	CFQ9W/G23/827	10	10000	2700	82	525	452	1,2,3,4,5,6
					20689	CF9DD/827	CFQ9W/G23/827	50	10000	2700	82	525	452	1,2,3,4,5,6
					20783	CF9DD/830	CFQ9W/G23/830	50	10000	3000	82	525	452	1,2,3,4,5,6
					20690	CF9DD/835	CFQ9W/G23/835	50	10000	3500	82	525	452	1,2,3,4,5,6
13	T4	4.6	118	GX23-2	20538	CF13DD/827/RP	CFQ13W/GX23/827	10	10000	2700	82	780	671	1,2,3,4,5,6
					20691	CF13DD/827	CFQ13W/GX23/827	50	10000	2700	82	780	671	1,2,3,4,5,6
					20705	CF13DD/830	CFQ13W/GX23/830	50	10000	3000	82	780	671	1,2,3,4,5,6
					20692	CF13DD/835	CFQ13W/GX23/835	50	10000	3500	82	780	671	1,2,3,4,5,6
					20708	CF13DD/841	CFQ13W/GX23/841	50	10000	4100	82	780	671	1,2,3,4,5,6
18	T4	6.0	153	G24D-2	20676	CF18DD/827	CFQ18W/G24D/827	50	10000	2700	82	1150	1075	1,2,3,4,5,6
					20709	CF18DD/830	CFQ18W/G24D/830	50	10000	3000	82	1150	1075	1,2,3,4,5,6
					20677	CF18DD/835	CFQ18W/G24D/835	50	10000	3500	82	1150	1075	1,2,3,4,5,6
					20678	CF18DD/841	CFQ18W/G24D/841	50	10000	4100	82	1150	1075	1,2,3,4,5,6
26	T4	6.8	173	G24D-3	20679	CF26DD/827	CFQ26W/G24D/827	50	10000	2700	82	1710	1548	1,2,3,4,5,6
					20710	CF26DD/830	CFQ26W/G24D/830	50	10000	3000	82	1710	1548	1,2,3,4,5,6
					20680	CF26DD/835	CFQ26W/G24D/835	50	10000	3500	82	1710	1548	1,2,3,4,5,6



## DULUX® D PREHEAT 2-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
26	T4	6.8	173	G24D-3	20681	CF26DD/841	CFQ26W/G24D/841	50	10000	4100	82	1710	1548	1,2,3, 4,5,6

## DULUX® D/E 4-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

for Dimming and Electronic Ballast with End-of-Lamp Life (EOL) Protection

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
13	T4	5.2	131	G24Q-1	20682	CF13DD/E/827	CFQ13W/G24Q/827	50	12000	2700	82	900	774	1,2,3, 6,8,9,10
					20721	CF13DD/E/830	CFQ26W/G24Q/830	50	12000	3000	82	900	774	1,2,3, 6,8,9,10
					20671	CF13DD/E/835	CFQ13W/G24Q/835	50	12000	3500	82	900	774	1,2,3, 6,8,9,10
					20667	CF13DD/E/841	CFQ13W/G24Q/841	50	12000	4100	82	900	774	1,2,3, 6,8,9,10
18	T4	5.8	147	G24Q-2	20683	CF18DD/E/827	CFQ18W/G24Q/827	50	12000	2700	82	1150	1075	1,2,3, 6,8,9,10
					20724	CF18DD/E/830	CFQ18W/G24Q/830	50	12000	3000	82	1150	1075	1,2,3, 6,8,9,10
					20672	CF18DD/E/835	CFQ18W/G24Q/835	50	12000	3500	82	1150	1075	1,2,3, 6,8,9,10
					20668	CF18DD/E/841	CFQ18W/G24Q/841	50	12000	4100	82	1150	1075	1,2,3, 6,8,9,10
26	T4	6.5	166	G24Q-3	20684	CF26DD/E/827	CFQ26W/G24D/827	50	12000	2700	82	1710	1548	1,2,3, 6,8,9,10
					20722	CF26DD/E/830	CFQ26W/G24Q/830	50	12000	3000	82	1710	1548	1,2,3, 6,8,9,10
					20673	CF26DD/E/835	CFQ26W/G24Q/835	50	12000	3500	82	1710	1548	1,2,3, 6,8,9,10
					20669	CF26DD/E/841	CFQ26W/G24Q/841	50	12000	4100	82	1710	1548	1,2,3, 6,8,9,10

## DULUX® T PREHEAT 2-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

with Starter in Lamp Base for Magnetic Ballast

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
18	T4	4.8	123	GX24D-2	20756	CF18DT/827	CFTR18W/GX24D/827	50	12000	2700	82	1200	1032	1,2,3, 4,5,6
26	T4	5.4	138	GX24D-3	20752	CF26DT/827	CFTR26W/GX24D/827	50	12000	2700	82	1800	1548	1,2,3, 4,5,6

## DULUX® T/E 4-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

for Dimming and Electronic Ballast

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
13	T4	4.2	106	GX24Q-1	20891	CF13DT/E/827	CFTR13W/GX24Q/827	50	12000	2700	82	900	774	1,2,3, 6,8,9,10
					20892	CF13DT/E/830	CFTR13W/GX24Q/830	50	12000	3000	82	900	774	1,2,3, 6,8,9,10



DULUX® T

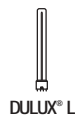
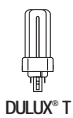
### DULUX® T/E 4-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
13	T4	4.2	106	GX24Q-1	20893	CF13DT/E/835	CFTR13W/GX24Q/835	50	12000	3500	82	900	774	1,2,3, 6,8,9,10
					20894	CF13DT/E/841	CFTR13W/GX24Q/841	50	12000	4100	82	900	774	1,2,3, 6,8,9,10
18	T4	4.6	116	GX24Q-2	20760	CF18DT/E/827	CFTR18W/GX24Q/827	50	12000	2700	82	1200	1032	1,2,3, 6,8,9,10
26	T4	5.2	124	GX24Q-3	20767	CF26DT/E/827	CFTR26W/GX24Q/827	50	12000	2700	82	1800	1548	1,2,3, 6,8,9,10
32	T4	5.8	147	GX24Q-3	20768	CF32DT/E/827	CFTR32W/GX24Q/827	50	12000	2700	82	2400	2064	1,2,3, 6,8,9,10,11

### DULUX® T/E/IN AMALGAM, 4-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

for Dimming and Electronic Ballast for High and Low Temp Applications

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
18	T4	4.4	111	GX24Q-2	20875	CF18DT/E/IN/827	CFTR18W/GX24Q/827	50	12000	2700	82	1200	1032	1,2,3, 6,8,9,10,12
					20876	CF18DT/E/IN/830	CFTR18W/GX24Q/830	50	12000	3000	82	1200	1032	1,2,3, 6,8,9,10,12
					20877	CF18DT/E/IN/835	CFTR18W/GX24Q/835	50	12000	3500	82	1200	1032	1,2,3, 6,8,9,10,12
					20878	CF18DT/E/IN/841	CFTR18W/GX24Q/841	50	12000	4100	82	1200	1032	1,2,3, 6,8,9,10,12
26	T4	5.0	126	GX24Q-3	20879	CF26DT/E/IN/827	CFTR26W/GX24Q/827	50	12000	2700	82	1800	1548	1,2,3, 6,8,9,10,12
					20880	CF26DT/E/IN/830	CFTR26W/GX24Q/830	50	12000	3000	82	1800	1548	1,2,3, 6,8,9,10,12
					20881	CF26DT/E/IN/835	CFTR26W/GX24Q/835	50	12000	3500	82	1800	1548	1,2,3, 6,8,9,10,12
					20882	CF26DT/E/IN/841	CFTR26W/GX24Q/841	50	12000	4100	82	1800	1548	1,2,3, 6,8,9,10,12
32	T4	5.6	142	GX24Q-3	20883	CF32DT/E/IN/827	CFTR32W/GX24Q/827	50	12000	2700	82	2400	2064	1,2,3, 6,8,9,10,11,12
					20884	CF32DT/E/IN/830	CFTR32W/GX24Q/830	50	12000	3000	82	2400	2064	1,2,3, 6,8,9,10,11,12
					20885	CF32DT/E/IN/835	CFTR32W/GX24Q/835	50	12000	3500	82	2400	2064	1,2,3, 6,8,9,10,11,12
					20886	CF32DT/E/IN/841	CFTR32W/GX24Q/841	50	12000	4100	82	2400	2064	1,2,3, 6,8,9,10,11,12
42	T4	6.5	163	GX24Q-4	20887	CF42DT/E/IN/827	CFTR42W/GX24Q/827	50	12000	2700	82	3200	2752	1,2,3, 6,8,9,10,11,12
					20888	CF42DT/E/IN/830	CFTR42W/GX24Q/830	50	12000	3000	82	3200	2752	1,2,3, 6,8,9,10,11,12
					20871*	CF42DT/E/IN/835	CFTR42W/GX24Q/835	50	12000	3500	82	3200	2752	1,2,3, 6,8,9,10,11,12
					20890	CF42DT/E/IN/841	CFTR42W/GX24Q/841	50	12000	4100	82	3200	2752	1,2,3, 6,8,9,10,11,12
57	T4	7.76	197	GX24Q-5	20895	CF57DT/E/IN/827	CFTR57W/GX24Q/827	50	12000	2700	82	4300	3698	1,2,3, 6,8,9,10,11,12

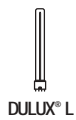


## DULUX® T/E/IN AMALGAM, 4-PIN ECOLOGIC® COMPACT FLUORESCENT LAMPS

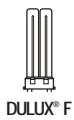
Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
57	T4	7.76	197	GX24Q-5	20896	CF57DT/E/IN/830	CFTR57W/GX24Q/830	50	12000	3000	82	4300	3698	1,2,3, 6,8,9,10,11,12
					20897	CF57DT/E/IN/835	CFTR57W/GX24Q/835	50	12000	3500	82	4300	3698	1,2,3, 6,8,9,10,11,12
					20899	CF57DT/E/IN/841	CFTR57W/GX24Q/841	50	12000	4100	82	4300	3698	1,2,3, 6,8,9,10,11,12
70	T4	9.25	235	GX24Q-6	20794	CF70DT/E/IN/827	CFTR70W/GX24Q/827	50	12000	2700	82	5200	4472	1,2,3, 6,8,9,10,11,12
					20795	CF70DT/E/IN/830	CFTR70W/GX24Q/830	50	12000	3000	82	5200	4472	1,2,3, 6,8,9,10,11,12
					20796	CF70DT/E/IN/835	CFTR70W/GX24Q/835	50	12000	3500	82	5200	4472	1,2,3, 6,8,9,10,11,12
					20797	CF70DT/E/IN/841	CFTR70W/GX24Q/841	50	12000	4100	82	5200	4472	1,2,3, 6,8,9,10,11,12

## DULUX® L HIGH LUMEN COMPACT FLUORESCENT LAMPS

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
18	T5	9.0	229	2G11	20587	FT18DL/830	FT18W/2G11/830	10	12000	3000	82	1250	1075	1,2,3,8,9
					20595	FT18DL/830/RS	FT18W/2G11/RS/830	10	20000	3000	82	1250	1075	1,2,3,8,9
					20588	FT18DL/835	FT18W/2G11/835	10	12000	3500	82	1250	1075	1,2,3,8,9
					20594	FT18DL/835/RS	FT18W/2G11/RS/835	10	20000	3500	82	1250	1075	1,2,3,8,9
					20589	FT18DL/841	FT18W/2G11/841	10	12000	4100	82	1250	1075	1,2,3,8,9
					20593	FT18DL/841/RS	FT18W/2G11/RS/841	10	20000	4100	82	1250	1075	1,2,3,8,9
24	T5	12.9	326	2G11	20597	FT24DL/830	FT24W/2G11/830	10	12000	3000	82	1800	1548	1,2,3,8,9, 13
					20580	FT24DL/835	FT24W/2G11/835	10	12000	3500	82	1800	1548	1,2,3,8,9, 13
					20596	FT24DL/841	FT24W/2G11/841	10	12000	4100	82	1800	1548	1,2,3,8,9, 13
36	T5	16.6	422	2G11	20581	FT36DL/830	FT36W/2G11/830	10	12000	3000	82	2900	2494	1,2,3,8,9, 13
					20582	FT36DL/835	FT36W/2G11/835	10	12000	3500	82	2900	2494	1,2,3,8,9, 13
					20583	FT36DL/841	FT36W/2G11/841	10	12000	4100	82	2900	2494	1,2,3,8,9, 13
40	T5	22.6	573	2G11	20584	FT40DL/830/RS	FT40W/2G11/RS/830	10	20000	3000	82	3150	2709	1,2,3,8,9
					20585	FT40DL/835/RS	FT40W/2G11/RS/835	10	20000	3500	82	3150	2709	1,2,3,8,9
					20586	FT40DL/841/RS	FT40W/2G11/RS/841	10	20000	4100	82	3150	2709	1,2,3,8,9
					20576	FT40DL/850/RS	FT40W/2G11/RS/850	10	20000	5000	82	3150	2709	1,2,3,8,9
55	T5	21.1	535	2G11	20590	FT55DL/830	FT55W/2G11/830	10	12000	3000	82	4800	4128	1,2,3,8,9, 14
					20591	FT55DL/835	FT55W/2G11/835	10	12000	3500	82	4800	4128	1,2,3,8,9, 14
					20592	FT55DL/841	FT55W/2G11/841	10	12000	4100	82	4800	4128	1,2,3,8,9, 14
80	T5	22.6	573	2G11	20572	FT80DL/830	F180W/2G11/830	10	12000	3000	82	6000	5160	1,2,3,8,9, 14



DULUX® L



DULUX® F



DULUX® EL Triple



DULUX® EL Twist

## DULUX® L HIGH LUMEN COMPACT FLUORESCENT LAMPS

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
80	T5	22.6	573	2G11	20622	FT80DL/835	FT80W/2G11/835	10	12000	3500	82	6000	5160	☐ 1,2,3,8,9,14
					20624	FT80DL/841	FT40W/2G11/841	10	12000	4100	82	6000	5160	☐ 1,2,3,8,9,14

## DULUX® F FLAT COMPACT FLUORESCENT LAMPS

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	NEMA Generic Designation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	(mm)									Initial	Mean	
18	T5	4.8	122	2G10	20551	CF18DF/830	CFM18W/2G10/830	10	10000	3000	82	1100	946	☐ 1,2,3,8,9,15
					20552	CF18DF/841	CFM18W/2G10/841	10	10000	4100	82	1100	946	☐ 1,2,3,8,9,15
24	T5	6.7	171	2G10	20553	CF24DF/830	CFM24W/2G10/830	10	10000	3000	82	1700	1462	☐ 1,2,3,8,9,15
					20558	CF24DF/841	CFM24W/2G10/841	10	10000	4100	82	1700	1462	☐ 1,2,3,8,9,15
36	T5	8.5	217	2G10	20559	CF36DF/830	CFM36W/2G10/830	10	10000	3000	82	2800	2408	☐ 1,2,3,8,9,15
					20560	CF36DF/841	CFM36W/2G10/841	10	10000	4100	82	2800	2408	☐ 1,2,3,8,9,15

## DULUX® EL SELF-BALLASTED COMPACT FLUORESCENT LAMPS

### Triple Tube Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)										Initial	Mean	
15	T4	5.7	Med	29307	CF15EL/830/MED/1	120	6	10000	3000	82	850	731	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
20	T4	6.42	Med	29308	CF20EL/830/MED/1	120	6	10000	3000	82	1200	1032	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
23	T4	6.93	Med	29310	CF23EL/830/MED/1	120	6	10000	3000	82	1450	1247	☐ Ⓢ Ⓣ 1,2,3,16,17,18	

### Mini Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)										Initial	Mean	
7	MINITWIST	4.4	Med	29451	CF7EL/MINITWIST/2700K	120	6	8000	2700	82	375	323	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
				29379	CF7EL/MINITWIST/1	120	6	8000	3000	82	375	323	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
				29371	CF7EL/MINITWIST/BL/1	120	6	8000	3000	82	375	323	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
11	MINITWIST	4.5	Med	29378	CF11EL/MINITWIST/1	120	6	8000	3000	82	600	516	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
				29364	CF11EL/MINITWIST/BL/1	120	6	8000	3000	82	600	516	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
13	MINITWIST	4.5	Med	29409	CF13EL/MINITWIST/2700K	120	6	8000	2700	82	800	688	☐ Ⓢ Ⓣ 1,2,3,16,17,18	
				29376	CF13EL/MINITWIST/1	120	6	8000	3000	82	800	688	☐ Ⓢ Ⓣ 1,2,3,16,17,18	





DULUX® EL Twist

## DULUX® EL SELF-BALLASTED COMPACT FLUORESCENT LAMPS

### Mini Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
13	MINITWIST	4.5	Med	29116*	CF13EL/MINITWIST/BL/1	120	6	8000	3000	82	800	688	☐ ☐ ☐ 1,2,3,16,17,18
				29169*	CF13EL/MINITWIST/DAY/BL/1	120	6	8000	3500	82	800	688	☐ ☐ ☐ 1,2,3,16,17,18
19	MINITWIST	5.2	Med	29410*	CF19EL/MINITWIST/2700K	120	6	8000	2700	82	1200	1032	☐ ☐ ☐ 1,2,3,16,17,18
				29396*	CF19EL/MINITWIST	120	6	8000	3000	82	1200	1032	☐ ☐ ☐ 1,2,3,16,17,18
				29347*	CF19EL/MINITWIST/BL/1	120	5	8000	3000	82	1200	1032	☐ ☐ ☐ 1,2,3,16,17,18
				29367*	CF19EL/MINITWIST/DAY/BL/1	120	5	8000	3500	82	1200	1032	☐ ☐ ☐ 1,2,3,16,17,18
23	MINITWIST	5.75	Med	29411*	CF23EL/MINITWIST/2700K	120	6	8000	2700	82	1600	1376	☐ ☐ ☐ 1,2,3,16,17,18
				29397*	CF23EL/MINITWIST	120	6	8000	3000	82	1600	1376	☐ ☐ ☐ 1,2,3,16,17,18
				29394*	CF23EL/MINITWIST/BL/1	120	5	8000	3000	82	1600	1376	☐ ☐ ☐ 1,2,3,16,17,18
				29417*	CF23EL/MINITWIST/DAY/BL/1	120	5	8000	3500	82	1600	1376	☐ ☐ ☐ 1,2,3,16,17,18

### Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
15	TWIST	5.13	Med	29286	CF15EL/TWIST	120	6	10000	3000	82	850	731	☐ ☐ ☐ 1,2,3,16,17,18
				29289	CF15EL/TWIST/BL/1	120	6	10000	3000	82	850	731	☐ ☐ ☐ 1,2,3,16,17,18
20	TWIST	5.5	Med	29287	CF20EL/TWIST	120	6	10000	3000	82	1200	1032	☐ ☐ ☐ 1,2,3,16,17,18
				29290	CF20EL/TWIST/BL/1	120	6	10000	3000	82	1200	1032	☐ ☐ ☐ 1,2,3,16,17,18
23	TWIST	5.88	Med	29288	CF23EL/TWIST	120	6	10000	3000	82	1450	1247	☐ ☐ ☐ 1,2,3,16,17,18
				29291	CF23EL/TWIST/BL/1	120	6	10000	3000	82	1450	1247	☐ ☐ ☐ 1,2,3,16,17,18
27	TWIST	6.1	Med	29412*	CF27EL/TWIST/2700K	120	6	10000	2700	82	1750	1505	☐ ☐ ☐ 1,2,3,16,17,18
				29390	CF27EL/TWIST	120	6	10000	3000	82	1750	1505	☐ ☐ ☐ 1,2,3,16,17,18
				29391	CF27EL/TWIST/1/BL	120	6	10000	3000	82	1750	1505	☐ ☐ ☐ 1,2,3,16,17,18
				29370*	CF27EL/TWIST/DAY/1/BL	120	6	10000	3500	82	1750	1505	☐ ☐ ☐ 1,2,3,16,17,18
				29353*	CF27EL/TWIST/5000K	120	6	10000	5000	82	1750	1505	☐ ☐ ☐ 1,2,3,16,17,18
30	TWIST	5.13	Med	29395*	CF30EL/TWIST	120	6	6000	3000	82	2000	1720	☐ ☐ ☐ 1,2,3,16,17,18



DULUX® EL Twist



DULUX® EL Classic



DULUX® EL Globe



DULUX® EL Reflector

## DULUX® EL SELF-BALLASTED COMPACT FLUORESCENT LAMPS

### Twist Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	Base								Initial	Mean	
30	TWIST	5.13	Med	29392*	CF30EL/TWIST/1/BL	120	5	6000	3000	82	2000	1720	☐ ☒ ☓ 1,2,3,16,17,18
12 19 28	TWIST	5.75	3Contact Med	29351*	CF28EL/3WAY/TWIST/1	120	6	6000	3000	82	600 1100 1600	516 946 1376	☐ ☒ ☓ 1,2,3,16,17,18
				29349*	CF28EL/3WAY/TWIST/1/BL	120	5	6000	3000	82	600 1100 1600	516 946 1376	☐ ☒ ☓ 1,2,3,16,17,18

### Classic (A-Shape) Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	Base								Initial	Mean	
14	A19	4.75	Med	29468*	CF14EL/A19	120	5	6000	3000	82	800	688	☐ ☒ ☓ 1,2,3,16,17,18
				29345*	CF14EL/A19/1/BL	120	5	6000	3000	82	800	688	☐ ☒ ☓ 1,2,3,16,17,18
				29346*	CF14EL/A19/1/BL/YELLOW	120	5	6000	YLW	82	475	409	☐ ☒ ☓ 1,2,3,16,17,18

### Decorative Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	Base								Initial	Mean	
4	Flame	4.25	Candelabra	29135*	CF4EL/DECO/CANDELABRA	120	6	6000	3000	82	160	138	☐ ☒ ☓ 1,2,3,16,17,18
				29121*	CF4EL/DECO/CANDELABRA/1/BL	120	6	6000	3000	82	160	138	☐ ☒ ☓ 1,2,3,16,17,18
7	Flame	5	Med	29167*	CF7EL/DECO/MEDIUM/1/BL	120	6	6000	3000	82	280	241	☐ ☒ ☓ 1,2,3,16,17,18

### Globe Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	Base								Initial	Mean	
11	G25	4.6	Med	29414*	CF11EL/G25/2700K	120	6	6000	2700	82	450	387	☐ ☒ ☓ 1,2,3,16,17,18
				29344*	CF11EL/G25/1/BL	120	5	6000	3000	82	450	387	☐ ☒ ☓ 1,2,3,16,17,18
				29368*	CF11EL/G25/DAY/1/BL	120	5	6000	3500	82	450	387	☐ ☒ ☓ 1,2,3,16,17,18
15	G30	5.5	Med	29195	CF15EL/G/830/MED	120	6	6000	3000	82	700	602	☐ ☒ ☓ 1,2,3,16,17,18
				29278	CF15EL/G/830/MED/1/BL	120	5	6000	3000	82	700	602	☐ ☒ ☓ 1,2,3,16,17,18

### Reflector Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL		Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	Base								Initial	Mean	
15	BR30	5.6	Med	29413*	CF15EL/BR30/2700K	120	6	6000	2700	82	560	482	☐ ☒ ☓ 1,2,3,16,17,18



## DULUX® EL SELF-BALLASTED COMPACT FLUORESCENT LAMPS

### Reflector Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
15	BR30	5.6	Med	29352*	CF15EL/BR30/FROST	120	6	6000	3000	82	560	482	☐ ☐ ☐ 1,2,3,16,17,18
				29331	CF15EL/BR30/FROST/1/BL	120	5	6000	3000	82	560	482	☐ ☐ ☐ 1,2,3,16,17,18
				29366*	CF15EL/BR30/DAY/BL/1	120	5	6000	3500	82	560	482	☐ ☐ ☐ 1,2,3,16,17,18
20	BR40	6.5	Med	29399*	CF20EL/BR40	120	6	8000	2700	82	900	774	☐ ☐ ☐ 1,2,3,16,17,18

### Low Profile Bullet and Circline Electronic Compact Fluorescent Lamps

Nominal Wattage	Bulb	MOL (in)	Base	Product Number	Ordering Abbreviation	Voltage	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
15	T20	5.5	Med	29195	CF15EL/B/830/MED	120	6	6000	3000	82	700	602	☐ ☐ ☐ 1,2,3,16,17,18
				29278	CF15EL/B/830/MED/1/BL	120	6	6000	3000	82	700	602	☐ ☐ ☐ 1,2,3,16,17,18
30	T9	2.8	Med	29294	CF30EL/CIRC/830/MED	120	5	10000	3000	82	1800	1548	☐ ☐ ☐ 1,2,3,16,17,18

FLUORESCENT

## OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS

OCTRON® lamps are T8 fluorescent lamps designed to be operated on dedicated magnetic rapid start or electronic instant start, rapid start or programmed rapid start (also known as programmed start) ballasts. OCTRON lamps may be operated on electronic instant start ballasts with ballast factors ranging from .71 to 1.20 at the nominal ballast input voltage. For details on various lamp/ballast system combinations, please refer to the Systems Performance Guide in the "SYLVANIA QUICKTRONIC® Ballast Technology & Specification Guide".

### OCTRON® 700 and 700 XP™ Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes	
											Initial	Mean		
14	T8	18	17.91	Med Bipin	21665	F013/730/ECO	30	20000	3000	75	830	745	1,2,6,8,20,21	
					21666	F013/735/ECO	30	20000	3500	75	830	745	1,2,6,8,20,21	
					21667	F013/741/ECO	30	20000	4100	75	830	745	1,2,6,8,20,21	
17	T8	24	23.78	Med Bipin	21918	F017/730/ECO	30	20000	3000	75	1300	1170	1,2,6,8,20,21	
					21636*	F017/730/XP/ECO	30	24000	3000	78	1325	1255	1,2,6,8,21,22,23	
					21769	F017/735/ECO	30	20000	3500	75	1300	1170	1,2,6,8,20,21	
					21699	F017/735/XP/ECO	30	24000	3500	78	1325	1255	1,2,6,8,21,22,23	
					21770	F017/741/ECO	30	20000	4100	75	1300	1170	1,2,6,8,20,21	
					21637*	F017/741/XP/ECO	30	24000	4100	78	1325	1255	1,2,6,8,21,22,23	
25	T8	36	35.78	Med Bipin	21937	F025/730/ECO	30	20000	3000	75	1950	1755	1,2,6,8,20,21	
					21638*	F025/730/XP/ECO	30	24000	3000	78	2050	1945	1,2,6,8,21,22,23	
					21941	F025/735/ECO	30	20000	3500	75	1950	1755	1,2,6,8,20,21	
					21698	F025/735/XP/ECO	30	24000	3500	78	2050	1945	1,2,6,8,21,22,23	
					21942	F025/741/ECO	30	20000	4100	75	1950	1755	1,2,6,8,20,21	
					21639*	F025/741/XP/ECO	30	24000	4100	78	2050	1945	1,2,6,8,21,22,23	
					21700	F025/765	30	20000	6500	75	2000	1800	1,2,8,20,21	
32	T8	48	47.78	Med Bipin	21961	F032/GOLD	10	20000			1700	1530	1,2,8,20,21,24	
					21234*	F032/AQUATIC/XP/ECO	30	24000	10000	52	1250			1,2,6,8,20,21,22
					21997	F032/730/ECO	30	20000	3000	75	2800	2520	1,2,6,8,20,21	
					22006	F032/730/ECO/PALLET	1968	20000	3000	75	2800	2520	1,2,6,8,20,21	
					21711	F032/730/XP/ECO	30	24000	3000	78	2850	2705	1,2,6,8,21,22,23	
					21902*	F032/735/CVP	12	20000	3500	75	2800	2520	1,2,8,20,21	
					21998	F032/735/ECO	30	20000	3500	75	2800	2520	1,2,6,8,20,21	
					21945	F032/735/ECO/PALLET	1968	20000	3500	75	2800	2520	1,2,6,8,20,21	

## OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS

## OCTRON® 700 and 700 XP™ Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes
											Initial	Mean	
32	T8	48	47.78	Med Bipin	21678	F032/735/SL	30	20000	3500	75	2745	2470	Ⓢ Ⓜ 1,2,20, 21,25,26
					22044	F032/735/XP/ECO	30	24000	3500	78	2850	2705	Ⓢ Ⓜ 1,2,6, 8,21,22,23
					21981	F032/741/CVP	12	20000	4100	75	2800	2520	Ⓢ Ⓜ 1,2,8, 20,21
					21999	F032/741/ECO	30	20000	4100	75	2800	2520	Ⓢ Ⓜ 1,2, 6,8,20,21
					22181	F032/741/ECO/CVP	12	20000	4100	75	2800	2520	Ⓢ Ⓜ 1,2,6, 8,20,21
					22008	F032/741/ECO/PALLET	1968	20000	4100	75	2800	2520	Ⓢ Ⓜ 1,2, 6,8,20,21
					21712	F032/741/XP/ECO	30	24000	4100	78	2850	2705	Ⓢ Ⓜ 1,2, 6,8,21,22,23
					22141	F032/750/ECO	30	20000	5000	75	2650	2385	Ⓢ Ⓜ 1,2, 6,8,20,21
					22175	F032/765/ECO	30	20000	6500	75	2700	2430	Ⓢ Ⓜ 1,2, 6,8,20,21
40	T8	60	59.61	Med Bipin	22102	F040/730/ECO	30	20000	3000	75	3500	3150	Ⓢ Ⓜ 1,2,6, 8,20,21
					22103	F040/735/ECO	30	20000	3500	75	3500	3150	Ⓢ Ⓜ 1,2,6, 8,20,21
					22104	F040/741/ECO	30	20000	4100	75	3500	3150	Ⓢ Ⓜ 1,2,6, 8,20,21
59	T8	96	94	Single Pin	22030	F096/730/ECO	24	15000	3000	75	5700	5130	Ⓢ Ⓜ 1,2, 6,8,27
					21737	F096/735/ECO	24	15000	3500	75	5700	5130	Ⓢ Ⓜ 1,2, 6,8,27
					21736	F096/741/ECO	24	15000	4100	75	5700	5130	Ⓢ Ⓜ 1,2, 6,8,27
86	T8	96	93.91	Recessed DC	22041	F096/735/HO	24	18000	3500	75	8000	7200	Ⓢ Ⓜ 1,2,8
					22042	F096/741/HO	24	18000	4100	75	8000	7200	Ⓢ Ⓜ 1,2,8

## OCTRON® 800, 800 XP™ and 800 XPS® Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes
											Initial	Mean	
17	T8	24	23.78	Med Bipin	22135	F017/830/ECO	30	20000	3000	82	1350	1240	Ⓢ Ⓜ 1,2,6, 8,20,21
					21785	F017/830/XP/ECO	30	24000	3000	85	1375	1305	Ⓢ Ⓜ 1,2,6, 8,21,22,23
					22150	F017/830/XPS/ECO	30	30000	3000	85	1400	1340	Ⓢ Ⓜ 1,2,6, 8,21,28,31
					22136	F017/835/ECO	30	20000	3500	82	1350	1240	Ⓢ Ⓜ 1,2,6, 8,20,21
					21778	F017/835/XP/ECO	30	24000	3500	85	1375	1305	Ⓢ Ⓜ 1,2,6, 8,21,22,23
					22151	F017/835/XPS/ECO	30	30000	3500	85	1400	1340	Ⓢ Ⓜ 1,2,6, 8,21,28,31

## OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS

OCTRON® lamps are T8 fluorescent lamps designed to be operated on dedicated magnetic rapid start or electronic instant start, rapid start or programmed rapid start (also known as programmed start) ballasts. OCTRON lamps may be operated on electronic instant start ballasts with ballast factors ranging from .71 to 1.20 at the nominal ballast input voltage. For details on various lamp/ballast system combinations, please refer to the Systems Performance Guide in the "SYLVANIA QUICKTRONIC® Ballast Technology & Specification Guide".

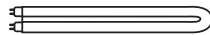
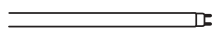
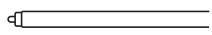
### OCTRON® 800, 800 XP™ and 800 XPS® Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes
											Initial @25°C/77°F	Mean	
17	T8	24	23.78	Med Bipin	22137	F017/841/ECO	30	20000	4100	82	1350	1240	1,2,6,8,20,21
					21907	F017/841/XP/ECO	30	24000	4100	85	1375	1305	1,2,6,8,21,22,23
					22152	F017/841/XPS/ECO	30	30000	4100	85	1400	1340	1,2,6,8,21,28,31
25	T8	36	35.78	Med Bipin	22138	F025/830/ECO	30	20000	3000	82	2150	1975	1,2,6,8,20,21
					21910	F025/830/XP/ECO	30	24000	3000	85	2175	2065	1,2,6,8,21,22,23
					22153	F025/830/XPS/ECO	30	30000	3000	85	2200	2090	1,2,6,8,21,28,31
					22139	F025/835/ECO	30	20000	3500	82	2150	1975	1,2,6,8,20,21
					21776	F025/835/XP/ECO	30	24000	3500	85	2175	2065	1,2,6,8,21,22,23
					22154	F025/835/XPS/ECO	30	30000	3500	85	2200	2090	1,2,6,8,21,28,31
					22140	F025/841/ECO	30	20000	4100	82	2150	1975	1,2,6,8,20,21
					21774	F025/841/XP/ECO	30	24000	4100	85	2175	2065	1,2,6,8,21,22,23
28	T8	48	47.78	Med Bipin	22177	F028/830/XP/SS/ECO	30	18000	3000	82	2725	2560	1,2,6,22,23,29,30
					22178	F028/835/XP/SS/ECO	30	18000	3500	82	2725	2560	1,2,6,22,23,29,30
					22179	F028/841/XP/SS/ECO	30	18000	4100	82	2725	2560	1,2,6,22,23,29,30
30	T8	48	47.78	Med Bipin	22063	F030/830/XP/SS/ECO	30	18000	3000	82	2850	2680	1,2,6,22,23,29,30
					22060	F030/835/XP/SS/ECO	30	18000	3500	82	2850	2680	1,2,6,22,23,29,30
					22062	F030/841/XP/SS/ECO	30	18000	4100	82	2850	2680	1,2,6,22,23,29,30
32	T8	48	47.78	Med Bipin	22039	F032/827/XP/ECO	30	24000	2700	84	3000	2850	1,2,6,8,21,22,23
					21777	F032/830/ECO	30	20000	3000	82	2950	2710	1,2,6,8,20,21
					21759	F032/830/XP/ECO	30	24000	3000	85	3000	2850	1,2,6,8,21,22,23
					21680	F032/830/XPS/ECO	30	30000	3000	85	3100	2945	1,2,6,8,14,21,28,31
					21779	F032/835/ECO	30	20000	3500	82	2950	2710	1,2,6,8,20,21

# OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS

## OCTRON® 800, 800 XP™ and 800 XPS® Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
32	T8	48	47.78	Med Bipin	21763	FO32/835/XP/ECO	30	24000	3500	85	3000	2850	1,2,6,8,21,22,23
					21697	FO32/835/XPS/ECO	30	30000	3500	85	3100	2945	1,2,6,8,14,21,28,31
					21676	FO32835PLT 1776/CS 1/SKU	1776	20000	3500	82	2950	2714	1,2,8,20,21
					21781	FO32/841/ECO	30	20000	4100	82	2950	2710	1,2,6,8,20,21
					21767	FO32/841/XP/ECO	30	24000	4100	85	3000	2850	1,2,6,8,21,22,23
					21681	FO32/841/XPS/ECO	30	30000	4100	85	3150	2990	1,2,6,8,14,21,28,31
					22143	FO32/850/ECO	30	20000	5000	80	2800	2576	1,2,6,8,20,21
					22026	FO32/850/XP/ECO	30	24000	5000	85	3000	2850	1,2,6,8,21,22,23
40	T8	60	59.61	Med Bipin	22144	FO40/830/ECO	30	20000	3000	82	3650	3473	1,2,6,8,20,21
					21912	FO40/830/XP/ECO	30	24000	3000	85	3750	3560	1,2,6,8,21,22,23
					22145	FO40/835/ECO	30	20000	3500	82	3650	3473	1,2,6,8,20,21
					21911	FO40/835/XP/ECO	30	24000	3500	85	3750	3560	1,2,6,8,21,22,23
					22146	FO40/841/ECO	30	20000	4100	82	3650	3473	1,2,6,8,20,21
					21916	FO40/841/XP/ECO	30	24000	4100	85	3750	3560	1,2,6,8,21,22,23
					22099	FO96/830/XP/SS/ECO	24	18000	3000	82	5700	5415	1,2,6,34,35
55	T8	96	94	Single Pin	22100	FO96/835/XP/SS/ECO	24	18000	3500	82	5700	5415	1,2,6,34,35
					22101	FO96/841/XP/SS/ECO	24	18000	4100	82	5700	5415	1,2,6,34,35
					22099	FO96/830/XP/SS/ECO	24	18000	3000	82	5700	5415	1,2,6,34,35
59	T8	96	94	Single Pin	22147	FO96/830/ECO	24	15000	3000	82	5900	5428	1,2,6,8,36
					22036	FO96/830/XP/ECO	24	18000	3000	85	6100	5795	1,2,6,8,14,22,35
					22148	FO96/835/ECO	24	15000	3500	82	5900	5428	1,2,6,8,36
					21740	FO96/835/XP	24	18000	3500	85	6100	5795	1,2,8,14,22,35
					22034	FO96/835/XP/ECO	24	18000	3500	85	6100	5795	1,2,6,8,14,22,35
					22149	FO96/841/ECO	24	15000	4100	82	5900	5428	1,2,6,8,36
					22025	FO96/841/XP	24	18000	4100	85	6100	5795	1,2,8,14,22,35
					22032	FO96/841/XP/ECO	24	18000	4100	85	6100	5795	1,2,6,8,14,22,35



T8 Single Pin

T8 Med Bipin

T8 U-Shaped (leg spacing of 1-5/8")

**OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS****OCTRON® 800, 800 XP™ and 800 XPS® Lamps**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
59	T8	96	94	Single Pin	22173	FO96/850/ECO	24	15000	5000	80	5900	5428	☉ 1,2,6,8,36
					22174	FO96/850/XP/ECO	24	18000	5000	85	5900	5605	☉ 1,2,6,8,22,27
86	T8	96	93.91	Recessed DC	22037	FO96/835/HO	24	18000	3500	84	8200	7380	☉ 1,2,8
					22040	FO96/841/HO	24	18000	4100	80	8200	7380	☉ 1,2,8

**OCTRON® 5000K And 6500K for Displays, Signage and Backlighting**

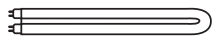
Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
14	T8	18	17.91	Med Bipin	21731	FO13/865/XP/ECO	30	24000	6500	85	850	805	☉ 1,2,6,8,21,22,23
					21868	FO14/950/20in	30	20000	5000	90	750	638	☉ 1,2,8,20,21
15	T8	20	19.78	Med Bipin	21716	FO14/865/XP/ECO	30	24000	6500	85	1000	950	☉ 1,2,6,8,21,22,23
16	T8	10.5	10.60	Med Bipin	21726	FBO16/865XP	15	24000	6500	85	1125	1069	☉ 1,2,8,21,22,23,37,38
17	T8	24	23.78	Med Bipin	21871	FO17/950/24in	30	20000	5000	90	800	680	☉ 1,2,8,20,21
					21718	FO17/865/XP/ECO	30	24000	6500	85	1250	1188	☉ 1,2,6,8,21,22,23
21	T8	30	29.78	Med Bipin	21869	FO21/950/30in	30	20000	5000	90	1000	850	☉ 1,2,8,20,21
					21730	FO21/865/XP/ECO	30	24000	6500	85	1600	1520	☉ 1,2,6,8,21,22,23
25	T8	36	35.78	Med Bipin	21872	FO25/950/36in	30	20000	5000	90	1250	1063	☉ 1,2,8,20,21
					21719	FO25/865/XP/ECO	30	24000	6500	85	2000	1900	☉ 1,2,6,8,21,22,23
28	T8	40	39.78	Med Bipin	21870	FO28/950/40in	30	20000	5000	90	1800	1530	☉ 1,2,8,20,21
					21727	FO28/865/XP/ECO	30	24000	6500	85	2250	2138	☉ 1,2,6,8,21,22,23
32	T8	48	47.78	Med Bipin	21880	FO32/950/48in	30	20000	5000	90	1800	1530	☉ 1,2,8,20,21
					21720	FO32/865/XP/ECO	30	24000	6500	85	2850	2708	☉ 1,2,6,8,21,22,23
40	T8	60	59.61	Med Bipin	21873	FO40/950/60in	30	20000	5000	90	2200	1870	☉ 1,2,8,20,21
					21721	FO40/865/XP/ECO	30	24000	6500	85	3650	3468	☉ 1,2,6,8,21,22,23

**OCTRON® CURVALUME® U-Shaped Lamps, 1 5/8" Leg Spacing**

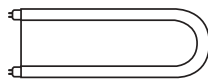
The OCTRON® CURVALUME® lamps are made to the same color standards and may be used in combination with other SYLVANIA OCTRON lamps to meet the needs of lighting installations where OCTRON T8 systems are used. Since Curvalume and linear OCTRON lamps of the same/similar wattages operate on the ballasts, the types of ballasts used in an installation can be minimized. When OCTRON FBO31 lamps are used in 2x2 luminaires, the 2x2 luminaires can deliver light levels similar to 2x4 luminaires with the same number of linear OCTRON lamps. The nominal length of the CURVALUME lamp is measured from base face to the outside of the glass bend.

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
16	T8	10.5	10.60	Med Bipin	21834	FBO16/830	15	20000	3000	82	1125	1035	☉ 1,2,8,20,21,37,38
					21835	FBO16/835	15	20000	3500	82	1125	1035	☉ 1,2,8,20,21,37,38





T8 U-Shaped (leg spacing of 1-5/8")



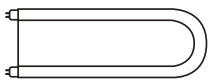
T8 U-Shaped (leg spacing of 6")

**OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS****OCTRON® CURVALUME® U-Shaped Lamps, 1 5/8" Leg Spacing**

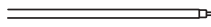
Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
16	T8	10.5	10.60	Med Bipin	21836	FBO16/841	15	20000	4100	82	1125	1035	1,2,8,20,21,37,38
					21726	FBO16/865XP	15	24000	6500	85	1125	1069	1,2,8,21,22,23,37,38
24	T8	16.5	16.6	Med Bipin	21874	FBO24/830	15	20000	3000	82	1925	1771	1,2,8,20,21,37,38
					21875	FBO24/835	15	20000	3500	82	1925	1771	1,2,8,20,21,37,38
					21876	FBO24/841	15	20000	4100	82	1925	1771	1,2,8,20,21,37,38
31	T8	22.5	22.6	Med Bipin	21877	FBO31/830	15	20000	3000	82	2725	2507	1,2,8,20,21,37,38
					21693*	FBO31/830/XP/ECO	15	24000	3000	85	2775	2636	1,2,6,8,21,22,23,37,38
					21878	FBO31/835	15	20000	3500	82	2725	2507	1,2,8,20,21,37,38
					21695*	FBO31/835/XP/ECO	15	24000	3500	85	2775	2636	1,2,6,8,21,22,23,37,38
					21879	FBO31/841	15	20000	3500	82	2725	2507	1,2,8,20,21,37,38
					21696*	FBO31/841/XP/ECO	15	24000	4100	85	2775	2636	1,2,6,8,21,22,23,37,38
					21926*	FBO31/841XP	15	24000	4100	85	2775	2636	1,2,8,21,22,23,37,38
					21819	FBO31/750	15	20000	5000	75	2600	2340	1,2,8,20,21,37,38

**OCTRON® CURVALUME® U-Shaped Lamps, 6" Leg Spacing**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
30	T8	22.5	22.6	Med Bipin	22170*	FBO30/830XP/6/SS/ECO	16	18000	3000	82	2800	2632	1,2,6,22,23,29,30,37
					22171*	FBO30/835XP/6/SS/ECO	16	18000	3500	82	2800	2632	1,2,6,22,23,29,30,37
					22172*	FBO30/841XP/6/SS/ECO	16	18000	4100	82	2800	2632	1,2,6,22,23,29,30,37
32	T8	22.5	22.6	Med Bipin	22046	FBO32/730/6/ECO	16	20000	3000	75	2750	2475	1,2,6,8,20,21,37
					21970*	FBO32/830/6	16	20000	3000	82	2850	2622	1,2,8,20,21,37
					21663	FBO32/830/6/ECO	16	20000	3000	82	2850	2622	1,2,6,8,20,21,37
					22054	FBO32/830XP/6/ECO	16	24000	3000	85	2900	2755	1,2,6,8,21,22,23,37
					22094	FBO32/830XPS/6/ECO	16	24000	3000	85	3000	2850	1,2,6,8,21,37,39,40
					22051	FBO32/735/6/ECO	16	20000	3500	75	2750	2475	1,2,6,8,20,21,37



T8 U-Shaped (leg spacing of 6")



T5 Mini Bipin

## OCTRON® AND OCTRON® CURVALUME® FLUORESCENT LAMPS

### OCTRON® CURVALUME® U-Shaped Lamps, 6" Leg Spacing

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
32	T8	22.5	22.6	Med Bipin	21670	FBO32/835/6/ECO	16	20000	3500	82	2850	2622	1,2,6,8,20,21,37
					21984	FBO32/835XP/6	16	24000	3500	85	2900	2755	1,2,8,21,22,23,37
					22055	FBO32/835XP/6/ECO	16	24000	3500	85	2900	2755	1,2,6,8,21,22,23,37
					22095	FBO32/835XPS/6/ECO	16	24000	3500	85	3000	2850	1,2,6,8,21,37,39,40
					22052	FBO32/741/6/ECO	16	20000	4100	75	2750	2475	1,2,6,8,20,21,37
					21671	FBO32/841/6/ECO	16	20000	4100	82	2850	2622	1,2,6,8,20,21,37
					22057	FBO32/841XP/6/ECO	16	24000	4100	85	2900	2755	1,2,6,8,21,22,23,37
					22096	FBO32/841XPS/6/ECO	16	24000	4100	85	3000	2850	1,2,6,8,21,37,39,40
					22053	FBO32/750/6/ECO	16	20000	5000	75	2625	2363	1,2,6,8,20,21,37

### PENTRON® T5 LAMPS

PENTRON® T5 lamps are designed to operate on dedicated electronic programmed rapid start (also known as programmed start) ballasts only. These lamps are globally standardized and are designed to operate with their peak light output at 35°C (95°F) ambient temperature. For comparison purposes and to accommodate existing lamp measurement standards, ratings are given at both 25°C (77°F) and 35°C (95°F). The new lamp dimensions allow for innovative fixture designs and improved fixture performance. A PENTRON Fixture Design Guide is available on request.

### PENTRON® High Performance T5 Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F @35°C/95°F		Symbols & Footnotes
											Initial	Mean	
14	T5	24	22.2	Mini Bipin	20810	FP14/830	40	20000	3000	82	1200	1116	1,2,8,9,11
					20907	FP14/830/ECO	40	20000	3000	82	1200	1116	1,2,6,8,9,11
					20812	FP14/835	40	20000	3500	82	1200	1116	1,2,8,9,11
					20908	FP14/835/ECO	40	20000	3500	82	1200	1116	1,2,6,8,9,11
					20822	FP14/841	40	20000	4100	82	1200	1116	1,2,8,9,11
					20914	FP14/841/ECO	40	20000	4100	82	1200	1116	1,2,6,8,9,11
					20823	FP21/830	40	20000	3000	82	1900	1767	1,2,8,9,11
21	T5	36	34	Mini Bipin	20919	FP21/830/ECO	40	20000	3000	82	1900	1767	1,2,6,8,9,11
					20832	FP21/835	40	20000	3500	82	1900	1767	1,2,8,9,11
					20921	FP21/835/ECO	40	20000	3500	82	1890	1767	1,2,6,8,9,11
					20835	FP21/841	40	20000	4100	82	1900	1767	1,2,8,9,11

## PENTRON® T5 LAMPS

## PENTRON® High Performance T5 Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes	
											Initial @25°C/77°F	Mean @35°C/95°F		
21	T5	36	34	Mini Bipin	20924☼	FP21/841/ECO	40	20000	4100	82	1890 2100	1767 1953	☼☼ 1,2,6,8,9,11	
28	T5	48	45.8	Mini Bipin	20838☼	FP28/60[RED]	40	10000				2100		1,2,8,9,11
					20839☼	FP28/66[GREEN]	40	10000				3500		1,2,8,9,11
					20840☼	FP28/67[BLUE]	40	10000				700		1,2,8,9,11
					20836☼	FP28/830	40	20000	3000	82	2600 2900	2418 2697	☼☼ 1,2,8,9,11	
					20868☼	FP28/830/ECO	40	20000	3000	82	2600 2900	2418 2697	☼☼ 1,2,6,8,9,11	
					20841☼	FP28/835	40	20000	3500	82	2600 2900	2418 2697	☼☼ 1,2,8,9,11	
					20901☼	FP28/835/ECO	40	20000	3500	82	2600 2900	2418 2697	☼☼ 1,2,6,8,9,11	
					20842☼	FP28/841	40	20000	4100	82	2600 2900	2418 2697	☼☼ 1,2,8,9,11	
					20902☼	FP28/841/ECO	40	20000	4100	82	2600 2900	2418 2697	☼☼ 1,2,6,8,9,11	
35	T5	60	57.6	Mini Bipin	20843☼	FP35/830	40	20000	3000	82	3300 3650	3069 3394	☼☼ 1,2,8,9,11	
					20925☼	FP35/830/ECO	40	20000	3000	82	3300 3650	3069 3394	☼☼ 1,2,6,8,9,11	
					20844☼	FP35/835	40	20000	3500	82	3300 3650	3069 3394	☼☼ 1,2,8,9,11	
					20926☼	FP35/835/ECO	40	20000	3500	82	3300 3650	3069 3394	☼☼ 1,2,6,8,9,11	
					20845☼	FP35/841	40	20000	4100	82	3300 3650	3069 3394	☼☼ 1,2,8,9,11	
					20927☼	FP35/841/ECO	40	20000	4100	82	3300 3650	3069 3394	☼☼ 1,2,6,8,9,11	

## PENTRON® High Output, High Performance T5 Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes
											Initial @25°C/77°F	Mean @35°C/95°F	
24	T5	24	22.2	Mini Bipin	20846	FP24/830/HO	40	20000	3000	82	1750 2000	1627 1860	☼☼ 1,2,8,9,11
					20928☼	FP24/830/HO/ECO	40	20000	3000	82	1750 2000	1627 1860	☼☼ 1,2,6,8,9,11
					20852	FP24/835/HO	40	20000	3500	82	1750 2000	1627 1860	☼☼ 1,2,8,9,11
					20929☼	FP24/835/HO/ECO	40	20000	3500	82	1760 2000	1627 1860	☼☼ 1,2,6,8,9,11
					20853	FP24/841/HO	40	20000	4100	82	1750 2000	1627 1860	☼☼ 1,2,8,9,11
					20931☼	FP24/841/HO/ECO	40	20000	4100	82	1760 2000	1627 1860	☼☼ 1,2,6,8,9,11
39	T5	36	34	Mini Bipin	20854	FP39/830/HO	40	20000	3000	82	3100 3500	2883 3255	☼☼ 1,2,8,9,11



T5 Mini Bipin



Circline 4-Pin T5

## PENTRON® T5 LAMPS

### PENTRON® High Output, High Performance T5 Lamps

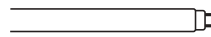
Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes
											Initial @25°C/77°F	Mean @35°C/95°F	
39	T5	36	34	Mini Bipin	20932	FP39/830/HO/ECO	40	20000	3000	82	3100	2883	☀️ CRI 1,2,6,8,9,11
					20855	FP39/835/HO	40	20000	3500	82	3100	2883	☀️ 1,2,8,9,11
					20933	FP39/835/HO/ECO	40	20000	3500	82	3100	2883	☀️ CRI 1,2,6,8,9,11
					20856	FP39/841/HO	40	20000	4100	82	3100	2883	☀️ 1,2,8,9,11
					20934	FP39/841/HO/ECO	40	20000	4100	82	3100	2883	☀️ CRI 1,2,6,8,9,11
54	T5	48	45.8	Mini Bipin	20857	FP54/830/HO	40	20000	3000	82	4450	4138	☀️ 1,2,8,9,11
					20903	FP54/830/HO/ECO	40	20000	3000	82	4450	4138	☀️ CRI 1,2,6,8,9,11
					20858	FP54/835/HO	40	20000	3500	82	4450	4138	☀️ 1,2,8,9,11
					20904	FP54/835/HO/ECO	40	20000	3500	82	4450	4138	☀️ CRI 1,2,6,8,9,11
					20860	FP54/841/HO	40	20000	4100	82	4450	4138	☀️ 1,2,8,9,11
					20906	FP54/841/HO/ECO	40	20000	4100	82	4450	4138	☀️ CRI 1,2,6,8,9,11
					20862	FP54/860/HO/ECO	40	20000	6000	82	4050	3766	☀️ CRI 1,2,6,8,9,11
80	T5	60	57.6	Mini Bipin	20863	FP80/830/HO	40	20000	3000	82	6150	5719	☀️ 1,2,8,9,11
					20935	FP80/830/HO/ECO	40	20000	3000	82	6150	5719	☀️ CRI 1,2,6,8,9,11
					20864	FP80/835/HO	40	20000	3500	82	6150	5719	☀️ 1,2,8,9,11
					20936	FP80/835/HO/ECO	40	20000	3500	82	6150	5719	☀️ CRI 1,2,6,8,9,11
					20865	FP80/841/HO	40	20000	4100	82	6150	5719	☀️ 1,2,8,9,11
					20937	FP80/841/HO/ECO	40	20000	4100	82	6150	5719	☀️ CRI 1,2,6,8,9,11

### PENTRON® Circline T5 Lamps

Nominal Wattage	Bulb	Outside Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes
										Initial @25°C/77°F	Mean @35°C/95°F	
22	T5	8.66 - 9.06	2GX13	20702	FPC22/830	12	12000	3000	82	1800	1585	☀️ 1,2,8,9,11
				20712	FPC22/835	12	12000	3500	82	1800	1585	☀️ 1,2,8,9,11
				20715	FPC22/841	12	12000	4100	82	1800	1585	☀️ 1,2,8,9,11
40	T5	11.54 - 12.01	2GX13	20731	FPC40/830	12	12000	3000	82	3200	2815	☀️ 1,2,8,9,11
				20732	FPC40/835	12	12000	3500	82	3200	2815	☀️ 1,2,8,9,11
				20733	FPC40/841	12	12000	4100	82	3200	2815	☀️ 1,2,8,9,11



Circline 4-Pin T5



T12 Med Bipin

## PENTRON® T5 LAMPS

### PENTRON® Circline T5 Lamps

Nominal Wattage	Bulb	Outside Diameter (in)		Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
55	T5	11.54 - 12.01		2GX13	20741	FPC55/830/HO	12	12000	3000	82	4000	3520	☑ 1,2,8,9,11
					20750	FPC55/835/HO	12	12000	3500	82	4000	3520	☑ 1,2,8,9,11
					20751	FPC55/841/HO	12	12000	4100	82	4000	3520	☑ 1,2,8,9,11

## RAPID START LAMPS

### 3' SUPERSAVER® Rapid Start Lamps

Rapid start lamps, 3-foot and 4-foot in length, are typically designated by their wattage: e.g. F40 = Fluorescent 40W. Therefore, lamps previously designated as F30T12/RS/SS, F40/SS and FB40/SS energy saving types will now be designated as F25T12/RS/SS, F34/SS and FB34/SS, respectively, to comply with standard lamp designation nomenclature for these families of lamps.

Nominal Wattage	Bulb	Nominal Length (in)		MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
												Initial	Mean	
25	T12	36		35.78	Med Bipin	23451	F25T12/D30/RS/SS <i>formerly F30T12/D30/RS/SS</i>	30	18000	3000	70	2050	1804	☑ 1,2,42
						23473	F25T12/WW/RS/SS <i>formerly F30T12/WW/RS/SS</i>	30	18000	3000	52	1975	1679	1,2,42
						23485	F25T12/D35/RS/SS <i>formerly F30T12/D35/RS/SS</i>	30	18000	3500	70	2050	1804	☑ 1,2,42
						23472	F25T12/CW/RS/SS <i>formerly F30T12/CW/RS/SS</i>	30	18000	4200	62	1925	1636	1,2,42

### 3' Standard Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)		MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
												Initial	Mean	
30	T12	36		35.78	Med Bipin	23474	F30T12/D830/RS	30	18000	3000	80	2290	2061	☑ 1,2,8,43
						23490	F30T12/WW/RS	6	18000	3000	52	2275	1934	1,2,8,43
						23482	F30T12/WW/RS	30	18000	3000	52	2275	1934	1,2,8,43
						23484	F30T12/D35/RS	30	18000	3500	70	2250	1980	☑ 1,2,8,43
						23139	F30T12/D835/RS	30	18000	3500	80	2290	2061	☑ 1,2,8,43
						23477	F30T12/CWX/RS	30	18000	4100	87	1600	1360	☑ 1,2,8,43
						23488	F30T12/D41/RS	30	18000	4100	70	2250	1980	☑ 1,2,8,43
						23493	F30T12/CW/RS	6	18000	4200	62	2200	1870	1,2,8,43
						23476	F30T12/CW/RS	30	18000	4200	62	2200	1870	1,2,8,43
						23487	F30T12/CW/RS/UPC	30	18000	4200	62	2200	1870	1,2,8,43
						23478	F30T12/D/RS	30	18000	6500	76	1900	1615	☑ 1,2,8,43

### 4' SUPERSAVER® Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)		MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
												Initial	Mean	
34	T12	48		47.78	Med Bipin	24535	F34/D30/SS/ECO <i>formerly F40/D30/SS/ECO</i>	30	20000	3000	70	2800	2520	☑ 1,2,6,43,44,45,46
						24589	F34/D830/SS <i>formerly F40/D830/SS</i>	30	20000	3000	80	2900	2610	☑ 1,2,43,44,45,46
						24544	F34/D830/SS/ECO <i>formerly F40/D830/SS/ECO</i>	30	20000	3000	80	2900	2610	☑ 1,2,6,43,44,45,46
						24595	F34WW/SS <i>formerly F40WW/SS</i>	30	20000	3000	52	2750	2365	☑ 1,2,43,44,45,46

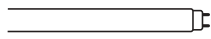
## RAPID START LAMPS

## 4' SUPERSAVER® Rapid Start Lamps

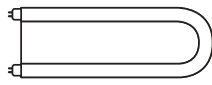
Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens Initial Mean @25°C/77°F		Symbols & Footnotes
34	T12	48	47.78	Med Bipin	24538	<b>F34WW/SS/ECO</b> <i>formerly F40WW/SS/ECO</i>	30	20000	3000	52	2750	2365	☉ 1,2,6, 43,44,45,46
					24591	<b>F34W/SS</b> <i>formerly F40W/SS</i>	30	20000	3450	57	2750	2365	☉ 1,2,43,44,45, 46
					24585	<b>F34/D35/SS</b> <i>formerly F40/D35/SS</i>	30	20000	3500	70	2800	2520	☉ 1,2,43, 44,45,46
					24522	<b>F34/D35/SS/CVP</b> <i>formerly F40/D35/SS/CVP</i>	10	20000	3500	70	2800	2520	☉ 1,2,43, 44,45,46
					24540	<b>F34/D35/SS/ECO</b> <i>formerly F40/D35/SS/ECO</i>	30	20000	3500	70	2800	2520	☉ 1,2,6, 43,44,45,46
					24547	<b>F34/D835/SS/ECO</b> <i>formerly F40/D835/SS/ECO</i>	30	20000	3500	80	2900	2610	☉ 1,2, 6,43,44,45,46
					24542	<b>F34/D41/SS/ECO</b> <i>formerly F40/D41/SS/ECO</i>	30	20000	4100	70	2800	2520	☉ 1,2,6, 43,44,45,46
					24554	<b>F34/D841/SS/ECO</b> <i>formerly F40/D841/SS/ECO</i>	30	20000	4100	80	2900	2610	☉ 1,2, 6,43,44,45,46
					24588	<b>F34CW/SS</b> <i>formerly F40CW/SS</i>	30	20000	4100	87	1925	1656	☉ 1,2,43,44,45, 46
					24590	<b>F34LW/SS</b> <i>formerly F40LW/SS</i>	30	20000	4150	48	2825	2430	☉ 1,2,43,44,45, 46
					24566	<b>F34LW/SS/ECO</b> <i>formerly F40LW/SS/ECO</i>	30	20000	4150	48	2825	2430	☉ 1,2,6, 43,44,45,46
					24508	<b>F34CW/RS/SS/672PLT</b> <i>formerly F40CW/RS/SS/672PLT</i>	672	20000	4200	62	2650	2279	☉ 1,2,43,44,45, 46
					24594	<b>F34CW/SS</b> <i>formerly F40CW/SS</i>	30	20000	4200	62	2650	2279	☉ 1,2,43,44,45, 46
					24516	<b>F34CW/SS/10</b> <i>formerly F40CW/SS/10</i>	10	20000	4200	62	2650	2279	☉ 1,2,43,44,45, 46
					24524	<b>F34CW/SS/CVP</b> <i>formerly F40CW/SS/CVP</i>	10	20000	4200	62	2650	2279	☉ 1,2,43,44,45, 46
					24596	<b>F34CW/SS/ECO</b> <i>formerly F40CW/SS/ECO</i>	30	20000	4200	62	2650	2279	☉ 1,2,6, 43,44,45,46
					24396	<b>F34CW/SS/SL</b> <i>formerly F40CW/SS/SL</i>	30	20000	4200	62	2600	2235	☉ 1,2,25,26,43, 44,45
					28012	<b>F34CW/SS/UPC</b> <i>formerly F40CW/SS/UPC</i>	30	20000	4200	62	2650	2279	☉ 1,2,43,44,45, 46
					24706	<b>F34/D865/SS</b> <i>formerly F40/D865/SS</i>	30	20000	6500	80	2650	2385	☉ 1,2,43, 44,45,46
					24599	<b>F34/DX/SS</b> <i>formerly F40/DX/SS</i>	30	20000	6500	88	1930	1565	☉ 1,2,43,44,45, 46

## 4' Standard Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens Initial Mean @25°C/77°F		Symbols & Footnotes
40	T12	48	47.78	Med Bipin	24673	<b>F40/GO</b>	10	20000			1980		1,2,8,43,44,46, 47
					24454	<b>F40IF</b>	30	20000	2750	89	1480	1273	☉ 1,2,8,43,44, 46,47



T12 Med Bipin



T12 U-Shaped (leg spacing of 3-5/8" or 6")

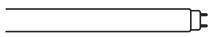
## RAPID START LAMPS

### 4' Standard Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
40	T12	48	47.78	Med Bipin	24521	F40/D30/ECO	30	20000	3000	70	3200	2880	Ⓢ Ⓜ 1,2, 6,8,43,44,46,47
					24543	F40/D830/ECO	30	20000	3000	80	3300	2970	Ⓢ Ⓜ 1,2, 6,8,43,44,46,47
					24537	F40/D35/ECO	30	20000	3500	70	3200	2880	Ⓢ Ⓜ 1,2, 6,8,43,44,46,47
					24546	F40/D835/ECO	30	20000	3500	80	3300	2970	Ⓢ Ⓜ 1,2, 6,8,43,44,46,47
					24438	F40N	30	20000	3600	86	2100	1806	Ⓜ 1,2,8,43,44, 46,47
					24584	F40/D41	30	20000	4100	70	3200	2880	Ⓢ Ⓜ 1,2,8, 43,44,46,47
					24541	F40/D41/ECO	30	20000	4100	70	3200	2880	Ⓢ Ⓜ 1,2, 6,8,43,44,46,47
					24553	F40/D841/ECO	30	20000	4100	80	3300	2970	Ⓢ Ⓜ 1,2, 6,8,43,44,46,47
					24442	F40CWX	10	20000	4100	87	2150	1849	Ⓜ 1,2,8,43,44, 46,47
					24441	F40CWX	30	20000	4100	87	2150	1849	Ⓜ 1,2,8,43,44, 46,47
					24683	F40DSGN50	30	20000	5000	90	2200	1892	Ⓜ 1,2,8,43,44, 46,47
					24570	F40/D865	30	20000	6500	80	3000	2700	Ⓢ Ⓜ 1,2,8, 43,44,46,47
					24477	F40/DX	30	20000	6500	88	2180	1770	Ⓜ 1,2,8,43,44, 46,47

### CURVALUME® Rapid Start SUPERSAVER® - U-Shaped, 6" Leg Spacing

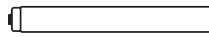
Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
34	T12	22.5	22.6	Med Bipin	24063	FB34/D30/6/SS <i>formerly FB40/D30/6/SS</i>	12	18000	3000	70	2730	2457	Ⓢ Ⓜ 1,2,43, 45
					24047	FB34/WW/6/SS <i>formerly FB40/WW/6/SS</i>	12	18000	3000	52	2650	2279	Ⓢ 1,2,43,45
					24052	FB34/WW/6/SS/ECO <i>formerly FB40/WW/6/SS/ECO</i>	12	18000	3000	52	2650	2279	Ⓢ Ⓜ 1,2,6, 43,45
					24062	FB34/WW/6/SS/UPC <i>formerly FB40/WW/6/SS</i>	12	18000	3000	52	2650	2279	Ⓢ 1,2,43,45
					24065	FB34/D35/6/SS <i>formerly FB40/D35/SS</i>	12	18000	3500	70	2730	2457	Ⓢ Ⓜ 1,2,43, 45
					24067	FB34/D41/6/SS <i>formerly FB40/D41/SS</i>	12	18000	4100	70	2730	2457	Ⓢ Ⓜ 1,2,43, 45
					24049	FB34/LW/6/SS <i>formerly FB40/LW/6/SS</i>	12	18000	4150	48	2800	2408	Ⓢ 1,2,43,45
					24046	FB34/CW/6/SS <i>formerly FB40/CW/6/SS</i>	12	18000	4200	62	2600	2236	Ⓢ 1,2,43,45
					24054	FB34/CW/6/SS/ECO <i>formerly FB40/CW/6/SS/ECO</i>	12	18000	4200	62	2600	2236	Ⓢ Ⓜ 1,2,6, 43,45



T12 Med Bipin



Circline 4-Pin T9



T12 RDC

**RAPID START LAMPS****CURVALUME® Rapid Start SUPERSAVER® - U-Shaped, 6" Leg Spacing**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
34	T12	22.5	22.6	Med Bipin	24059	FB34/CW/6/SS/UPC <i>formerly FB40/CW/SS/6</i>	12	18000	4200	62	2600	2236	Ⓢ 1,2,43,45

**CURVALUME® Rapid Start Standard Lamps - U-Shaped, 6" Leg Spacing**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
40	T12	22.5	22.6	Med Bipin	24080	FB40/D30/6	12	18000	3000	70	3050	2745	Ⓢ CRI 1,2,8,43
					24017	FB40/D830/6	12	18000	3000	80	3200	2880	Ⓢ CRI 1,2,8,43
					24081	FB40/D35/6	12	18000	3500	70	3050	2745	Ⓢ CRI 1,2,8,43
					24004	FB40/CWX/6	12	18000	4100	87	2100	1806	CRI 1,2,8,43
					24082	FB40/D41/6	12	18000	4100	70	3050	2745	Ⓢ CRI 1,2,8,43

**Circline T9 Rapid Start Lamps**

Nominal Wattage	Bulb	Outside Diameter (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
										Initial	Mean	
20	T9	6.25-6.75	4 Pin	20155	FC6T9/WW/RS	12	8000	3000	52	800	696	1,2,8,48
				20156	FC6T9/CW/RS	12	8000	4200	62	750	653	1,2,8,48
22	T9	8.00-8.50	4 Pin	20209	FC8T9/DWW/RP	6	12000	3000	70	1100	990	CRI 1,2,8,48
				20088	FC8T9/WW/RS	12	12000	3000	52	1050	914	1,2,8,48
				20148	FC8T9/CW/RS	12	12000	4200	62	1050	914	1,2,8,48
				20151	FC8T9/CW/RS/6 PACK	6	12000	4200	62	1050	914	1,2,8,48
				20080	FC8T9/D/RS	12	12000	6500	76	900	783	CRI 1,2,8,48
30	T9	8.00-8.50	4 Pin	20210	FC8T9/830/EL	6	10000	3000	80	1850	1591	CRI 1,2,3,16,17,49
32	T9	11.50-12.0	4 Pin	20233	FC12T9/DWW/RP	6	15000	3000	70	2100	1806	CRI 1,2,8,48
				20037	FC12T9/WW/RS	12	15000	3000	52	1950	1697	1,2,8,48
				20142	FC12T9/CW/RS	12	15000	4200	62	1925	1675	1,2,8,48
				20143	FC12T9/CW/RS/6 PACK	6	15000	4200	62	1925	1675	1,2,8,48
				20030	FC12T9/D/RS	12	15000	6500	76	1650	1436	CRI 1,2,8,48
40	T9	15.5-16	4 Pin	20057	FC16T9/WW/RS	12	18000	3000	52	2800	2436	1,2,8,48
				20132	FC16T9/CW/RS	12	18000	4200	62	2750	2393	1,2,8,48
				20072	FC16T9/D/RS	12	18000	6500	76	2350	2045	CRI 1,2,8,48

**High Output (800mA) Rapid Start SUPERSAVER® Lamps**

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
55	T12	48	46	Recessed DC	25137	F48T12D35/HO/SS	30	12000	3500	70	3750	3375	CRI 1,2,50,51
95	T12	96	93.91	Recessed DC	25008	F96T12/D830/HO/SS	15	12000	3000	80	8750	8050	Ⓢ CRI 1,2,50,51
					25011	F96T12/WW/HO/SS	15	12000	3000	52	7700	6237	Ⓢ 1,2,50,51



## RAPID START LAMPS

## High Output (800mA) Rapid Start SUPERSAVER® Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens Initial @25°C/77°F	Approx Lumens Mean @25°C/77°F	Symbols & Footnotes
95	T12	96	93.91	Recessed DC	25024	F96T12/D35/HO/SS	15	12000	3500	48	8350	7515	Ⓢ 1,2,50,51
					25001	F96T12/CW/HO/SS/ECO	15	12000	4050	62	8000	6480	Ⓢ 1,2,6,50,51
					25023	F96T12/D41/HO/SS	15	12000	4100	70	8350	7515	Ⓢ 1,2,50,51
					25025	F96T12/LW/HO/SS	15	12000	4150	48	8000	6480	Ⓢ 1,2,50,51
					25010	F96T12/CW/HO/SS	15	12000	4200	62	8000	6480	Ⓢ 1,2,50,51

## High Output (800mA) Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens Initial @25°C/77°F	Approx Lumens Mean @25°C/77°F	Symbols & Footnotes
25	T12	18	15.91	Recessed DC	25303	F18T12/DSGN50/HO	30	9000	5000	90	850	740	Ⓢ 1,2,8
35	T12	24	21.91	Recessed DC	25313	F24T12/CW/HO	30	9000	4200	62	1650	1337	1,2,8
					25312	F24T12/DSGN50/HO	30	9000	5000	90	1200	1044	Ⓢ 1,2,8
					25314	F24T12/D/HO	30	9000	6500	76	1400	1134	Ⓢ 1,2,8
42	T12	30	27.91	Recessed DC	25322	F30T12/CW/HO	30	9000	4200	62	2250	1825	1,2,8
45	T12	36	33.91	Recessed DC	25333	F36T12/CW/HO	30	9000	4200	62	2850	2309	1,2,8
					25334	F36T12/DSGN50/HO	30	9000	5000	90	2100	1701	Ⓢ 1,2,8
					25332	F36T12/D/HO	30	9000	6500	76	2500	2025	Ⓢ 1,2,8
55	T12	42	39.91	Recessed DC	25342	F42T12/CW/HO	30	9000	4200	62	3400	2754	1,2,8
					25344	F42T12/DSGN50/HO	30	9000	5000	90	2550	2066	Ⓢ 1,2,8
					25343	F42T12/D/HO	30	9000	6500	76	3050	2471	Ⓢ 1,2,8
60	T12	48	46	Recessed DC	25148	F48T12/D830/HO	30	12000	3000	80	4400	4048	Ⓢ 1,2,8,51
					25147	F48T12/WW/HO	30	12000	3000	52	4130	3345	1,2,8,51
					25154	F48T12/D35/HO	30	12000	3500	70	4250	3825	Ⓢ 1,2,8,51
					25144	F48T12/CWX/HO	30	12000	4100	87	2800	2268	Ⓢ 1,2,8,51
					25136	F48T12/D41/HO	30	12000	4100	70	4250	3443	Ⓢ 1,2,8,51
					25146	F48T12/CW/HO	30	12000	4200	62	4050	3281	1,2,8,51
					25122*	F48T12/CW/HO/ECO	30	12000	4200	62	4050	3281	Ⓢ 1,2,6,8,51
					25153	F48T12/DSGN50/HO	30	12000	5000	90	3050	2471	Ⓢ 1,2,8,51
25150	F48T12/D/HO	30	12000	6500	76	3600	2916	Ⓢ 1,2,8,51					
75	T12	60	57.91	Recessed DC	25127	F60T12/WW/HO	30	12000	3000	52	5250	4253	1,2,8,51
					25128	F60T12/D35/HO	30	12000	3500	70	5600	5040	Ⓢ 1,2,8,51
					25126	F60T12/CW/HO	30	12000	4200	62	5200	4212	1,2,8,51
					25119	F60T12/DSGN50/HO	30	12000	5000	90	3850	3119	Ⓢ 1,2,8,51
					25120	F60T12/D/HO	30	12000	6500	76	4600	3826	Ⓢ 1,2,8,51
80	T12	64	61.91	Recessed DC	25352	F64T12/CW/HO	30	12000	4200	62	5750	4658	1,2,8,51
					25355	F64T12/DSGN50/HO	30	12000	5000	90	4200	3402	Ⓢ 1,2,8,51
					25353	F64T12/D/HO	30	12000	6500	76	4900	3969	Ⓢ 1,2,8,51
85	T12	72	69.91	Recessed DC	25097	F72T12/D30/HO	15	12000	3000	70	6650	5985	Ⓢ 1,2,8,51,52
					25098	F72T12/D830/HO	15	12000	3000	80	6750	6210	Ⓢ 1,2,8,51,52

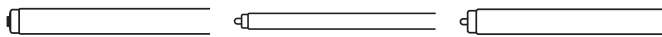
## RAPID START LAMPS

## High Output (800mA) Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens Initial @25°C/77°F	Approx Lumens Mean @25°C/77°F	Symbols & Footnotes
85	T12	72	69.91	Recessed DC	25177	F72T12/WW/HO	15	12000	3000	52	6400	5184	1,2,8,51,52
					27249	F72T12/D35/HO	15	12000	3500	70	6650	5985	1,2,8,51,52
					25281	F72T12/D835/HO	15	12000	3500	80	6750	6210	1,2,8,51,52
					25182	F72T12/N/HO	15	12000	3600	86	4400	3564	1,2,8,51,52
					25187	F72T12/CWX/HO	15	12000	4100	87	4560	3694	1,2,8,51,52
					27245	F72T12/D41/HO	15	12000	4100	70	6650	5985	1,2,8,51,52
					25176	F72T12/CW/HO	15	12000	4200	62	6250	5063	1,2,8,51,52
					25171	F72T12/CW/HO/ECO	15	12000	4200	62	6250	5063	1,2,6,8,52
					25190	F72T12/DSGN50/HO	15	12000	5000	90	4600	3726	1,2,8,51
					25189	F72T12/D/HO	15	12000	6500	76	5550	4496	1,2,8,51,52
100	T12	84	81.91	Recessed DC	25383	F84T12/D35/HO	15	12000	3500	70	7880	7092	1,2,8,51
					25384	F84T12/CW/HO	15	12000	4200	62	7550	6115	1,2,8,51
					25386	F84T12/DSGN50/HO	15	12000	5000	90	5600	4536	1,2,8,51
					25385	F84T12/D/HO	15	12000	6500	76	6700	5427	1,2,8,51
110	T12	96	93.91	Recessed DC	25149	F96T12/D30/HO	15	12000	3000	70	9050	8145	1,2,8,51
					25152	F96T12/D830/HO	15	12000	3000	80	9400	8648	1,2,8,51
					25165	F96T12/D35/HO	15	12000	3500	70	9050	8145	1,2,8,51
					25166	F96T12/D835/HO	15	12000	3500	80	9400	8648	1,2,8,51
					25162	F96T12/N/HO	15	12000	3600	86	6050	4900	1,2,8,51
					25158	F96T12/CWX/HO	15	12000	4100	87	6100	5307	1,2,8,51
					25184	F96T12/D41/HO	15	12000	4100	70	9050	8145	1,2,8,51
					25114	F96T12/D841/HO	15	12000	4100	80	9400	8648	1,2,8,51
					25129	F96T12/CW/HO/CT/ECO	15	12000	4200	62	8600	6966	1,2,6,8,51,53
					25164	F96T12/DSGN50/HO	15	12000	5000	90	6450	5225	1,2,8,51
25185	F96T12/D865/HO	15	12000	6500	80	8800	7920	1,2,8,51					

## High Output (800mA) Rapid Start Lamps for Cold Temperature Operation

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens Initial @25°C/77°F	Approx Lumens Mean @25°C/77°F	Symbols & Footnotes
110	T12	96	93.91	Recessed DC	25134	F96T12/CW/HO/COLD TEMP	15	12000	4200	62	8600	6966	1,2,8,51,53
					25118	F96T12/CW/HO/COLD/10/CVP	10	12000	4200	62	8600	6966	1,2,8,51,53
					25129	F96T12/CW/HO/CT/ECO	15	12000	4200	62	8600	6966	1,2,6,8,51,53
					25135	F96T12/D/HO/COLD TEMP	15	12000	6500	76	7600	6156	1,2,8,51,53



T12 RDC

T8 Single Pin

T12 Single Pin

## RAPID START LAMPS

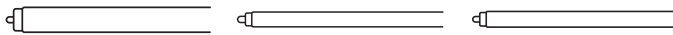
### Very High Output (1500mA) Rapid Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
115	T12	48	46	Recessed DC	25248	F48T12/CW/VHO	30	10000	4200	62	6600	4620	1,2,8,54
					25249	F48T12/CW/VHO/LT	30	10000	4200	62	6750	5250	1,2,8,54,55,56
					21260	F48T12/CW/VHO/PB/30	6	10000	4200	62			1,2,8,57
					25244	F48T12/D/VHO	30	10000	6500	76	5600	3920	☉ 1,2,8,54
135	T12	60	57.91	Recessed DC	25262	F60T12/CW/VHO	30	10000	4200	62	8700	6090	1,2,8,54
141	T12	60	57.91	Recessed DC	25263	F60T12/CW/VHO/LT	30	10000	4200	62	8700	6090	1,2,8,54,55,56
160	T12	72	69.91	Recessed DC	25272	F72T12/CW/VHO	15	10000	4200	62	10600	7420	1,2,8,54
					25274	F72T12/CW/VHO/LT	15	10000	4200	62	11000	7700	1,2,8,54,55,56
					25270	F72T12/D/VHO	15	10000	6500	76	9400	6580	☉ 1,2,8,54
195	T12	96	93.91	Recessed DC	25296	F96T12/CW/VHO/SS	15	10000	4200	62	13000	9100	1,2,8,54,58
215	T12	96	93.91	Recessed DC	25211	F96T12/WWW/VHO	15	10000	3000	52	14000	9800	1,2,8,54
					25209	F96T12/CW/VHO	15	10000	4200	62	14000	9800	1,2,8,54
					25292	F96T12/CW/VHO/LT	15	10000	4200	62	15000	10500	1,2,8,54,55,56
					25210	F96T12/D/VHO	15	10000	6500	76	11600	8120	☉ 1,2,8,54

## INSTANT START LAMPS

### Slimline Instant Start SUPERSAVER® Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
32	T12	48	46.00	Single Pin	24829	F48T12/D35/SS	30	9000	3500	70	2575	2369	☉ 1,2,59
					24825	F48T12/D41/SS	30	9000	4100	70	2575	2369	☉ 1,2,59
					24823	F48T12/CW/SS	30	9000	4200	62	2450	2200	1,2,59
60	T12	96	94	Single Pin	29825	F96T12/D30/SS	15	12000	3000	70	5600	5152	☉ ☉ 1,2,51,59
					29809	F96T12/D30/SS/ECO	15	12000	3000	70	5600	5152	☉ ☉ ☉ 1,2,6,51,59
					29823	F96T12/D830/SS	15	12000	3000	80	5800	5452	☉ ☉ 1,2,51,59
					29854	F96T12/D830/SS/ECO	15	12000	3000	80	5800	5452	☉ ☉ ☉ 1,2,6,51,59
					29795	F96T12/WWW/SS/ECO	15	12000	3000	52	5500	4840	☉ ☉ 1,2,6,51,59
					29819	F96T12/D35/SS	15	12000	3500	70	5600	5152	☉ ☉ 1,2,51,59
					29808	F96T12/D35/SS/ECO	15	12000	3500	70	5600	5152	☉ ☉ ☉ 1,2,6,51,59
					29811	F96T12/D835/SS	15	12000	3500	80	5800	5452	☉ ☉ 1,2,51,59
					29859	F96T12/D835/SS/ECO	15	12000	3500	80	5800	5452	☉ ☉ ☉ 1,2,6,51,59
					29814	F96T12/CWX/SS	15	12000	4100	87	3850	3388	☉ 1,2,51,59
29853	F96T12/D41/SS/ECO	15	12000	4100	70	5600	5152	☉ ☉ ☉ 1,2,6,51,59					
29812	F96T12/D841/SS	15	12000	4100	80	5800	5452	☉ ☉ 1,2,51,59					



T12 Single Pin

T6 Single Pin

T8 Single Pin

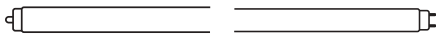
## INSTANT START LAMPS

### Slimline Instant Start SUPERSAVER® Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
60	T12	96	94	Single Pin	29860	F96T12/D841/SS/ECO	15	12000	4100	80	5800	5452	☉ ☰ 1,2, 6,51,59
					29820	F96T12/LW/SS	15	12000	4150	48	5600	4928	☉ 1,2,51,59
					29815	F96T12/CW/SS	15	12000	4200	62	5300	4664	☉ 1,2,51,59
					29805	F96T12/CW/SS/CVP	10	12000	4200	62	5300	4664	☉ 1,2,51,59
					29505	F96T12/CW/SS/ECO	15	12000	4200	62	5300	4664	☉ ☰ 1,2,6, 51,59
					29816	F96T12/CW/SS/UPC	15	12000	4200	62	5300	4664	☉ 1,2,51,59
					29851	F96T12/D865/SS	15	12000	6500	80	5300	4770	☉ ☑ 1,2,51, 59
					29828	F96T12/DX/SS	15	12000	6500	88	3860	3397	☑ 1,2,51,59
					29868☉	F96T12/DX/SS/ECO	15	12000	6500	88	3860	3397	☑ ☑ 1,2,6, 51,59

### Slimline Instant Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
21	T12	24	22.0	Single Pin	22403	F24T12/CW	30	7500	4200	62	1150	1000	1,2,8
25	T6	42	40	Single Pin	24270	F42T6/MWW	24	7500	3032	52	1825	1606	☉ 1,2,8
					24269	F42T6/D35	24	7500	3500	70	1830	1684	☉ ☑ 1,2,8
					24266	F42T6/CW	24	7500	4200	62	1750	1540	☉ 1,2,8
30	T12	36	34	Single Pin	23618	F36T12/CW	30	7500	4200	62	1970	1734	1,2,8
38	T6	64	62	Single Pin	26470	F64T6/MWW	24	7500	3000	52	2900	2552	☉ 1,2,8
					26469☉	F64T6/D35	24	7500	3500	70	2930	2696	☑ 1,2,8
					26466	F64T6/CW	24	7500	4200	62	2800	2464	☉ 1,2,8
	T8	72	70	Single Pin	27270	F72T8/MWW	24	7500	3000	52	3100	2728	☉ 1,2,8
					27266	F72T8/CW	24	7500	4200	62	3050	2684	☉ 1,2,8
39	T12	48	46	Single Pin	24827	F48T12/CW/ECO	30	9000	4200	62	2820	2482	☰ 1,2,6,8
					24836	F48T12D/ECO	30	9000	6500	76	2450	2156	☑ ☑ 1,2,6, 8
					24832	F48T12/D35	30	9000	3500	70	3000	2760	☑ 1,2,8
					24830	F48T12/CW	30	9000	4200	62	2820	2482	1,2,8
					24834	F48T12/D	30	9000	6500	76	2450	2156	☑ 1,2,8
50	T12	60	58	Single Pin	26018	F60T12/D35	30	12000	3500	70	3850	3542	☑ 1,2,8,51
					26001	F60T12/CW	30	12000	4200	62	3700	3256	1,2,8,51
					26002	F60T12/D	30	12000	6500	76	3000	2640	☑ 1,2,8,51
51	T8	96	94	Single Pin	29666	F96T8/CW	24	7500	4200	62	4000	3520	☉ 1,2,8
					29650	F96T8/D	24	7500	6500	76	3550	3124	☉ ☑ 1,2,8
52	T12	64	62	Single Pin	26403	F64T12/CW	30	12000	4200	62	3900	3432	1,2,8,51
					26404	F64T12/D	30	12000	6500	76	3300	2904	☑ 1,2,8,51
55	T12	72	70	Single Pin	27255	F72T12/D830	15	12000	3000	80	4800	4512	☑ 1,2,8,51



T12 Single Pin

T12 Med Bipin

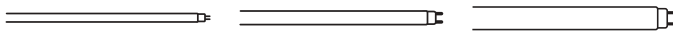
## INSTANT START LAMPS

### Slimline Instant Start Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
55	T12	72	70	Single Pin	27250	F72T12/D35	15	12000	3500	70	4700	4324	☉ 1,2,8,51
					27243	F72T12/D41	15	12000	4100	70	4700	4324	☉ 1,2,8,51
					27256	F72T12/CW	15	12000	4200	62	4500	3960	1,2,8,51
					27259	F72T12/D	15	12000	6500	76	3800	3432	☉ 1,2,8,51
70	T12	84	82	Single Pin	28417	F84T12/CW	15	12000	4200	62	5300	4664	1,2,8,51
75	T12	96	94	Single Pin	29818	F96T12/D30	15	12000	3000	70	6420	5906	☉ 1,2,8,51
					29796	F96T12/D30/ECO	15	12000	3000	70	6420	5906	☉ 1,2,6,51
					29827	F96T12/D830	15	12000	3000	80	6550	6157	☉ 1,2,8,51
					29856	F96T12/D830/ECO	15	12000	3000	80	6550	6157	☉ 1,2,6,8,51
					29685	F96T12/D35	15	12000	3500	70	6420	5906	☉ 1,2,8,51
					29686	F96T12/D35/ECO	15	12000	3500	70	6420	5906	☉ 1,2,6,8,51
					29843	F96T12/D835	15	12000	3500	80	6550	6157	☉ 1,2,8,51
					29838	F96T12/D835/ECO	15	12000	3500	80	6550	6157	☉ 1,2,6,8,51
					29478	F96T12/CWX	15	12000	4100	87	4400	3872	☉ 1,2,8,51
					29858	F96T12/CWX/CVP	10	12000	4100	87	4400	3872	☉ 1,2,8,51
					29489	F96T12/CWX/UPC	15	12000	4100	87	4400	3872	☉ 1,2,8,51
					29797	F96T12/D41/CVP	10	12000	4100	70	6420	5906	☉ 1,2,8,51
					29798	F96T12/D41/ECO	15	12000	4100	70	6420	5906	☉ 1,2,6,8,51
					29852	F96T12/D41/UPC	15	12000	4100	70	6420	5906	☉ 1,2,8,51
					29857	F96T12/D841	15	12000	4100	80	6550	6157	☉ 1,2,8,51
					29850	F96T12/D841/ECO	15	12000	4100	80	6550	6157	☉ 1,2,6,8,51
					29833	F96T12/DSGN50	15	12000	5000	90	4400	3872	☉ 1,2,8,51
29849	F96T12/D865	15	12000	6500	80	6000	5520	☉ 1,2,8,51					
29500	F96T12/DX	15	12000	6500	88	4360	3837	☉ 1,2,8,51					

### Instant Start Bipin Lamp

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
40	T12	48	47.78	Med Bipin	24571	F40T12/CW/IS	30	9000	4200	62	3000	2640	1,2,8,60



T5 Mini Bipin

T8 Med Bipin

T12 Med Bipin

## PREHEAT LAMPS

### Miniature T5 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
4	T5	6	5.91	Mini Bipin	20416	F4T5/CW	24	6000	4200	62	135	117	1,2
					20415	F4T5CW/BL/1/6	6	6000	4200	62	135	117	1,2
					20420	F4T5/D	24	6000	6500	76	115	100	☒ 1,2
6	T5	9	8.91	Mini Bipin	20617	F6T5/WW	24	7500	3000	52	275	239	1,2
					20616	F6T5/CW	24	7500	4200	62	270	235	1,2
					20619	F6T5CW/BL/1/6	6	7500	4200	62	270	235	1,2
					20620	F6T5/D	24	7500	6500	76	260	226	☒ 1,2
8	T5	12	11.91	Mini Bipin	20817	F8T5/WW	24	7500	3000	52	400	348	1,2
					20819	F8T5/WW/BL/1/6	6	7500	3000	52	400	348	1,2
					20821	F8T5/W	24	7500	3450	57	400	348	1,2
					20837	F8T5/CWX	24	7500	4100	87	270	235	☒ 1,2
					20816	F8T5/CW	24	7500	4200	62	390	339	1,2
					20834	F8T5CW/BL/1/6	6	7500	4200	62	390	339	1,2
					20824	F8T5/DSGN50	24	7500	5000	90	280	244	☒ 1,2
					20820	F8T5/D	24	7500	6500	76	350	305	☒ 1,2
13	T5	21	20.4	Mini Bipin	21301	L13W/25	25	7500	4000	75	700	630	☒ 1,2
				Mini Bipin	21317	F13T5/WW	24	7500	3000	52	880	766	1,2
		20.91	Mini Bipin	21332	F13T5/WW/BL/1/6	6	7500	3000	52	880	766	1,2	
				21316	F13T5/CW	24	7500	4200	62	860	748	1,2	
				21315	F13T5CW/BL/1/6	6	7500	4200	62	860	748	1,2	

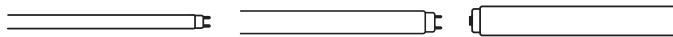
### Standard T8 and T12 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
13	T8	12	11.71	Med Bipin	21766	F13T8/CW	24	7500	4200	62	530	461	1,2
14	T8	15	14.78	Med Bipin	21486	F14T8/CW	24	7500	4200	62	685	644	1,2
					21488	F14T8/D	24	7500	6500	76	575	561	☒ 1,2
	T12	15	14.78	Med Bipin	21451	F14T12/DWW/RP	6	9000	3000	70	720	648	☒ 1,2
					21435	F14T12/WW	30	9000	3000	52	660	574	1,2
					21536	F14T12/DCW/1/6/RP	6	9000	4100	70	720	648	1,2
					21409	F14T12/CW	30	9000	4200	62	650	566	1,2
					21410	F14T12/CW/6/RP	6	9000	4200	62	650	566	1,2
					21411	F14T12/D	30	9000	6500	76	590	513	☒ 1,2
15	T8	18	17.78	Med Bipin	21610	F15T8/D830	24	7500	3000	82	920	846	☒ 1,2
					21701	F15T8/WW	24	7500	3000	52	845	735	1,2
					21765	F15T8/WW/RP	6	7500	3000	52	845	735	1,2
					21609	F15T8/D35	24	7500	3500	70	940	846	☒ 1,2
					21682	F15T8/N	24	7500	3600	86	560	487	☒ 1,2
					21627	F15T8/CWX	24	7500	4100	87	600	522	☒ 1,2
					21603	F15T8/DCW/RP	6	7500	4100	70	900	810	☒ 1,2

## PREHEAT LAMPS

## Standard T8 and T12 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens		Symbols & Footnotes					
											Initial @25°C/77°F	Mean						
15	T8	18	17.78	Med Bipin	21616	F15T8/CW	24	7500	4200	62	825	718	1,2					
					21619	F15T8/CW/6PK	6	7500	4200	62	825	718	1,2					
					21642	F15T8/DSGN50	24	7500	5000	90	600	539	☐ 1,2					
					21600	F15T8/D	24	7500	6500	76	700	653	☐ 1,2					
	T12	18	17.78	Med Bipin	21551	F15T12/DWWW/RP	6	9000	3000	70	770	693	☐ 1,2					
					21542	F15T12/WWW	30	9000	3000	52	770	670	1,2					
					21544	F15T12/WWW/RP	6	9000	3000	52	770	670	1,2					
					21535	F15T12/DCW/RP	6	9000	4100	76	770	693	☐ 1,2					
					21532	F15T12/CW	30	9000	4200	62	750	653	1,2					
					21513	F15T12/CW 6PK	6	9000	4200	62	750	653	1,2					
					21534	F15T12/D	30	9000	6500	76	660	574	☐ 1,2					
					18	T8	24	23.78	Med Bipin	23014	F18T8CW/K24	24	7500	4200	62	1190	1035	1,2
										23012	F18T8CW/K24/1/12/UPC	12	7500	4200	62	1190	1035	1,2
26	25.78	Med Bipin	23025	F18T8CW/K26PLT			3168	7500	4200	62	1280	1079	1,2					
			23027	F18T8CW/K26			24	7500	4200	62	1280	1079	1,2					
			21728	F18T8/D/K26			24	7500	6500	76	1100	957	☐ 1,2					
28	27.78	Med Bipin	23028	F18T8CW/K28			24	7500	4200	62	1360	1131	1,2					
30	29.78	Med Bipin	23030	F18T8CW/K30			24	7500	4200	62	1400	1200	1,2					
20	T12	21	20.78	Med Bipin			22080	F20T12/CW/21	30	7500	4200	62	1020	887	1,2			
					22085	F20T12/D/22	30	7500	6500	76	975	848	☐ 1,2					
		24	23.78	Med Bipin	22997	F20T12/G	10	9000						1,2				
					22075	F20T12/D830	30	9000	3000	80	1350	1242	☐ 1,2					
					22252	F20T12/DWWW/RP	6	9000	3000	70	1300	1170	☐ 1,2					
					22131	F20T12/WWW	30	9000	3000	52	1250	1088	1,2					
					22134	F20T12/WWW/RP	6	9000	3000	52	1250	1088	1,2					
					22251	F20T12/D35	30	9000	3500	70	1300	1170	☐ 1,2					
					22082	F20T12/CWX	30	9000	4100	87	890	774	☐ 1,2					
					22255	F20T12/D41	30	9000	4100	70	1300	1170	☐ 1,2					
					22256	F20T12/DCW/RP	6	9000	4100	76	1300	1170	☐ 1,2					
					22078	F20T12/CW	30	9000	4200	62	1200	1044	1,2					
					22015	F20T12/CW/RP	6	9000	4200	62	1200	1044	1,2					
					22073	F20T12/CW/UPC	30	9000	4200	62	1200	1044	1,2					
					22119	F20T12/DSGN50	30	9000	5000	90	880	766	☐ 1,2					
					22083	F20T12/D	30	9000	6500	76	1075	935	☐ 1,2					
					22087	F20T12/D/UPC	30	9000	6500	76	1075	935	☐ 1,2					
25	T12	28	27.78	Med Bipin	22527	F25T12/CW/28	30	7500	4200	62	1670	1453	1,2					
					22333	F25T12/WWW/30	30	7500	3000	52	1750	1523	1,2					
		30	29.78	Med Bipin	22528	F25T12/CW/30	30	7500	4200	62	1730	1505	1,2					
					22529	F25T12/CW/33	30	7500	4200	62	1850	1610	1,2					
					22531	F25T12/D/33	30	7500	6500	76	1600	1392	☐ 1,2					



T8 Med Bipin

T12 Med Bipin

T14 1/2 RDC

## PREHEAT LAMPS

### Standard T8 and T12 Preheat Lamps (Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
30	T8	36	35.78	Med Bipin	23140	F30T8/DWWW/RP	6	7500	3000	70	2360	2124	☑ 1,2
					23701	F30T8/WWW	24	7500	3000	52	2150	1871	1,2
					23182	F30T8/N	24	7500	3600	86	1500	1305	☑ 1,2
					23127	F30T8/CWX	24	7500	4100	87	1550	1349	☑ 1,2
					23121	F30T8/CW	6	7500	4200	62	2180	1897	1,2
					23116	F30T8/CW	24	7500	4200	62	2180	1897	1,2
					23100	F30T8/D	24	7500	6500	76	1850	1653	☑ 1,2
40	T12	48	47.2	Med Bipin	24409	L40W/30-1	25		3000	50		1,2,43,44,47	
65	T8			Med Bipin	24736	L 65W/10 S	25		6000	75		☑ 1,2,8	
70	T8	70	70	Med Bipin	20804	L70W / 21 - 840	25	15000	4000	80	6550	6026	☑ 1,2,8

## SPECIALTY FLUORESCENT LAMPS

### SAFELINE® Shatter Resistant Coated Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
32	T8	48	47.78	Med Bipin	21678	F032T735/SL	30	20000	3500	75	2745	2470	☑ ☑ 1,2,20,21,25,26
34	T12	48	47.78	Med Bipin	24396	F34CW/SS/SL <i>formerly F40CW/SS/SL</i>	30	20000	4200	62	2600	2235	☑ 1,25,26,43,44,45

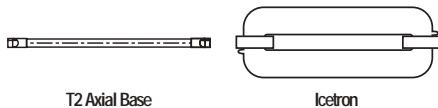
### Weather-Shielded Jacketed Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
70	T14.5	60	57.91	Recessed DC	21124	FJ60T12/CW/HO	8	12000	4200	62	5300	4293	1,2,8,51,61
110	T12	96	93.1	Recessed DC	21356	FJ96T12/CW/HO	8	12000	4200	62	8500	6885	1,2,8,51,61
128	T12	48	45.91	Recessed DC	21330	FJ48T12/CW/HO/LT	12	10000	4200	62	6750	4725	1,2,8,54,56,61
165	T12	72	69.91	Recessed DC	21335	FJ72T12/CW/HO/LT	8	10000	4200	62	10700	7490	1,2,8,54,56,61
215	T12	96	93.1	Recessed DC	21340	FJ96T12/CW/HO/LT	8	10000	4200	62	15300	10710	1,2,8,54,56,61

### GRO-LUX® Lamps for Plant Growth & Aquariums

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
15	T8	18	17.78	Med Bipin	21657	F15T8/GRO/AQ/RP	6	7500		66	325		☑ 1,2,8,62
20	T12	24	23.78	Med Bipin	22029	F20T12/GRO/AQ/RP	6	9000			480		☑ 1,2,8,62
					22013	F20T12/GRO/AQ/WS/RP	6	9000	3400	89	750	☑ 1,2,8,62	
30	T8	36	35.78	Med Bipin	23160	F30T8/GRO/AQ/RP	6	7500		66	800		☑ 1,2,8,62
40	T12	48	47.78	Med Bipin	24660	F40/GRO/AQ/RP	6	20000			1200		☑ 1,2,8,43,44,46,47
					24671	F40/GRO/AQ/WS/RP	6	20000	3400	89	1700	☑ 1,2,8,43,44,46,47	





T2 Axial Base

Icetron

## SPECIALTY FLUORESCENT LAMPS

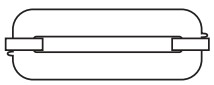
### Miniature T2 Lamps

Nominal Wattage	Bulb	Nominal Length		Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	MOL (in)								Initial	Mean	
6	T2	8.6	8.6	Axial	26204	FM6/830	20	10000	3000	80	330	297	1,2,8,9,11,63,64
					26233	FM6/835	20	10000	3500	80	330	297	1,2,8,9,11,63,64
					26213	FM6/841	20	10000	4100	80	330	297	1,2,8,9,11,63,64
8	T2	12.6	12.6	Axial	26237	FM8/830	20	10000	3000	80	540	486	1,2,8,9,11,63,64
					26234	FM8/835	20	10000	3500	80	540	486	1,2,8,9,11,63,64
					26232	FM8/841	20	10000	4100	80	540	486	1,2,8,9,11,63,64
11	T2	16.6	16.6	Axial	26239	FM11/830	20	10000	3000	80	750	675	1,2,8,9,11,63,64
					26235	FM11/835	20	10000	3000	80	750	675	1,2,8,9,11,63,64
					26231	FM11/841	20	10000	4100	80	750	675	1,2,8,9,11,63,64
13	T2	20.6	20.6	Axial	26253	FM13/830	20	10000	3000	80	930	837	1,2,8,9,11,63,64
					26291	FM13/835	20	8000	3500	80	960	837	1,2,8,9,11,63,64
					26230	FM13/841	20	10000	4100	80	930	837	1,2,8,9,11,63,64

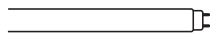
### ICETRON® Inductively Coupled, Electrodeless Lamps

The ICETRON® System is a unique adaptation of the inductively coupled electrodeless technology delivering high luminous efficacy, extremely long system life of 100,000 hours in a shape uniquely suited for a variety of lighting applications. The ICETRON lamps and ballasts are designed as dedicated systems and are not interchangeable with other lamps and ballasts. Please consult OSRAM SYLVANIA for fixture design and application assistance. An ICETRON Design Guide is available on request.

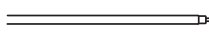
Nominal Wattage	Bulb	Nominal Length		Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
		(in)	MOL (in)								Initial	Mean	
70	T17	12.32	Mounting Bkts	26081 <sup>⚡</sup>	ICE70/835	1	100000	3500	80	6200	4588	1,2,11,65,66,67,68,69	
				26087	ICE70/835/2P/ECO	1	100000	3500	80	6200	4588	1,2,6,11,66,67,68,69	
				26082 <sup>⚡</sup>	ICE70/841	1	100000	4100	80	6200	4588	1,2,11,65,66,67,68,69	
				26088	ICE70/841/2P/ECO	1	100000	4100	80	6200	4588	1,2,6,11,66,67,68,69	
				26089	ICE70/850/2P/ECO	1	100000	5000	80	5950	4588	1,2,6,11,66,67,68,69	
100	T17	12.32	Mounting Bkts	26100 <sup>⚡</sup>	ICE100/835	1	100000	3500	80	8000	5920	1,2,11,65,66,67,68,69	
				26102	ICE100/835/2P/ECO	1	100000	3500	80	8000	5920	1,2,6,11,66,67,68,69	
				26101 <sup>⚡</sup>	ICE100/841	1	100000	4100	80	8000	5920	1,2,11,65,66,67,68,69	
				26103	ICE100/841/2P/ECO	1	100000	4100	80	8000	5920	1,2,6,11,66,67,68,69	



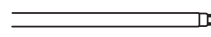
Iceltron



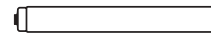
T12 Med Bipin



T5 Mini Bipin



T8 Med Bipin



T12 RDC

## SPECIALTY FLUORESCENT LAMPS

### ICETRON® Inductively Coupled, Electrodeless Lamps

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
100	T17		12.32	Mounting Bkts	26105	ICE100/850/2P/ECO	1	100000	5000	80	7600	5920	1,2,6, 11,66,67,68,69
150	T17		16.28	Mounting Bkts	26150	ICE150/835	1	100000	3500	80	12000	8880	1,2,11,65,66, 67,68,69
					26152	ICE150/835/2P/ECO	1	100000	3500	80	12000	8880	1,2,6, 11,66,67,68,69
					26151	ICE150/841	1	100000	4100	80	12000	8880	1,2,11,65,66, 67,68,69
					26153	ICE150/841/2P/ECO	1	100000	4100	80	12000	8880	1,2,6, 11,66,67,68,69
					26155	ICE150/850/2P/ECO	1	100000	5000	80	11650	8880	1,2,6, 11,66,67,68,69

### Diazo (SDB)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
65	T12	48	47.78	Med Bipin	24465	F40T12/SDB/65W	30	1000					86

### Blacklight, Preheat Lamps (Starter Required)

These lamps are not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
6	T5	9	8.91	Mini Bipin	20633	F6T5/350BL	24	7500					1,2,71,72,73
8	T5	12	11.91	Mini Bipin	20833	F8T5/350BL	24	7500					1,2,71,72,74
15	T8	18	17.78	Med Bipin	21623	F15T8/350BL	24	7500					1,2,71,72,75
20	T12	24	23.78	Med Bipin	22113	F20T12/350BL	24	9000					1,2,71,72,76
22	T12	15	14.78	Med Bipin	21445	F15T12/350BL/500/PH	30						1,2,71,72,77
25	T8	18	17.78	Med Bipin	21703	F25T8/350BL/18in	24						1,2,71,72,78
30	T8	36	35.78	Med Bipin	23113	F30T8/350BL	24	7500					1,2,71,72,79
32	T12	18	17.78	Med Bipin	21525	F18T12/350BL/700/PH	30						1,2,71,72,80

### Blacklight, Rapid Start Lamps (No Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
40	T12	48	47.78	Med Bipin	24922	F40/350BL	30	20000					1,2,43,44,46,47, 72,81
115	T12	48	45.91	Recessed DC	25251	FR48T12/350BL/VHO/180	30	10000					1,2,72,82,83

### Blacklight Blue, Preheat Lamps (Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
4	T5	6	5.91	Mini Bipin	20425	F4T5/BLB	24	6000					1,2,71,72
8	T5	12	11.91	Mini Bipin	20825	F8T5/BLB	24	7500					1,2,71,72
15	T8	18	17.78	Med Bipin	21625	F15T8/BLB	6	7500					1,2,71,72,84
20	T12	24	23.78	Med Bipin	22116	F20T12/BLB/RP	6	9000					1,2,71,72,84



T12 Med Bipin

T5 Mini Bipin

T8 Med Bipin

## SPECIALTY FLUORESCENT LAMPS

### Blacklight Blue, Rapid Start Lamps (No Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
40	T12	48	47.78	Med Bipin	24026	F40/BLB/RP	6	20000					1,2,43,44,46,47,72,85

### Germicidal, Preheat Lamps (Starter Required)

Nominal Wattage	Bulb	Nominal Length (in)	MOL (in)	Base	Product Number	Ordering Abbreviation	Pkg Qty	Avg Rated Life (hrs)	CCT (K)	CRI	Approx Lumens @25°C/77°F		Symbols & Footnotes
											Initial	Mean	
8	T5	12	11.91	Mini Bipin	20811	G8T5	24	6000					1,2,32,71,87
15	T8	18	17.78	Med Bipin	21612	G15T8	24	7500					1,2,32,71,87
30	T8	36	35.78	Med Bipin	23112	G30T8	24	7500					1,2,32,71,87

## FLUORESCENT PREHEAT LAMP STARTERS

### GLOSTAT Starters

Product Number	Ordering Abbreviation	Pkg Qty	Description	Symbols & Footnotes
42812	FS-2	100	Fluorescent starter for use with F14, F15 and F20 preheat fluorescent lamps. UL, CSA	Ⓢ Ⓤ
42901	FS-2/BL/2PK	12	Fluorescent starter for use with F14, F15 and F20 preheat fluorescent lamps, bulk pack with 2 starters. UL, CSA	Ⓢ Ⓤ
44812	FS-4	100	Fluorescent starter for use with F13, F30 and F40 preheat lamps. UL, CSA	Ⓢ Ⓤ
44820	FS-4	1000	Fluorescent starter for use with F13, F30 and F40 preheat lamps. UL, CSA	Ⓢ Ⓤ
44900	FS-4/BL	100	Fluorescent starter for use with F13, F30 and F40 preheat lamps, blister pack. UL, CSA	Ⓢ Ⓤ
44902	FS-4/BL/2PK	12	Fluorescent starter for use with F13, F30 and F40 preheat lamps, blister pack with 2 starters. UL, CSA	Ⓢ Ⓤ
45812	FS-5	100	Fluorescent starter for use with F4, F6 and F8 preheat fluorescent lamps. UL, CSA	Ⓢ Ⓤ
45813	FS-5/BL/2PK	12	Fluorescent starter for use with F4, F6 and F8 preheat fluorescent lamps, blister pack with 2 starters. UL, CSA	Ⓢ Ⓤ
43813	FS-12/BL/2PK	12	Fluorescent starter for use with FC12 Circline lamps when operated by preheat ballasts and F22T8 preheat lamps, blister pack with 2 starters. UL, CSA	Ⓢ Ⓤ
42512	FS-25	100	Fluorescent starter for use with FC6 (20W) & FC8 (22W) Circline lamps when operated by preheat ballasts; F25 and F18T8 preheat lamps. UL, CSA	Ⓢ Ⓤ
42513	FS-25/BL/2PK	12	Fluorescent starter for use with FC6 (20W) & FC8 (22W) Circline lamps when operated by preheat ballasts; F25 and F18T8 preheat lamps, blister pack with 2 starters. UL, CSA	Ⓢ Ⓤ
44901	ST 111 STARTER	800	Fluorescent starter for use with 4, 6, 8, 10, 13, 15, 16, 18, 20, 22, 30, 32, 36, 38, 40, 58, 65, 80W preheat lamps; 18, 24 & 36W DULUX L lamps when operated by preheat ballasts. ENEC & VDE approved	Ⓤ
44903	ST 151 STARTER	800	Fluorescent starter for series operation for use with 4, 6, 8, 15, 16, 18, 20, 22W preheat lamp; 18 & 24W DULUX L lamps when operated by preheat ballasts; ENEC & VDE approved	Ⓤ
44910	ST 191 STARTER	800	Fluorescent starter for use with 100, 115 & 140W preheat lamps; ENEC & VDE approved	Ⓤ











### COP STARTERS WITH CUTOUT AND MANUAL RESET

Product Number	Ordering Abbreviation	Pkg Qty	Description	Symbols & Footnotes
42302	FS-20 (COP-20)	100	Fluorescent starter with cutout and manual reset for use with F15 & F20 preheat lamps. UL, CSA	Ⓢ Ⓤ
44102	FS-40/400 (COP-40/400)	100	Fluorescent starter with cutout and manual reset for use with F40 preheat lamps. UL, CSA	Ⓢ Ⓤ

### HID STARTER

Product Number	Ordering Abbreviation	Pkg Qty	Description	Symbols & Footnotes
44918	SE600	800	Replacement starter element (built-in spark gap type) for igniters used with Powerstar HQI metal halide and Vialox HPS lamps. Replace each time lamp is replaced.	

## SYMBOLS & FOOTNOTES FOR FLUORESCENT LAMPS

Symbol	Description
	New item introduced within the past year.
	Item will be discontinued when inventory is depleted.
	QUICK60+® warranty
	Rating given for 200mA operation.
	This fluorescent lamp generates radiant energy which is most beneficial for plant propagation and enhances vegetative and reproductive growth of many plants for home and commercial use.
	This lamp or ballast meets minimum Federal efficiency standards.
	This ECOLOGIC® lamp was designed to pass the Federal TCLP criteria for classification as non-hazardous waste in most states. Disposal regulations may vary; check local and state regulations.
	This lamp is a High Color Rendering Lamp
	Product is Canadian Standards Association approved for the Canadian market
	Product is Underwriters Laboratories listed

Footnote	Description
1	Approximate initial lumens after 100 hours operation.
2	The life ratings of fluorescent lamps are based on 3 hr. burning cycles under specified conditions and with ballast meeting ANSI specifications. If burning cycle is increased, there will be a corresponding increase in the average hours life.
3	Rule of Thumb for Compact Fluorescent Lamps: Divide wattage of incandescent lamp by 4 to determine approximate wattage of compact fluorescent lamp that will provide similar light output.
4	Minimum starting temperature: CF5: -22 degrees F; CF7: -4 degrees F; CF9: 14 degrees F; CF13DS: 14 degrees F; CF13DD: -4 degrees F; CF18DD: 5 degrees F; CF18DT: -4 degrees F; CF26: 14 degrees F.
5	2 pin CF lamps should never be installed in 4 pin sockets regardless if lamp will fit.
6	SYLVANIA ECOLOGIC® fluorescent lamps are designed to pass the Federal Toxic Characteristic Leaching Procedure (TCLP) criteria for classification as non-hazardous waste in most states. TCLP test results are available upon request. Lamp disposal regulations may vary, check your local & state regulations. For more information, please visit <a href="http://www.lamprecycle.org">www.lamprecycle.org</a>
7	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 1 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.3 meters (12 inches) should be limited; for example exposure at 0.2m (8 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
8	Minimum starting temperature is a function of the ballast; consult the ballast manufacturer.
9	There is a NEMA supported, industry issue where T2, T4, and T5 fluorescent and compact fluorescent lamps operated on high frequency ballasts may experience an abnormal end-of-life phenomenon. This end-of-life phenomenon can result in one or both of the following: 1. Bulb wall cracking near the lamp base. 2. The lamp can overheat in the base area and possibly melt the base and socket. NEMA recommends that high frequency compact fluorescent ballasts have an end-of-life shutdown circuit which will safely and reliably shut down the system in the rare event of an abnormal end-of-life failure mode described above. The final requirements of this system are yet to be defined by ANSI. For additional information refer to NEMA papers on their WEBSITE at <a href="http://www.NEMA.org">www.NEMA.org</a> .
10	This 4-pin DULUX® lamp has an internal end-of-life mechanism (EOL) that shuts down the lamp preventing abnormal end-of life failure modes. This lamp was designed for use with high frequency ballasts that do not have their own end-of-life (lamp) sensing circuits, but it is also compatible with high frequency ballasts that have their own end-of-life (lamp) sensing circuits.
11	Lumen output and life rated on high frequency operation.
12	Amalgam compact fluorescent lamps provide at least 90% light output from 40-140 degrees F. Non-amalgam compact fluorescent lamps provide at least 90% light output from 60-100 degrees F in the base up position, the temperature range is narrower for horizontal or base down.
13	These lamps may also be operated on rapid start circuits. On rapid start circuits the 24 watt lamp operates at 27 watts and the 36 watt lamp operated at 39 watts. Rated lamp life is unchanged.
14	Lumen output rated on high frequency operation. 60 HZ operation would result in lower lumen output.
15	DULUX® F lamps can typically be operated on DULUX L and PENTRON® HO ballasts of the same/similar wattage. Check with the ballast manufacturer to verify lamp/ballast compatibility.
16	Minimum starting temperature for DULUX EL lamps is 0° F, unless otherwise specified in product literature.

## SYMBOLS & FOOTNOTES FOR FLUORESCENT LAMPS

Footnote	Description
17	DULUX® ELs meet CSA, FCC and UL requirements.
18	Caution: DULUX EL units cannot be used on dimming circuits, emergency exit fixtures or lights, electronic timers, photocells or lighted switches. In outdoor applications, use only in enclosed fixtures to avoid exposure to weather. Use only on 120V, 60 Hz circuits. Never disassemble or modify lamp. Install or remove unit from fixture by grasping plastic base. Best performance achieved when operated at 77degrees F (25 degrees C).
19	Minimum starting temperature for EL Globes & Reflectors is -22 degrees F. Minimum starting temperature for EL Triples, Twists and Mini Twists is 0 degrees F.
20	The life rating of OCTRON® and OCTRON Curvalume lamps operated on magnetic rapid start ballasts is 20,000 hours. The life rating of OCTRON and OCTRON Curvalume lamps operated on instant start electronic ballasts is 15,000 hours.
21	OCTRON lamps should be operated only with magnetic rapid start ballasts designed to operate 265 mA, T8 lamps or high frequency (electronic) ballasts that are either instant start, or rapid start, or programmed rapid start specifically designed to operate T8 lamps. OCTRON lamps may be operated on instant start ballasts with ballast factors ranging from a minimum of 0.71 to a maximum of 1.20 at the nominal ballast input voltage. When OCTRON lamps are operated in the instant start mode, the two wires or two contacts of each socket should be connected to each other. They should then be connected to the appropriate ballast lead wire using National Electric Code techniques.
22	Life rating of OCTRON XP™ lamps operated on instant start electronic ballasts is 18,000 hours based on the industry standard life test cycle of 3 hours per start.
23	The lamp lumen maintenance factor used to determine the mean lumen value was 95%. This is the lamp lumen maintenance factor at 8,000 hours, 40% of 20,000 hours. It was used to allow comparison to standard OCTRON® lamps with an average rated life of 20,000 hours. The lamp lumen maintenance factor at 40% of the 24,000 hour average rated life of this lamp, 9600 hours, would be 94%.
24	Gold OCTRON lamp has plastic tube guard which filters wavelengths less than 525nm and provides shatter protection.
25	SAFELINE® lamps satisfy the criteria of having a non-shattering covering for prevention of glass and other lamp components in your product by containment within the safety coating material. The covering must be intact or the lamp must be replaced to be in compliance. An onsite inspector will require correction if the lamps are installed improperly or not maintained properly.
26	SAFELINE lamps are intended for indoor use only. Lamps must be used in ambient temperatures below 135 degrees F. The coating is designed to withstand constant operating temperatures up to 239 degrees F and has a melting point in excess of 500 degrees F. Lamps must be used with sockets that provide adequate lamp pin to socket contact. Lamps must not be used with defective ballasts sockets, or fixtures with improper wiring.
27	The lumen maintenance factor used to determine the mean lumens value was 90%, measured at 40% of the average rated life, 15,000 hours. The lumen maintenance factor at 4,000-4,800 hours (for comparison to F96T12 HO and F96T12 Slimline instant start lamps) is 91%.
28	The lamp lumen maintenance factor used to determine the mean lumen value was 95%. This is the lamp lumen maintenance factor at 8000 hours, 40% of 20,000 hours. It was used for comparison to standard OCTRON® lamps with an average rated life of 20,000 hours. The lamp lumen maintenance factor at 40% of 24,000 hours, 9600 hours, would be 94%; the lamp lumen maintenance factor at 40% of 30,000 hours, 12,000 hours, would be 93%
29	This lamp may also be operated by the OSRAM SYLVANIA QUICKTRONIC® PSN ballast (.88 BF), or the QUICKTRONIC PSX ballast (.71 BF).
30	Recommended to be used on any F32 T8 Instant Start circuit. It is not recommended to be used:(1) with Rapid Start circuits unless the open circuit voltage is greater than 550V, (2) at lamp ambient temperatures below 60 degrees F or in drafty locations, (3) on low power factor ballast, (4) dimming ballast or (5) inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with the OCTRON® SUPERSAVER® 28 or 30 watt, 4 foot or 30W U-bent T8 lamp. Any of the above situations could result in lamp starting and stabilization problems.
31	The 30,000 hour average rated life of the F032/800XPS/ECO OCTRON® lamp is based on operation at 3 hours per start on a dedicated QUICKTRONIC® PSX ballast. If operated on other ballasts for T8 OCTRON lamps, lamp life will be 20,000 hours for rapid start operation, 24,000 hours for programmed rapid start operation and 15,000 hours for instant start operation at 3 hours per start.
32	Germicidal lamps can be operated on corresponding wattage preheat ballasts.
33	Mean lumens at 8,000 hours (40% of 20,000 hours for comparison to standard OCTRON and F40 rapid start lamps). The lumen maintenance factor at 40% of average rated life (9,600 hours) is 94%.
34	Recommended to be used on any F96 T8 Instant Start circuit. It is not recommended to be used: (1) at lamp ambient temperatures below 60 degrees F or in drafty locations, (2) on low power factor ballast, or (3) inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with the OCTRON F096 SUPERSAVER 55 watt T8 lamp. Any of the above situations could result in lamp starting and stabilization problems.

## SYMBOLS & FOOTNOTES FOR FLUORESCENT LAMPS

Footnote	Description
35	The lumen maintenance factor used to determine the mean lumen value was 95%. This is the lamp lumen maintenance factor at 6000 hours, 40% of 15,000 hours. It was used to allow comparison to standard OCTRON® lamps with an average rated life of 15000 hours. The lamp lumen maintenance factor at 40% of the 18,000 hour average rated life of this lamp, 7200 hours, would be 94%.
36	The lumen maintenance factor used to determine the mean lumens value was 92%, measured at 40% of the average rated life, 15,000 hours. The lumen maintenance factor at 4,000-4,800 hours (for comparison to F96T12 HO and F96T12 Slimline instant start lamps) is 93%.
37	Approximate length of OCTRON CURVALUME lamps is measured from base face to outside of glass bend.
38	For optimum performance OCTRON CURVALUME 1 5/8 inch leg spacing lamps in the 3000K, 3500K and 4100K color temperatures are now available only in the 82CRI version (800 series). These lamps are made to the same color standards and may be used in combination with other SYLVANIA OCTRON lamps to meet the needs of lighting installations where T8 lamps are used.
39	The 30,000 hour average rated of the OCTRON® XPS CURVALUME® lamp is based on operation at 3 hours per start by a dedicated QUICKTRONIC® PSX ballast. If operated by other ballasts for T8 OCTRON lamps, life will be the same as that of the XP version of the lamp: typically 24,000 hours for rapid or programmed rapid start operation and 18,000 hours for instant start operation at 3 hours per start.
40	The lamp lumen maintenance factor used to determine the mean lumen value was 95%. This is the lamp lumen maintenance factor at 8,000 hours, 40% of 20,000 hours. It was used to allow comparison to standard OCTRON lamps with an average rated life of 20,000 hours. The lamp lumen maintenance factor at 40% of 24,000 hours, 9600 hours, would be 94%; the lamp lumen maintenance factor at 40% of 30,000 hours, 12000 hours, would be 93%.
42	Recommended only for use on 2-lamp, 30 watt rapid-start high power factor lead, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60 degrees F or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts, or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 25 watt lamps.
43	Average rated life is measured at 3 hours per start on 2-lamp, rapid start magnetic ballasts per IES recommended practice. Lamp life on single-lamp rapid start ballasts may be reduced.
44	Average life rating at 12 hours operation per start is 28,800 hours.
45	Recommended for use on one or two lamp 40 watt rapid start, high power factor, lead, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60 degrees F or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts, or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 34 watt lamps.
46	The "RS" designation has been eliminated to simplify the ordering abbreviation.
47	40W Rapid Start Lamps may be used in starter operated fixtures designed for 40W preheat lamps. Life rating for preheat service is approximately 15,000 hours average.
48	Rating for OSRAM SYLVANIA Circline lamps are based on operation in Rapid Start circuits. They will also operate on preheat circuits.
49	Caution: DULUX® EL Circline units cannot be used on dimming circuits, emergency exit fixtures or lights, electronic timers, photocells or lighted switches. In outdoor applications, use only in enclosed fixtures to avoid exposure to weather. Use only on 120V, 60 Hz circuits.
50	Recommended for use on one or two lamp high power factor, lead, 8-foot lamp, high output, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60 degrees F or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts, or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 95 watt lamps.
51	Average life rating at 12 hours operation per start is 18,000 hours.
52	May be operated at 100 watts (1000MA) same as F84T12/HO.
53	Labeled for cold temperature (below 60 degrees F) operation only per EPACK.
54	Average life rating at 12 hours operation per start is 15,000 hours.
55	Low temperature performance rated at 35 degrees F ambient.
56	Low temperature performance rated at 35 degrees F ambient.
57	Cool White lamp with 30 degree aperture (Power Beam).
58	Recommended for use on 2-lamp high power factor, lead, 8-foot lamp, very high output, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60 degrees F or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts, or (5) on inverter operated emergency lighting systems unless equipment is specifically listed for use with 195 watt lamps.
59	Recommended for use on one or two lamp high power factor, lead, instant-start, indoor ballasts that meet ANSI standards. Not intended for use: (1) at lamp ambient temperatures below 60 degrees F or in drafty locations, (2) on low power factor ballasts, (3) reduced current/reduced light output ballasts, (4) dimming ballasts, or (5) on inverter operated emergency lighting systems unless any of the above equipment is specifically listed for use with 32 watt or 60 watt lamps.

## SYMBOLS & FOOTNOTES FOR FLUORESCENT LAMPS

Footnote	Description
60	For operation on instant start circuits. Use only in fixtures equipped with Instant Start Ballasts.
61	A fluorescent jacketed lamp consists of a T12 (1 1/2" diameter) lamp enclosed inside a T14.5 (1 13/16" diameter) glass jacket. A jacketed fluorescent lamp operates efficiently over a wide range of climatic conditions, including extremes of cold and strong wind in which an unjacketed (bare) lamp would be inefficient or inoperable. The jacket size provides the clearance necessary to minimize damaging lamp-jacket contact; narrow bands of rubber placed between the lamp and the jacket further prevent contact. A weather-tight seal is formed by neoprene rubber end caps.
62	Preheat lamp, starter required.
63	Due to their small diameter, T2 miniature fluorescent lamps operate at higher surface temperatures than other fluorescent lamps. To avoid possible burns, do not touch the lamp during operation and allow sufficient cooling time before removing the lamp from the fixture. The typical bulb wall temperature during operation is 120 degrees at the ends. The maximum allowable bulb wall temperature is 150 degrees C. To avoid electrical shock, turn electrical power off before removing or installing the lamp.
64	Use only with electronic ballasts which have been specifically designed to operate T2 miniature fluorescent lamps and to reliably and safely control all lamp operating modes including end-of-lamp-life sensing circuitry. If a non-conforming ballast is used, very high temperatures (350 degrees C typical) may be generated at the ends of the lamp especially during end-of-lamp-life operation, causing the lamp to crack and resulting in potential fire, electrical shock, or burn hazards.
65	Current ballast design incorporates a modular 2-Pin connector plugin from the lamp. An adapter, NAED code 26240, is available to connect 3-Pin lamp types to current (2-Pin) design ballasts.
66	Color and CRI at amalgam tip temperature of 149 degrees F (65 degrees C) for ICETRON 70 and ICETRON 100 and at 158 degrees F (70 degrees C) amalgam tip temperature for ICETRON 150.
67	ICETRON diameter is the outside diameter of the ferrite coil. ICETRON MOL is the length from the outside edge of the mounting bracket on one end to the outside edge of the mounting bracket on the opposite end.
68	WARNING: ICETRON® Inductively Coupled Electrodeless Fluorescent lamp. Read these warnings and instructions before installing and using this lamp. 1. This lamp operates at a higher temperature (130 C) than standard fluorescent lamps. To avoid the possibility of minor skin burns, do not touch lamp or metal mounting brackets during operation and allow sufficient cooling time prior to servicing, handling, or replacing lamp. 2. This lamp generates electric and magnetic fields during operation. The electric and magnetic fields generated by this lamp during operation in typical lighting applications do not pose exposure risks relative to the limits documented in ANSI C95.1. 3. To prevent electric shock, shut off the main power to the fixture and allow at least two minutes for ballast voltage to discharge before attempting to service or replace lamp. 4. To obtain optimum safety and system performance, use only with OSRAM SYLVANIA ballast. 5. To avoid potential electric shock hazard, do not use lamp if wires or insulation are cut or pulled out of connector. 6. To avoid potential electric shock hazard, do not use lamp if wires or insulation are cut or pulled out of connector.
69	WARNING: ICETRON® Inductively Coupled Electrodeless Fluorescent lamp. Read these warnings and instructions before installing and using this lamp. Instructions for Installation and Use. 1. To avoid premature lamp or ballast failure and ensure proper lamp, ballast, and system performance, make sure lamp, ballast, and fixture are properly installed. Electrical interconnects, electrical grounds, thermal management, and heat sinking specifications and requirements must be fully adhered to in all applications. (See OSRAM SYLVANIA ICETRON DESIGN GUIDE.) 2. Do not alter the electrical connector on lamp and/or ballast. To do so may adversely affect lamp operation, ballast life, and/or emission of EMI (electromagnetic interference). 3. This product may cause interference with radios, cordless telephones, and remote control devices. If interference occurs, relocate the radios, cordless telephones, and/or remote control devices away from this product.
70	The /2P version of the ICETRON lamp is supplied with a 24 inch lead wire terminated by a 2-Pin connector rather than the old 12 inch lead, 3-Pin connector design. The /2P versions are powered by QT1X100 ICE/UNV-T or QT1X150 ICE/UNV-T ballasts.
71	Starter required.
72	These lamps are not intended and should not be used for diagnostic, therapeutic, or cosmetic purposes.
73	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 1 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.35 meters (14 inches) should be limited; for example exposure at 0.25m (10 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
74	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.45 meters (18 inches) should be limited; for example exposure at 0.3m (12 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
75	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.55 meters (22 inches) should be limited; for example exposure at 0.4m (16 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.



## SYMBOLS & FOOTNOTES FOR FLUORESCENT LAMPS

Footnote	Description
76	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.65 meters (26 inches) should be limited; for example exposure at 0.45m (18 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
77	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.6 meters (24 inches) should be limited; for example exposure at 0.45m (18 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
78	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.7 meters (28 inches) should be limited; for example exposure at 0.54m (20 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
79	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.75 meters (30 inches) should be limited; for example exposure at 0.55m (22 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
80	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.8 meters (31 inches) should be limited; for example exposure at 0.55m (22 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
81	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 1.0 meters (39 inches) should be limited; for example exposure at 0.64m (24 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
82	Blacklight lamp with 180 degree reflector.
83	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 2 per ANSI/IESNA RP-27.3-96. Exposure at less than 2.0 meters (79 inches) should be limited; for example exposure at 1.4m (55 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
84	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 1 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.25 meters (10 inches) should be limited; for example exposure at 0.14m (6 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
85	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 1 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.3 meters (12 inches) should be limited; for example exposure at 0.14m (6 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
86	CAUTION: This lamp emits ultraviolet (UV) power during operation and is in Risk Group 1 per ANSI/IESNA RP-27.3-96. Exposure at less than 0.3 meters (12 inches) should be limited; for example exposure at 0.15m (6 inches) should not exceed 4 hours in an 8 hour interval (see ANSI/IESNA RP-27.1-96). Certain medications and chemicals can increase an individual's sensitivity. Consult your physician for specific information. Protective eyewear should be worn in occupational situations involving long term exposure in close proximity to the lamp. This lamp is not intended and should not be used for diagnostic, therapeutic or cosmetic purposes.
87	WARNING: To prevent possible serious injury, eyes and skin should not be exposed to direct or reflected ultraviolet power emitted by this lamp. This lamp is in Risk Group 3 per ANSI/IESNA RP-27.3-96. Adequate protection should be provided by clothing, gloves, opaque materials, and ordinary window glass. Although this lamp will operate in standard fluorescent fixtures, it should not be used for general lighting applications.