Fluorescent Lamps

Consumer T8 Lamps

Watts	Product Number	Symbols, Footnotes	Ordering Code	Pkg. Qty.	Description	Nom. Length (In.)	Rated Avg. Life (Hrs.) (202)	Approx. Initial Lumens (203,204)	Design Lumens (208)	CRI
T8 Fluorescent Lamps										
Medium Bipin & Single Pin Linear Fluorescent Lamps										
15	39212-6	●	F15T8/Soft White	6/1	3000K Individually Sleeved	18	7500	1000	900	85
	39207-6	●	F15T8/Cool White Plus	6/1	4100K Individually Sleeved	18	7500	870	765	59
	39108-6	●	F15T8/Cool White Plus	6/1	4100K Individually Sleeved	24	7500	1175	1035	59
	39229-0		F15T8/NATURALSUNSHINE 6/1	6/1	5000K Individually Sleeved	18	7,500	590	475	92
	39226-6		F15T8/Plant	6/1	Individually Sleeved	18	7500	410	–	–
	15760-2		F15T8/Blacklight	6/1	Individually Sleeved	18	7500	–	–	–
17	28126-1	●	F17T8/Soft White UPC	30	3000K 30 Pk Case	24	20,000	1400	1300	85
30	39216-7	●	F30T8/Soft White	6/1	3000K Individually Sleeved	36	7500	2500	2250	85
	28145-1	●	F30T8/CW ALTO UPC	30	4100K Individually Sleeved	36	7500	2200	1760	59
32	42916-7	● †	F32T8/Plant-Aquarium SLV 6PK	6/1	Individually Sleeved	48	24,000	1400	–	–
	15238-9	● ■	F32T8/ADV841/XEW/ALTO 25W 1/10	10	4100K 10 Pk Case	48	30,000	2500	2425	85
	22682-9	●	F32T8/SOFT WHITE /ALTO 36/2	36/2	3000K 2 Pk	48	24,000	2950	2800	84
	40943-3	●	F32T8/SOFT WHITE ALTO 10/1	10	3000K 10 Pk Case	48	24,000	2950	2800	85
	43449-8	● †	F32T8/TL835/ALTO 15/2	15/2	3500K 2 Pk	48	24,000	2875	2735	84
	43447-2	● †	F32T8/TL835 ALTO 1/10	10	3500K 10 Pk Case	48	24,000	2875	2735	84
	43448-0	● †	F32T8/TL835 ALTO 1/30	30	3500K 30 Pk Case	48	24,000	2875	2735	84
	43454-8	● †	F32T8/TL841 36/2	36/2	4100K 2 Pk	48	24,000	2875	2735	82
	43450-6	● †	F32T8/TL841 ALTO 1/10	10	4100K 10 Pk Case	48	24,000	2875	2735	82
	43453-0	● †	F32T8/TL841/ALTO 1/30	30	4100K 30 Pk Case	48	24,000	2875	2735	82
	43455-5		F32T8/TL841/ALTO TG UPC 6/1	6/1	Safety Coated 4100K Individual UPC	48	24,000	2875	2735	82
	40966-4	●	F32T8/TL850/ALTO 15/2	15/2	5000K 2 Pk	48	24,000	2850	2710	82
	20504-7	●	F32T8/TL850 ALTO 1/10	10	5000K 10 Pk Case	48	24,000	2850	2710	82
	28199-8	●	F32T8/TL850/ALTO 1/30	30	5000K 30 Pk Case	48	24,000	2850	2710	82
	45182-3	● †	F32T8/DAYLIGHT/ALTO 36/2	36/2	6500K 2 Pk	48	24,000	2850	2710	75
	45180-7	● †	F32T8/DAYLIGHT/ALTO 1/10	10	6500K 10 Pk Case	48	24,000	2850	2710	75
	45181-5	● †	F32T8/DAYLIGHT/ALTO 1/30	30	6500K 30 Pk Case	48	24,000	2850	2710	75

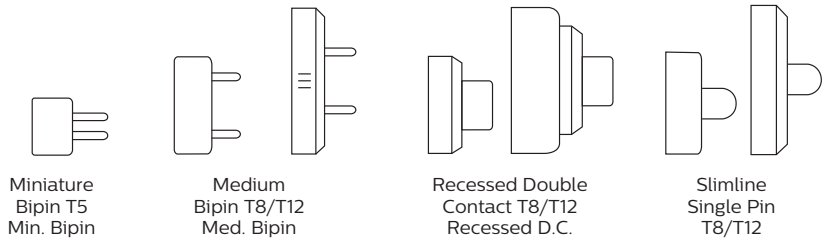
For the most current product information, go to the e-catalog on **www.philips.com**.
Fluorescent symbols and footnotes located on page 44.

T8 Medium Bipin T8 Single Pin

Fluorescent Lamps

Base Types and Bulb Shapes

Base Types (Not Actual Sizes)

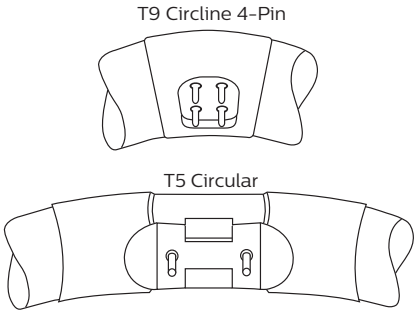


Miniature Bipin T5 Min. Bipin

Medium Bipin T8/T12 Med. Bipin

Recessed Double Contact T8/T12 Recessed D.C.

Slimline Single Pin T8/T12

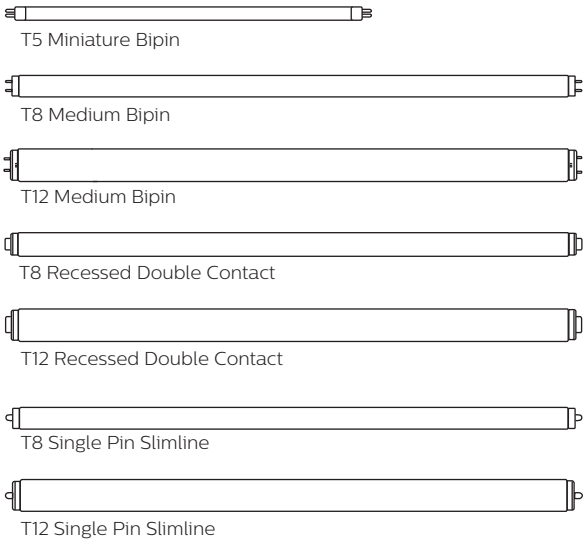


T9 Circline 4-Pin

T5 Circular

Bulb Shapes (Not Actual Sizes)

The size and shape of a bulb is designated by a letter or letters followed by a number. The letter indicates the shape of the bulb, while the number indicates the diameter of the bulb in eighths of an inch. For example, "T12" indicates a tubular shaped bulb having a diameter of $^{12}/_{8}$ or $1^{1}/_{2}$ inches. The following illustrations show some of the more popular bulb shapes and sizes.



T5 Miniature Bipin

T8 Medium Bipin

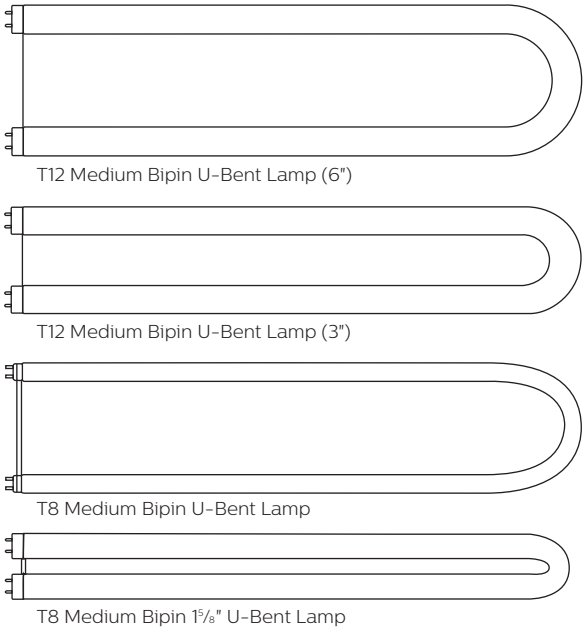
T12 Medium Bipin

T8 Recessed Double Contact

T12 Recessed Double Contact

T8 Single Pin Slimline

T12 Single Pin Slimline

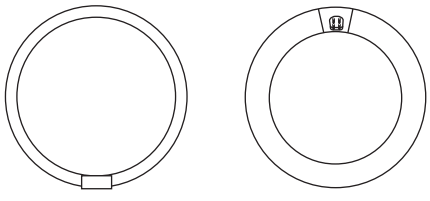


T12 Medium Bipin U-Bent Lamp (6")

T12 Medium Bipin U-Bent Lamp (3")

T8 Medium Bipin U-Bent Lamp

T8 Medium Bipin $1^{5}/_{8}$" U-Bent Lamp



T5 Circular

T9 Circline 4-Pin

Fluorescent Lamps

Symbols and Footnotes

For the most current product information, go to the e-catalog on **www.philips.com**

▢ Exclusive to Philips Lighting North America Corporation

● This lamp is better for the environment because of its reduced mercury content. All Philips ALTO lamps give you end-of-life options, which can simplify and reduce your lamp disposal costs, depending on your state and local regulations. ALTO II Lamps have only 1.7mg of mercury.

Ⓔ This Bulb Meets US Federal Minimum Efficiency Standard. Philips designs and manufactures fluorescent lamps to the following lighting industry standard: NEMA Standard LSD 26—Measurement Methods and Performance Tolerances for Verification Testing of General Purpose Incandescent and Fluorescent Lamps

† New since last printing

■ Energy Saving Product

(202) Average life under specified test conditions with lamps turned off and restarted no more frequently than once every 3 operating hours. Lamp life is appreciably longer if lamps are started less frequently. Rated Average Life is the length of operation (in hours) at which point 50% of a large sample of lamps will still be operational and 50% will not.

(203) Approximate initial lumens. The lamp lumen output is based upon lamp performance after 100 hours of operating life, when the output is measured during operation on a reference ballast under standard laboratory conditions.

(204) For expected lamp lumen output, commercial ballast manufacturers can advise the appropriate ballast factor for each of their ballasts when they are informed of the designated lamp. The ballast factor is a multiplier applied to the designated lamp lumen output.

(207) Approximate initial lumens are for 800 ma. operation. For 1000 ma. operation, lumens are approximately 10% higher and watts approximately 15% higher.

(208) Design lumens are the approximate lamp lumen output at 40% of the lamp's rated average life. This output is based upon measurements obtained during lamp operation on a reference ballast under standard laboratory conditions.

(212) Nominal length measured from face of base to maximum distant outside point of U. Measurement does not include base pins. Leg spacing center to center approximately 6", for /6 and 3⅜" for /3 lamps.

(214) Econ-o-watt lamps are only recommended for use on high power factor lead, indoor ballasts that meet ANSI standards. The lamps are not recommended for use in drafty areas, or locations where the ambient temperature is less than 60°F, except as noted. Also they should not be operated on low power factor ballasts, reduced light or reduced current ballasts, dimming ballasts or emergency system inverter ballasts.

(223) Meets the National Energy Policy Act of 1992 exemption for outdoor or cold temperature applications only.

(226) T5 nominal lamp lengths are shorter than standard sizes. See chart on page 27 for details.

(241) Average life under engineering data with lamps turned off and restarted once every 12 operating hours. Rated Average Life is the length of operation (in hours) at which point 50% of a large sample of lamps will still be operational and 50% will not.

Fluorescent Lamps

Light Source Color Chart

Light Source Color Chart

Fluorescent Color	Color Abbreviation	Atmosphere	Light Output (%) In 4' Lamp	CCT	CRI	CIE Color Coordinates X	Y
Cool White	CW	Cool	100	4100K	62	0.38	0.38
Deluxe Cool White	CWX	Cool	72	4100K	89	0.376	0.367
Daylight	D	Cool Daylight	85	6500K	79	0.313	0.337
Daylight Deluxe	DX	Cool Daylight	76	6500K	84	0.314	0.341
Lite White	LW	Cool	104	4200K	51	0.376	0.386
Natural	N	Neutral	69	3700K	90	0.384	0.357
3000K, SPEC30	SPEC30	Warm	105	3000K	70	0.444	0.409
3500K, SPEC35	SPEC35	Neutral	105	3500K	73	0.41	0.395
4100K, SPEC41	SPEC41	Cool	105	4100K	70	0.382	0.385
Warm White	WW	Warm	102	3000K	53	0.44	0.403
Colortone 50	C50	Daylight	72	5000K	92	0.345	0.359
Colortone 75	C75	Daylight Plus	66	7500K	95	0.299	0.316
3000K, Ultralume	30U	Warm	108	3000K	85	0.444	0.409
3500K, Ultralume	35U	Neutral	108	3500K	85	0.413	0.395
4100K, Ultralume	41U	Cool	108	4100K	85	0.382	0.385
5000K, Ultralume	50U	Daylight	93	5000K	85	0.346	0.356
3000K, TL 80	TL830	Warm	98	3000K	86	0.439	0.402
3500K, TL 80	TL835	Neutral	98	3500K	86	0.41	0.395
4100K, TL 80	TL841	Cool	98	4100K	86	0.382	0.385
5000K, TL 80	TL850	Daylight	97	5000K	86	0.346	0.356
5000K, TL 90	TL950	Daylight	66	5000K	98	0.344	0.355
Advantage T8 830	ADV830	Warm	105	3000K	86	0.444	0.409
Advantage T8 835	ADV835	Neutral	105	3500K	86	0.41	0.395
Advantage T8 841	ADV841	Cool	105	4100K	86	0.382	0.385
Advantage T8 850	ADV850	Daylight	105	5000K	86	0.346	0.36