

LED Linear Lamp

Performance Specifications

AC and Ballast Compatible models for fluorescent lamp replacement

2', 3', 4', 5' lamps



various lamp lengths available

LED T8 models available in Glass and Plastic enclosures

Applications Include:

- General lighting (office, education, medical facilities)
- Warehouse and distribution (high bay fixtures)
- Cooler and refrigeration
- Display case and shelf lighting
- Parking garage

Energy Savings over 40-50% when compared to existing fluorescent T8 and T12 electronic and magnetic ballasted fixture applications.

For additional energy savings of 20 to 30% use with low ballast factor ballast or lighting control system.

Installation is easy and saves money. Just change the existing fluorescent lamps without the need to rewire the light fixture.

Install LED lamp using existing fluorescent ballast.

LED lamp models are available in 3000k, 3500k, 4000k, 5000K color temperatures. Other color temperatures available as special order. LED lamps available to support 2', 3', 4', 5', 8', U-Bend and TTL/BIAX lamp applications.



LED T8 and T12 lamps

AC / Ballast LED lamps

LED AC wired or ballast operated direct replacement lamp models provide ultimate flexibility when replacing fluorescent lamps. Install using the existing ballast. If the ballast fails or if the ballast is not compatible simply wire the LED lamp to AC power.

Direct Replacement LED lamps

LED direct replacement lamp models require NO Re-WIRING of the fluorescent light fixture and provides excellent energy savings when replacing T8 or T12 fluorescent lamps.

Installation is easy...just remove existing fluorescent lamp and install the LED linear lamp.

ELB offers a wide selection of LED lamps to replace fluorescent lamps.

Multi-ABC: Specially designed for 100% compatibility with T8 ballasts. ELB's special design eliminates all ballast power issue often experienced with other designs. Excellent choice for Resellers and Distributors when selling into projects with unknown ballast types.

Multi-OP: Designed for operation on both T8 and T12 ballast types. Good choice for Contractors and ESCO's when the ballast type is known and different lamp types are on a project.

Contractor Series: LED direct replacement lamp models tuned specifically for replacement of T8 or T12 fluorescent lamps. Good choice for Contractors and ESCO's when the ballast type is known.

ELB LED linear lamps are also compatible with existing fluorescent battery back-up ballasts.

Benefits:

- Light distribution angle of 270 degrees
- Excellent for low temperature applications
- High Performance DLC qualified models available
- Use with occupancy sensors with frequent starting
- Dimmable (with compatible driver / ballast)
- Less Vibration and impact resistant
- Instant ON operation
- Suitable for damp locations
- Meets UL standard 1598c and UL standard 1993
- Long life product (>70,000 hours)
- Rotatable end caps for refrigeration and shelf lighting applications (optional on some models). Refer to application notes at end of document.
- 5 Year manufacturer's warranty

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LED AC/Ballast (A+B) lamp: Operates on 120-277VAC power or existing ballast

Performance Model #	Lamp length and size	Lamp Lumens	Line Input Wattage	Line Input current	Line Input Voltage	PF	EF (lm/W)
LED T8AB-48-17-830-MV-FHF	LED 4' T8	1950	16.49	0.146	120/277	0.994	112.78
LED T8AB-48-17-835-MV-FHF	LED 4' T8	2000	16.61	0.147	120/277	0.994	116.21
LED T8AB-48-17-840-MV-FHF	LED 4' T8	2050	16.49	0.146	120/277	0.994	118.56
LED T8AB-48-17-850-MV-FHF	LED 4' T8	2100	16.73	0.148	120/277	0.994	119.79
LED T8AB-48-14-830-MV-FHF	LED 4' T8	1720	14.61	0.122	120/277	0.994	117.68
LED T8AB-48-14-835-MV-FHF	LED 4' T8	1760	14.73	0.123	120/277	0.994	119.44
LED T8AB-48-14-840-MV-FHF	LED 4' T8	1800	14.49	0.121	120/277	0.994	124.17
LED T8AB-48-14-850-MV-FHF	LED 4' T8	1850	14.61	0.122	120/277	0.994	126.58
LED T8AB-36-12-830-MV-FHF	LED 3' T8	1390	12.69	0.106	120/277	0.994	109.46
LED T8AB-36-12-835-MV-FHF	LED 3' T8	1420	12.81	0.107	120/277	0.994	110.78
LED T8AB-36-12-840-MV-FHF	LED 3' T8	1450	12.81	0.107	120/277	0.994	113.12
LED T8AB-36-12-850-MV-FHF	LED 3' T8	1480	12.93	0.108	120/277	0.994	114.39
LED T8AB-24-8-830-MV-FHF	LED 2' T8	950	8.54	0.073	120/277	0.994	111.17
LED T8AB-24-8-835-MV-FHF	LED 2' T8	965	8.66	0.074	120/277	0.994	111.37
LED T8AB-24-8-840-MV-FHF	LED 2' T8	975	8.66	0.074	120/277	0.994	112.52
LED T8AB-24-8-850-MV-FHF	LED 2' T8	1050	8.86	0.074	120/277	0.994	118.44
Ballast Operated	Lamp length and size	Lamp Lumens	Input Wattage		Input		EF (lm/W)
LED T8AB-48-17-830-MV-FHF	LED 4' T8	1850	16.73	-	T8 Ballast	-	110.57
LED T8AB-48-17-835-MV-FHF	LED 4' T8	1900	16.85	-	T8 Ballast	-	112.75
LED T8AB-48-17-840-MV-FHF	LED 4' T8	1950	16.95	-	T8 Ballast	-	115.04
LED T8AB-48-17-850-MV-FHF	LED 4' T8	2000	17.00	-	T8 Ballast	-	117.16
LED T8AB-48-14-830-MV-FHF	LED 4' T8	1700	14.13	-	T8 Ballast	-	120.26
LED T8AB-48-14-835-MV-FHF	LED 4' T8	1740	14.25	-	T8 Ballast	-	122.05
LED T8AB-48-14-840-MV-FHF	LED 4' T8	1780	14.13	-	T8 Ballast	-	125.92
LED T8AB-48-14-850-MV-FHF	LED 4' T8	1830	14.25	-	T8 Ballast	-	128.37
LED T8AB-36-12-830-MV-FHF	LED 3' T8	1330	12.21	-	T8 Ballast	-	108.84
LED T8AB-36-12-835-MV-FHF	LED 3' T8	1390	12.33	-	T8 Ballast	-	112.65
LED T8AB-36-12-840-MV-FHF	LED 3' T8	1420	12.45	-	T8 Ballast	-	113.97
LED T8AB-36-12-850-MV-FHF	LED 3' T8	1450	12.50	-	T8 Ballast	-	115.27
LED T8AB-24-8-830-MV-FHF	LED 2' T8	930	8.30	-	T8 Ballast	-	111.97
LED T8AB-24-8-835-MV-FHF	LED 2' T8	950	8.42	-	T8 Ballast	-	112.75
LED T8AB-24-8-840-MV-FHF	LED 2' T8	970	8.52	-	T8 Ballast	-	113.77
LED T8AB-24-8-850-MV-FHF	LED 2' T8	1010	8.66	-	T8 Ballast	-	116.56

Part number designation:

F - Fixed or R - Rotatable locking end caps ———— - xxx
 S - Standard or H - High Performance ————
 High Performance = DLC qualified models
 C - Clear* or F - Frosted Lens ————

*Clear lens models are special order

Additional Lamp Specifications:

Color Temp (K) – Available in 3000k, 3500k, 4000k and 5000k.

Average Life – 55,000 Hours

Beam Angle – 270 Degree

CRI – 83

LED Linear Lamp

Performance Specifications

AC and Ballast Compatible models for fluorescent lamp replacement

2', 3', 4', 5' lamps

**LED Multi-ABC lamp: Premium All Ballast Compatible (ABC) design
achieves >98% T8 fluorescent ballast compatibility**

Performance with different ballast types	Lamp length and size	Lamp Wattage	Lamp Lumen Efficacy	Installation T8 IS Electronic ballast		Installation T8 Program Start Electronic ballast	
				Lumens	Average System Watts	Lumens	Average System Watts
Model #							
LEDT8/12-48-850-xHF* Old # LEDT8-48-14-850-RHF	LED 4' T8	13.10	123.22	1745	14.0	1750	15.1
LEDT8/12-48-840-xHF* Old # LEDT8-48-14-840-RHF	LED 4' T8	13.10	118.18	1687	14.0	1690	15.1
LEDT8/12-48-835-xHF* Old # LEDT8-48-14-835-RHF	LED 4' T8	13.00	119.28	1676	14.0	1682	15.1
LEDT8/12-48-830-xHF* Old # LEDT8-48-14-830-RHF	LED 4' T8	13.00	118.50	1676	14.0	1684	15.1

* High Performance LED T8 DLC 4.2 qualified models for T8 lamp replacement only

Part number designation:

F - Fixed or R - Rotatable locking end caps ———— - xxx
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*Clear lens models are special order

Additional Lamp Specifications:

Color Temp (K) – Available in 3000k, 3500k, 4000k
 and 5000k.
 Average Life – 55,000 Hours
 Beam Angle – 270 Degree
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LED Linear Lamp

Performance Specifications

AC and Ballast Compatible models for fluorescent lamp replacement

2', 3', 4', 5' lamps

LED Multi-Op lamp: Multi operation supports T8 and T12 ballast

Performance with different ballast types Model #	Type	Bare Lamp Wattage	Installation T8 IS Electronic ballast		Installation T8 Program Start Electronic ballast		Installation T12 Magnetic ballast	
			Lumens	Average System Watts	Lumens	Average System Watts	Lumens	Average System Watts
LEDT8-24-850-FHF Old # LEDT8-8-850-B-FHF	LED 2' T8	8.4	945	9.30	945	9.60	1180	14.00
LEDT8-24-840-FHF Old # LEDT8-8-840-B-FHF	LED 2' T8	8.4	920	9.30	920	9.60	1160	14.00
LEDT8-24-835-FHF Old # LEDT8-8-835-B-FHF	LED 2' T8	8.4	900	9.30	900	9.60	1140	14.00
LEDT8-24-830-FHF Old # LEDT8-8-830-B-FHF	LED 2' T8	8.4	890	9.30	890	9.60	1140	14.00
LEDT8-12-850-B-RSF	LED 3' T8	11.0	1250	13.00	1250	13.00	2400	34.00
LEDT8-12-840-B-RSF	LED 3' T8	11.0	1225	13.00	1225	13.00	2500	34.00
LEDT8-12-835-B-RSF	LED 3' T8	11.0	1150	13.00	1150	13.00	2500	34.00
LEDT8-12-830-B-RSF	LED 3' T8	11.0	1130	13.00	1150	13.00	2700	34.00
LEDT8-48-850-xHF [x=F,R] *	LED 4' T8	12.6	1795	13.5	1795	13.8	-	-
LEDT8-48-840-xHF [x=F,R] *	LED 4' T8	12.7	1709	13.6	1709	13.9	-	-
LEDT8-48-835-xHF [x=F,R] *	LED 4' T8	12.7	1700	13.6	1700	13.9	-	-
LEDT8-48-830-xHF [x=F,R] *	LED 4' T8	12.6	1691	13.5	1691	13.8	-	-
LEDT8-48-850-H-xHF * Old # LEDT8-17-850-B-FHF	LED 4' T8	14.6	2047	15.9	2047	16.9	-	-
LEDT8-48-840-H-xHF * Old # LEDT8-17-840-B-FHF	LED 4' T8	14.4	2015	15.8	2015	16.90	-	-
LEDT8-48-835-H-xHF * Old # LEDT8-17-835-B-FHF	LED 4' T8	14.6	1930	15.9	1930	16.90	-	-
LEDT8-48-830-H-xHF * Old # LEDT8-17-830-B-FHF	LED 4' T8	14.4	1883	15.8	1883	16.90	-	-
LEDT8-22-850-B-RSF	LED 4' T8	20.0	2200	22.0	2200	22.0	2600	34.0
LEDT8-22-840-B-RSF	LED 4' T8	20.0	2150	22.0	2150	22.0	2500	34.0
LEDT8-22-835-B-RSF	LED 4' T8	20.0	2000	22.0	2000	22.0	2400	34.0
LEDT8-22-830-B-RSF	LED 4' T8	20.0	2000	22.0	2000	22.0	2400	34.0

* High Performance LED T8 DLC 3.0 qualified models for T8 lamp replacement only

Part number designation:

- xxx

F - Fixed or R - Rotatable locking end caps

S - Standard or H - High Performance

High Performance = DLC qualified models

C - Clear* or F - Frosted Lens

*Clear lens models are special order

Additional Lamp Specifications:

Color Temp (K) – Available in 3000k, 3500k, 4000k and 5000k.

Average Life – 55,000 Hours

Beam Angle – 270 Degree

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LED Linear Lamp

Performance Specifications

AC and Ballast Compatible models for fluorescent lamp replacement

2', 3', 4', 5' lamps

Contractor Series - LED T8 Only lamp:

Performance with different ballast types	Lamp length and size	Lamp Wattage	Installation T8 IS Electronic ballast		Installation T8 Program Start Electronic ballast		Installation T12 ballast	
			Lumens	Average System Watts	Lumens	Average System Watts	Lumens	Average System Watts
Model #								
Direct Replacement for T8 only fluorescent lamps - Plastic Enclosure								
LEDT8E-24-8-850-RSF	LED 2' T8	7.5	1090	9.3	1090	10.5	-	-
LEDT8E-24-8-840-RSF	LED 2' T8	7.5	1080	9.3	1080	10.5	-	-
LEDT8E-24-8-835-RSF	LED 2' T8	7.5	1060	9.3	1060	10.5	-	-
LEDT8E-24-8-830-RSF	LED 2' T8	7.5	1010	9.3	1010	10.5	-	-
LEDT8E-36-12-850-RSF	LED 3' T8	9.5	1260	11.5	1260	12.5	-	-
LEDT8E-36-12-840-RSF	LED 3' T8	9.5	1215	11.5	1215	12.5	-	-
LEDT8E-36-12-835-RSF	LED 3' T8	9.5	1200	11.5	1200	12.5	-	-
LEDT8E-36-12-830-RSF	LED 3' T8	9.5	1130	11.5	1130	12.5	-	-
LEDT8E-48-14-850-xHF**	LED 4' T8	13.2	1770	14.8	1770	16.0	-	-
LEDT8E-48-14-840-xHF**	LED 4' T8	13.2	1755	14.8	1755	16.0	-	-
LEDT8E-48-14-835-xHF**	LED 4' T8	13.2	1740	14.8	1740	16.0	-	-
LEDT8E-48-14-830-xHF**	LED 4' T8	13.2	1730	14.8	1730	16.0	-	-
LEDT8E-48-850-H-xHF Old # LEDT8E-17-850-FHF**	LED 4' T8	15.2	2050	16.8	2050	17.5	-	-
LEDT8E-48-840-H-xHF Old # LEDT8E-17-840-FHF**	LED 4' T8	15.2	2000	16.8	2000	17.5	-	-
LEDT8E-48-835-H-xHF Old # LEDT8E-17-835-FHF**	LED 4' T8	15.2	1950	16.8	1950	17.5	-	-
LEDT8E-48-830-H-xHF Old # LEDT8E-17-830-FHF**	LED 4' T8	15.2	1900	16.8	1900	17.5	-	-
LEDT8E-22-850-FHF*	LED 4' T8	20.7	2350	22.0	2350	23.5	-	-
LEDT8E-22-840-FHF*	LED 4' T8	20.7	2300	22.0	2300	23.5	-	-
LEDT8E-22-835-FHF*	LED 4' T8	20.7	2250	22.0	2250	23.5	-	-
LEDT8E-22-830-FHF*	LED 4' T8	20.7	2200	22.0	2200	23.5	-	-

* High Performance LED T8 DLC 3.0 qualified models: ** LED T8 DLC 4.0 qualified models:

Part number designation:

F - Fixed or R - Rotatable locking end caps ———— - xxx
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*Clear lens models are special order

Additional Lamp Specifications:

Color Temp (K) – Available in 3000k, 3500k, 4000k and 5000k.

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Beam Angle – 270 Degree

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AC and Ballast Compatible models for fluorescent lamp replacement

2', 3', 4', 5' lamps

Contractor Series - LED T8 Only lamp (continued):

LEDT8E-60-27-850-RHF	LED 5' T8	25.7	2950	27.0	2950	28.5	-	-
LEDT8E-60-27-840-RHF	LED 5' T8	25.7	2900	27.0	2900	28.5	-	-
LEDT8E-60-27-835-RHF	LED 5' T8	25.7	2850	27.0	2850	28.5	-	-
LEDT8E-60-27-830-RHF	LED 5' T8	25.7	2800	27.0	2800	28.5	-	-
Direct Replacement for T8 only fluorescent lamps - Glass Enclosure								
LEDT8E-48-850-G-FHF**	LED 4' T8	12.8	1779	14.4	1750	15.4	-	-
LEDT8E-48-840-G-FHF**	LED 4' T8	12.8	1720	14.4	1720	15.4	-	-
LEDT8E-48-835-G-FHF**	LED 4' T8	12.8	1690	14.3	1690	15.4	-	-
LEDT8E-48-830-G-FHF	LED 4' T8	12.8	1650	14.3	1650	15.4	-	-
LEDT8E-48-850-GH-FHF**	LED 4' T8	14.8	2043	16.0	1900	17.0	-	-
LEDT8E-48-840-GH-FHF**	LED 4' T8	14.8	1990	16.0	1850	17.0	-	-
LEDT8E-48-835-GH-FHF**	LED 4' T8	14.8	1955	16.0	1800	17.0	-	-
LEDT8E-48-830-GH-FHF**	LED 4' T8	14.8	1910	16.0	1750	17.0	-	-

Contractor Series - LED T12 Only lamp:

LED Direct Replacement for T12 only Fluorescent lamps – Plastic Enclosure								
Performance with different ballast types	Lamp length and size	Lamp Wattage	Installation T8 IS Electronic ballast		Installation T8 Program Start Electronic ballast		Installation T12 ballast	
			Lumens	Average System Watts	Lumens	Average System Watts	Lumens	Average System Watts
Model #								
LEDT12-48-20-850-RSF	LED 4' T8	15.2	-	-	-	-	1770	17.4 - 20.2
LEDT12-48-20-840-RSF	LED 4' T8	15.2	-	-	-	-	1700	17.4 - 20.2
LEDT12-48-20-835-RSF	LED 4' T8	15.2	-	-	-	-	1683	17.4 - 20.2
LEDT12-48-20-830-RSF	LED 4' T8	15.2	-	-	-	-	1660	17.4 - 20.2

LED T8 Up/Down T8 only lamp: Provides both Up and Downward illumination

Model #	Type	Installation T8 Instant Start Electronic ballast		Installation T8 Program Start Electronic ballast	
		Lumens	Average System Watts	Lumens	Average System Watts
LEDT8-17-850-U-RSF	LED T8 4'	1607 Down /178 Up	16.8	1607 Down /178 Up	17.0
LEDT8-17-840-U-RSF	LED T8 4'	1530 Down /170 Up	16.8	1530 Down /170 Up	17.0
LEDT8-17-835-U-RSF	LED T8 4'	1515 Down /168 Up	16.8	1515 Down /168 Up	17.0
LEDT8-17-830-U-RSF	LED T8 4'	1494 Down /166 Up	16.8	1494 Down /166 Up	17.0

* High Performance LED T8 DLC 3.0 qualified models: ** LED T8 DLC 4.0 qualified models

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Additional Lamp Specifications:

Color Temp (K) – Available in 3000k, 3500k, 4000k and 5000k.

Average Life – 55,000 Hours

Beam Angle – 270 Degree

CRI – 83

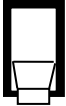
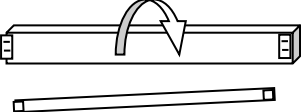
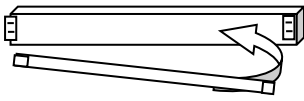

LED Linear Lamp

Performance Specifications

AC and Ballast Compatible models for fluorescent lamp replacement

2', 3', 4', 5' lamps

Lamp Operation: Direct replacement LED lamps operate using the existing fluorescent ballast as the driver. Results may vary based on ballast manufacture. Photometric testing is consistent with IES-LM-79 and tested to L70 requirements. See Warranty for terms and conditions.

Installation Instructions: Quick and Simple - No re-wiring required			
Step 1: Turn Power - OFF	Step 2: Remove Fluorescent lamp	Step 3: Plug in Quick-Fit LED lamp	Step 4: Turn Power - ON
			

Application Notes:

- Lamps with rotatable end caps are shipped without rotation (0-degree) for use as a fluorescent replacement lamp in standard fixture applications. The rotatable end caps are provided for applications like wall washing, shelf lighting, etc. where lamp sockets are not parallel to the intended light surface.
- There are multiple types of ballast designs (also called topologies) used in fluorescent light fixtures. To assure proper LED lamp operation and confirm ballast compatibility try product in the fixture before installing large quantities.
- Suitable for damp locations. Avoid applications where lamp can get wet.
- Operating temperature range between -34 °C to 80°C (-29 °F - 176 °F)
- The ELB Quick-Fit LED direct replacement lamp with multi-operation technology is compatible with standard fluorescent battery back-up ballast products where most other direct replacement LED lamps are not compatible. Check local and state electrical codes for acceptance of use. Recommend to test product prior to ordering large quantities.