

# LINEAR SERIES 2.0

## LED Linear Fixtures and Retrofit Kits

The Linear Series delivers ultra-long life and high efficacy. Fixtures can be installed independently or joined together for continuous-run lighting.

In applications where fluorescent strip housings are used, the Linear Retrofit Kits (RTR and RMW) are a fast and easy way to upgrade existing back boxes to LED.

**APPLICATIONS:** Industrial and Commercial Facilities, Warehouses, Manufacturing, Parking Garages and Retail.

Project Name	
Date	
Cat. Number	
Type	



See page 3 for more information

Nominal Lumens	Length	Lumen Output <sup>1</sup>	Efficacy	Watts	Part Number
3000	4'	3184	149	21	LR20S-A1-03K-04-40-80-FR
4000	4'	4532	139	33	LR20S-A1-04K-04-40-80-FR
6000	8'	6276	146	43	LR20S-A1-06K-08-40-80-FR
8000	8'	8186	148	55	LR20S-A1-08K-08-40-80-FR
9000	12'	9304	151	62	LR20S-A1-09K-12-40-80-FR
12000	12'	12488	150	83	LR20S-A1-12K-12-40-80-FR

<sup>2</sup>Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Frosted Lens, CRI 80+, Lumen Multipliers: No Lens = 1.08 ; 3500K = 0.93.

### FEATURES & SPECIFICATIONS

- **Environment:** Dry/Damp, for interior applications.
- **Length:** Fixtures are all 4' sections. Available for order in 4', 8' and 12' lengths. 8' and 12' versions are attached with included bracket(s). Each fixture has 1 driver to maximize efficiency and value.
- **Housing:** Steel.
- **Lenses:** Frosted acrylic (standard). Option of No Lens available (recommended for indirect lighting only).
- **Mounting Options:** All suitable for continuous row.
  - **Stand-alone Fixture (FXT):** Cable Mount or Surface Mount (standard).
  - **RetroFit Kit (RTR):** For standard back boxes. 4 3/8" wide. Utilizes existing housing, (no mounting kits available).
  - **Retro Multi Width Kit (RMW):** For any back box from 3.25" to 5.25" in width. Utilizes existing housing.
- **LED:** 3500K, 4000K and 5000K (standard), 80CRI (standard). Other CCTs and CRIs available upon request.
- **Warranty:** 5-year standard including guaranteed L70, up to 10-year optional, also available a 10-year warranty on ES40P fixtures including labor, see Accessories.

### PROJECTED LUMEN MAINTENANCE

TM-21 from initial lumens (based on 24/7 operation)

Ambient	Year 1	Year 5	Year 10	L70 (calculated)
25°C	99.62%	95.60%	90.81%	309,000 hours
45°C	99.70%	95.41%	90.31%	250,000 hours

### POWER & CONTROL

- **Power input:** 120-277V (50/60Hz).
- **Dimming:** 0-10V standard. Capable of dimming down to 10%.
- **Power Factor:** Greater than 0.9 (0.96–0.99 typical).
- **Total Harmonic Distortion:** Less than 20%, 10% typical.
- **Occupancy Sensors:** Optional - factory installed photocell sensors for motion and daylight harvesting.
- **Emergency Battery Backup:** Initial lumen output is 2200-2400 lumens, thereafter EMB produces 1900-2000 lumens for a minimum of 90 minutes. 16 watts initial output. Temperature range 10°C to 45°C. Not to exceed ambient of fixture. Available on stand-alone fixture (FXT) only.<sup>9</sup>
- **Surge Protection:** Minimum 2kV (standard). Additional surge protection up to 10kV is available.

ORDERING EXAMPLE

Base Fixture: [LR20S-A1-04K-04-40-80-FR-LV-FXT-10V](#)

Base Fixture with Options: [LR20S-A1-04K-04-40-80-FR-LV-FXT-OCC8-EMB-10V](#)

DLC Number: [LR20S-A1-04K-04-40-80-FR-LV-FXT-\(xxx\)-10V](#)

SELECT ONE			SELECT ONE	SELECT ONE	SELECT ONE	LV
Series-Compliance-Model			Color Temp <sup>4</sup>	CRI	Lens	Voltage
<b>4' LONG</b>	<b>8' LONG</b>	<b>12' LONG</b>	<b>35<sup>6</sup></b> 3500K	<b>80</b> (Standard)	<b>FR</b> Frosted Lens, Wide Distribution	<b>LV</b> 120-277V
<b>LR20S-A1-03K-04</b> 3K lumens	<b>LR20S-A1-06K-08</b> 6K lumens	<b>LR20S-A1-09K-12</b> 9K lumens	<b>40</b> 4000K	<b>Other CRI available upon request<sup>7</sup></b>	<b>NL</b> No Lens	
<b>LR20S-A1-04K-04</b> 4K lumens	<b>LR20S-A1-08K-08</b> 8K lumens	<b>LR20S-A1-12K-12</b> 12K lumens	<b>50</b> 5000K			
			<b>Other CCT available upon request<sup>7</sup></b>			

SELECT ONE	SELECT ONE IF APPLICABLE, IF NONE, LEAVE BLANK AND MOVE TO CORD & PLUG		SELECT ONE IF APPLICABLE, IF NONE, LEAVE BLANK, MOVE TO OPTION		SELECT AS MANY AS APPLICABLE, SEPARATE EACH WITH "-". IF NONE, LEAVE BLANK, MOVE TO DIMMING	10V
Mounting	Occupancy Sensors – No OCC sensor (Standard)		Cord & Plug – No cord/plug (Standard)		Option <sup>4</sup>	Dimming
<b>FXT<sup>4,7</sup></b> Stand-alone fixture	<b>OCC8<sup>3,10</sup></b> WattStopper Occ Sensor, on/off, with photocell, 8' mounting height	<b>TOCC20<sup>3,10</sup></b> IR-TEC OCC Sensor, on/off, w/ photocell, 8' to 20' mounting height	<b>6' 18AWG CORD, white with the following:</b>	<b>15' 18AWG CORD, white with the following:</b>	<b>EMB<sup>3, 8,9</sup></b> Battery back-up for emergency lighting	<b>10V</b> 0-10V Interface (Standard)
<b>RTR</b> 4 3/8" Retrofit Kit, utilizes existing housing and wiring	<b>OCCDIM8<sup>3,5,10</sup></b> Programmable WattStopper Occ Sensor, dimmable, with photocell, 8' mounting height	<b>OCCDIM20<sup>3,5,10</sup></b> WattStopper OCC Sensor, dimmable, w/ photocell, 20' mounting height	<b>CW<sup>3</sup></b> Cord, 15A, no plug	<b>15CW<sup>3</sup></b> Cord, 15A, no plug	<b>SRG<sup>3</sup></b> Fixture installed Surge Protector	
<b>RMW</b> Retro Multi Width Kit (3.25" to 5.25"), utilizes existing housing and wiring	<b>MOCDDIM8<sup>3,10</sup></b> WattStopper OCC Sensor, manual set and photocell, dimmable, 8' mounting height	<b>MOCDDIM20<sup>3,10</sup></b> WattStopper Occ Sensor, manual set and photocell, dimmable, 20' mounting height	<b>DW<sup>3</sup></b> Dimming cord, 15A, 5 Wire, no plug	<b>15DW<sup>3</sup></b> Dimming cord, 15A, 5 Wire, no plug	<b>BOX<sup>3</sup></b> Individual box packing available	
	<b>OCC20<sup>3,10</sup></b> WattStopper OCC Sensor, manual set and photocell, dimmable, 20' mounting height	<b>DOCC<sup>3,10,11</sup></b> High Frequency Doppler Occ Sensor, w/ambient light sensing, 10-20' mounting height	<b>C515<sup>3</sup></b> Cord, 15A, straight plug 120V (5-15P)	<b>15C515<sup>3</sup></b> Cord, 15A, straight plug 120V (5-15P)	<b>QDC<sup>3</sup></b> Driver Quick Disconnect	

When submitting for utility incentives and rebates, please use catalog numbers  
When ordering OPTIONS, separate each option with a "-". Catalog number always ends with dimming selection "10V"

## ACCESSORIES

Must be ordered separately. Packaged separately.

Type	Part Number	Description
Safety Kit	SAFETYCABLE	Kit includes (one) 5 ft. aircraft cable with single snap hook, L-bracket, screw and nut. For use with all mounting options.
V-Hanger	VHANGERKIT	Kit includes 2 wire V-hangers, enough to hang one 4' fixture. Order fixture with FXT mounting option.
Hanger	HANGERKIT	Kit includes 2 cable and toggle hangers. Order fixture with FXT mounting option. <sup>7</sup>
Wireless Programmer for Dimmable Occupancy Sensors(s)	OCCDIMPROG	Hand held wireless programmer for setup OCCDIMXX dimmable occupancy sensors. Required with OCCDIM8 selection.
Replacement Power Supply		Available upon request. Contact factory for details
Splint	SPLINT	13.5" Brace, used to firm up the joint between two, 4' sections. Extended lead time.

### WARRANTY UPGRADES

Type	Part Number	Description
7-Year Extended Warranty	FLS-EXTENDED-WARRANTY-7	Extends coverage for parts for a total of 7 years
10-Year Extended Warranty	FLS-EXTENDED-WARRANTY-10	Extends coverage for parts for a total of 10 years
10-Year Premium Warranty	10PREMIUM	10-year coverage for parts, lumen maintenance (L70) and labor reimbursement of \$300 per fixture

## END NOTES

- Typical ( $\pm 10\%$ ) at 277V (LV), 25°C, 4000K/5000K, Frosted Lens, CRI 80+. Lumen Multipliers: No Lens = 1.08 ; 3500K = 0.93.
- Dimensions listed are for the fixture only. See dimensional drawings for measurements with mounting hardware. Weights are approximate and vary by model, if weight is a concern, please contact factory. Weight changes when battery backup is added.
- Optional add-on. See price list for pricing.
- Optional CABLEKIT ordered separately. See ACCESSORIES.
- Wireless programmer required for final field setup. See ACCESSORIES.
- 3500K not DLC listed.
- Cable mounting full fixtures requires the additional support for 8' and 12' lengths. 4' requires 1 HANGERKIT (2-y cables), 8' and 12' require 2 each HANGERKIT( 4-y cables, total).
- Available on stand-alone (FXT) only.
- If AC input wiring passes through fixture housings in continuous run installations, max ambient on all fixtures containing a factory installed battery backup system is 40°C
- Settings for Sensors from Factory:  
OCC (LV and HV) - If no movement for 15 mins, OFF  
TOCC - If no movement for 10 mins, OFF  
OCCDIM - If no movement for 5 mins, dim to 10%, if no movement for 60 mins, OFF  
MOCCDIM - If no movement for 15 mins, dim to 10%, if no movement for ~8 mins, OFF. The photocell is disabled from the factory.  
DOCC - The sensor will be set from the factory at 75% sensitivity and a 10-minute delay.
- Extended lead time.

### AMBIENT RANGE OPERATION<sup>9</sup>

-25°C to 45°C (-13°F to 113°F)

-25°C to 40°C (-13°F to 104°F) for 08K-08

### LUMEN AMBIENT TEMPERATURE FACTOR

Ambient Temp.	35°C	40°C	45°C
Lumen Multiplier	0.99	0.98	0.98

### LISTINGS & CERTIFICATIONS

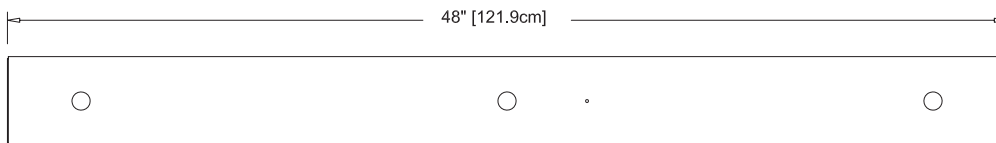
- ETL listed (UL 1598)
- RoHS Compliant
- DLC Premium and DLC Standard
- LM-79, LM 80 and TM-21 tests and reports are performed in accordance to IESNA standards
- CAN/CSA C22.2 No. 250.13

### DIMENSIONS & DRAWINGS<sup>2</sup>

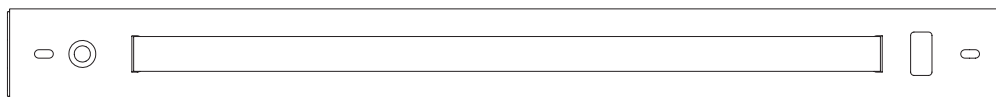
Model	Length (in)	Width (in)	Depth (in)	Weight (lb)	
4'	FXT	48.0	4.4	2.6	4.9
	RTR	47.8	4.3	1.8	2.3
	RMW	47.8	5.8	1.8	2.4
8'	FXT	96.0	4.4	2.6	8.8
	RTR	95.6	4.3	1.8	3.6
	RMW	95.6	5.8	1.8	3.7
12'	FXT	144.0	4.4	2.6	13.7
	RTR	143.4	4.3	1.8	6.9
	RMW	143.4	5.8	1.8	7.2

Dimensions listed are for the fixture only. See dimensional drawings for measurements with mounting hardware.

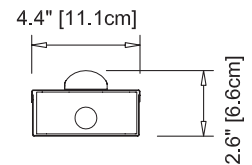
#### 4' Stand-alone Fixture (FXT)



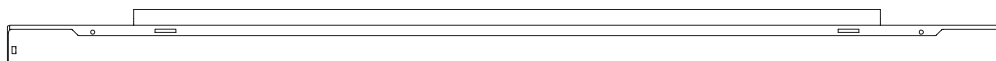
BOTTOM VIEW



TOP VIEW

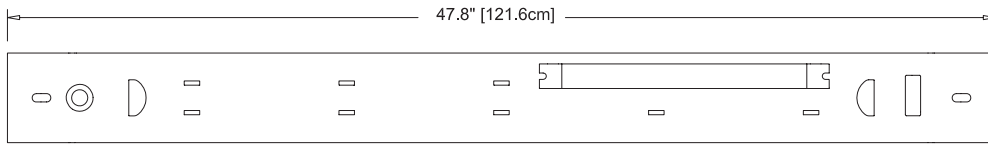


END VIEW

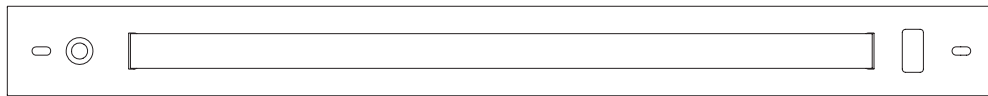


SIDE VIEW

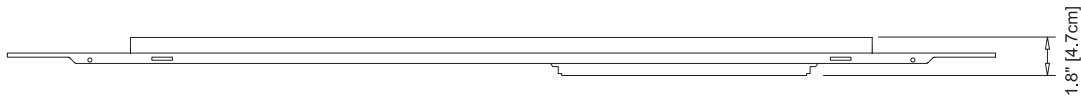
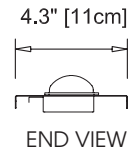
4' Retrofit Kit (RTR)



BOTTOM VIEW

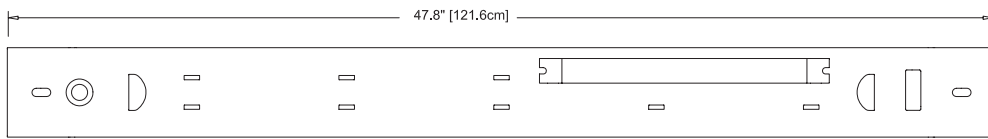


TOP VIEW

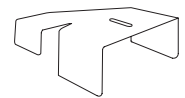


SIDE VIEW

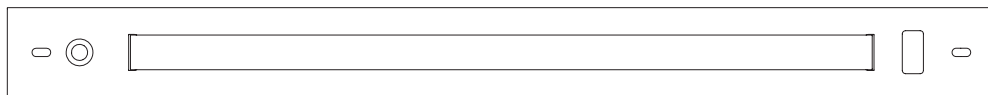
4' Retro Multi Width Kit (RMW)



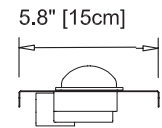
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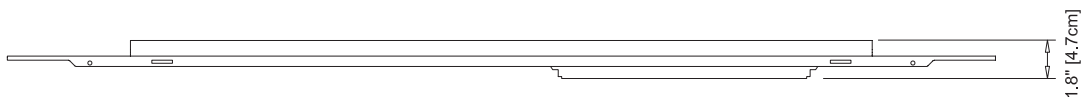
BRACKET ISO VIEW



TOP VIEW



END VIEW



SIDE VIEW



## Flex Lighting Solutions

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