

LS1 SERIES

LED Strip Fixtures

The LS1 Series is designed to replace linear fluorescent continuous run, utility and strip fixtures with long-lasting, more efficient LED technology; lowering your total cost of ownership (TCO).

The LS1 Series is available in four-foot lengths, at various lumen outputs and color temperatures and with a standard frosted lens; offering the best combination of performance and value for your applications.

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

Project Name	
Date	
Cat. Number	
Type	



See page 4 for more information

Nominal Lumens	Lumen Output ¹	Efficacy	Watts	Part Number
3000	3704	150	25	LS10S-A1-03K-04-40-80-FR
4000	4835	145	33	LS10S-A1-04K-04-40-80-FR
5000	5898	140	42	LS10S-A1-05K-04-40-80-FR

¹Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Frosted Lens, CRI 80+. Lumen Multipliers: 3500K = 0.93.

FEATURES & SPECIFICATIONS

- **Environment:** Dry/Damp, for interior applications. (IP4X)
- **Length:** Fixtures are all 4' sections.
- **Power Supply Access:** Power supply attached to inside wireway allows for easy access.
- **Lenses:** Frosted acrylic (standard).
- **Mounting Options:** Cable Mount or Surface Mount (standard) for both Stand Alone Fixture (FXT) and Linkable Fixture (LNK). Suitable for continuous row mounting, 15 fixtures maximum.
- **CCT:** 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.
- **Bulk Packaging:** All fixtures come in eco-friendly bulk packaging. Individual boxes are also available.

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	99.59%	94.92%	89.38%	250,000 hours

POWER & CONTROL

- **Power input:** 120-277V (50/60Hz).
- **Dimming:** 0-10V dimming standard. Capable of dimming down to 10%.
- **Power Factor:** Greater than 0.9 (0.94-0.99 typical).
- **Total Harmonic Distortion:** Less than 20%, 10% typical.
- **Occupancy Sensors:** Optional occupancy sensors with photocell/daylighting are available as ACCESSORIES.
- **Sensor Anywhere:** With the LNK fixture option and accessories you can place the occupancy sensor any where along the run and have it operate all or part of the fixtures.
- **Emergency Battery Backup:** Factory installed option, EMB initial lumen output is ~2200 lumens, thereafter EMB produces ~2000 lumens for a minimum of 90 minutes. EMB has 16 watts initial output, Temperature range 10°C to 45°C. Not to exceed ambient of fixture.^{2, 3, 5}
- **Surge Protection:** Minimum 2kV (standard). Additional surge protection up to 10kV is available.

ORDERING EXAMPLE

Base Fixture: **LS10S-A1-04K-04-40-80-FR-LV-FXT-10V**

Base Fixture with Options: **LS10S-A1-04K-04-40-80-FR-LV-FXT-EMB-QDC-10V**

DLC Number: **LS10-A1-04K-40-80-FR-LV-{xxx}-10V**

SELECT ONE	SELECT ONE	SELECT ONE	SELECT ONE	LV
Series-Compliance-Model-Length	Color Temp⁴	CRI	Lens	Voltage
LS10S-A1-03K-04 3K lumens, 4' LS10S-A1-04K-04 4K lumens, 4' LS10S-A1-05K-04 5K lumens, 4'	35² 3500K 40 4000K 50 5000K Other CCT available upon request ³	80 (Standard) Other CRI available upon request ³	FR Frosted Lens, Wide Distribution	LV 120-277V

SELECT ONE	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	
Configuration	Cord & Plug – No cord/plug (Standard) <small>All cords are 18/3 AWG, 600V, and white, except where noted</small>	Option³	Dimming	
FXT Stand-alone fixture LNK Linkable fixture, through wiring included	6' 18AWG CORD, white with the following: CW^{3,6} Cord, 15A, no plug DW^{3,6} Dimming cord, 15A, 5 Wire, no plug C515^{3,6} Cord, 15A, straight plug 120V (5-15P)	15' 18AWG CORD, white with the following: 15CW^{3,6} Cord, 15A, no plug 15DW^{3,6} Dimming cord, 15A, 5 Wire, no plug 15C515^{3,6} Cord, 15A, straight plug 120V (5-15P)	EMB^{2,3,5} Battery back-up for emergency lighting QDC³ Driver quick disconnect SRG³ Fixture installed surge protector	10V 0-10V Interface (Standard)

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"

END NOTES

- Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Frosted Lens, CRI 80+. Lumen Multipliers: 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.
- Wireless programmer required for final field setup. See ACCESSORIES.
- Consult factory for orders requiring EMB. Emergency Circuit constant hot wire must be added by customer.
- All cords are 18/3 AWG, 600V, and white
- Settings for Sensors from Factory--
 OCC (LV and HV)--If no movement for 15 mins, OFF
 OCCDIM--If no movement for 5 mins, dim to 10%, if no movement for 60 mins, OFF
- LS-CTRL-FXT and/or -LNK require additional EnOcean accessories. See page 4.
- 3500K CCT not DLC qualified.
- Extended lead time, please consult factory.

ACCESSORIES

Must be ordered separately. Packaged separately.

Type	Part Number	Description
Single Y-Toggle	LS-YCABLE	Y Toggle Hanger Kit, 1 each, for support between two, joined 4' sections.
Cable Kit	LS-CABLEKIT	Cable Kit, Single Toggle, 2 each. Supports single 4' fixture.
Fixture Connector	LS-BRACE ¹⁰	Includes joining bracket for use between 4' sections. Provides additional support for sections when only two cable mounts are available. Not needed when LS-YCABLE is used to support different sections.
LS WS Occ Sensor 8' Kit for LINKABLE fixtures	LS-OCC8-LNK ^{3, 7}	WattStopper Occ Sensor, on/off, w/ photocell, 8' mounting height.
LS WS Occ Sensor 8' Kit for Stand-Alone (FXT) fixtures only	LS-OCC8-FXT ^{3, 7}	WattStopper Occ Sensor, on/off, w/ photocell, 8' mounting height.
LS WS Occ/Dim Sensor 8' Kit for LINKABLE fixtures	LS-OCCDIM8-LNK ^{3, 4, 7}	Programmable WattStopper Occ Sensor, dimmable, w/ photocell, 8' mounting height.
LS WS Occ/Dim Sensor 8' Kit for Stand-Alone (FXT) fixtures only	LS-OCCDIM8-FXT ^{3, 4, 7}	Programmable WattStopper Occ Sensor, dimmable, w/ photocell, 8' mounting height.
LS WS Occ Sensor 20' Kit for LINKABLE fixtures	LS-OCC20-LNK ^{3, 7}	WattStopper Occ Sensor, on/off, w/ photocell, 20' mounting height.
LS WS Occ Sensor 20' Kit for Stand-Alone (FXT) fixtures only	LS-OCC20-FXT ^{3, 7}	WattStopper Occ Sensor, on/off, w/ photocell, 20' mounting height.
LS WS Occ/Dim Sensor 20' Kit for LINKABLE fixtures	LS-OCCDIM20-LNK ^{3, 4, 7}	Programmable WattStopper Occ Sensor, dimmable, w/ photocell, 20' mounting height.
LS WS Occ/Dim Sensor 20' Kit for Stand-Alone (FXT) fixtures only	LS-OCCDIM20-FXT ^{3, 4, 7}	Programmable WattStopper Occ Sensor, dimmable, w/ photocell, 20' mounting height.
EnOcean Control Kit for LINKABLE fixtures	LS-CTRL-LNK ⁸	EnOcean controller
EnOcean Control Kit for Stand-Alone (FXT) fixtures only	LS-CTRL-FXT ⁸	EnOcean controller
Sensor Stop Wiring Harness	LS-SNSRSTOP	Wiring harness used to limit the number of fixtures a sensor will control in a continuous run. For use on LINKED fixtures only.
Mechanical Joining Piece	LS-MJP	Mechanical joining piece for two, 4' LS10 sections. Enables End to End installations.
Wireless Programmer for Dimmable Occupancy Sensors(s)	OCCDIMPROG	Hand held wireless programmer for setup OCCDIMXX dimmable occupancy sensors. Required with OCCDIM8 and OCCDIM20 selection.
Blank Fixture Section 2'	LS-BLANK2 ¹⁰	2' fixture section, flat white plate, no LED's, with wiring harness, for spacing of lighted fixtures
Blank Fixture Section 4'	LS-BLANK4 ¹⁰	4' fixture section, flat white plate, no LED's, with wiring harness, for spacing of lighted fixtures
Replacement Power Supply		Available upon request. Contact factory for details.

EnOcean Controls (for use with EnOcean control module, CTRL)		
Single Rocker	ENSR	EnOcean Control Single Rocker
Double Rocker	ENDR	EnOcean Control Double Rocker
Wall Occupancy Sensor	ENWLOCC	EnOcean Control Wall OCC
Ceiling Occupancy Sensor	ENCLOCC	EnOcean Control Ceiling OCC
Ceiling Daylight Sensor	ENDAY	EnOcean Control Daylight Sensor
Software	ENSFT	EnOcean Control Navigan Commissioning Software

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

AMBIENT RANGE OPERATION

FXT: -25°C to 45°C (-13°F to 113°F)

LNK: -25°C to 40°C (-13°F to 104°F)

Max ambient reduced 5°C when mounted near (flush) ceiling.

LUMEN AMBIENT TEMPERATURE FACTOR

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

LISTINGS & CERTIFICATIONS

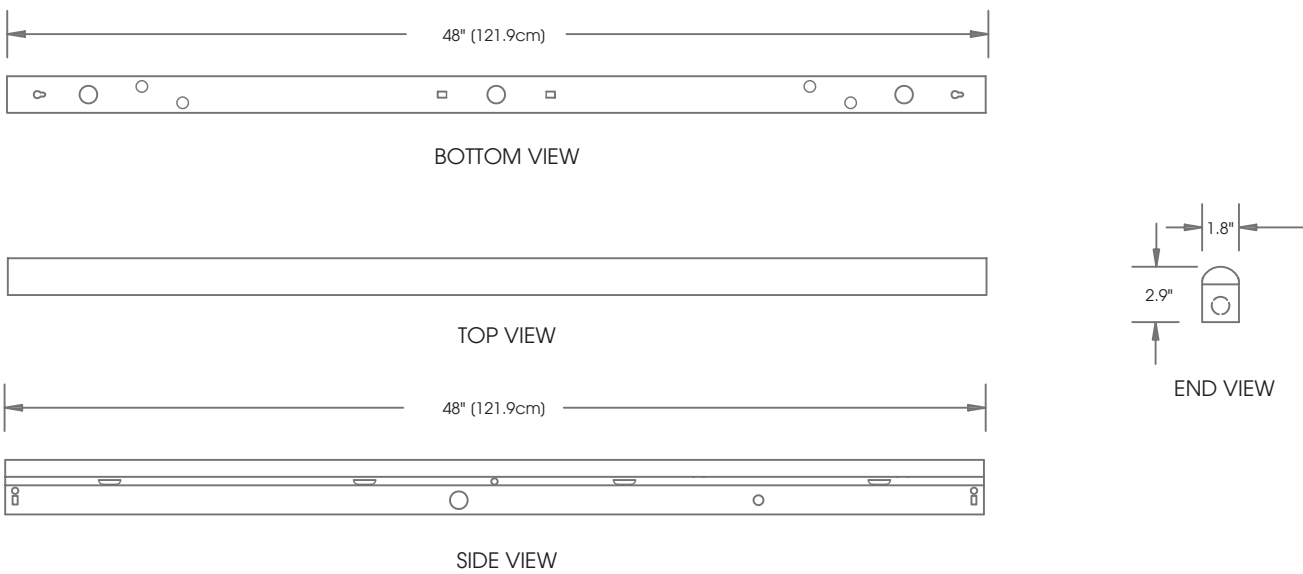
- ETL listed (UL 1598), CSA C22.2
- DLC Premium
- RoHS Compliant
- Title 47 CFR 15, Class A and ICES-005
- LM-79, LM 80 and TM-21 tests and reports are performed in accordance to IESNA standards

DIMENSIONS & DRAWINGS²

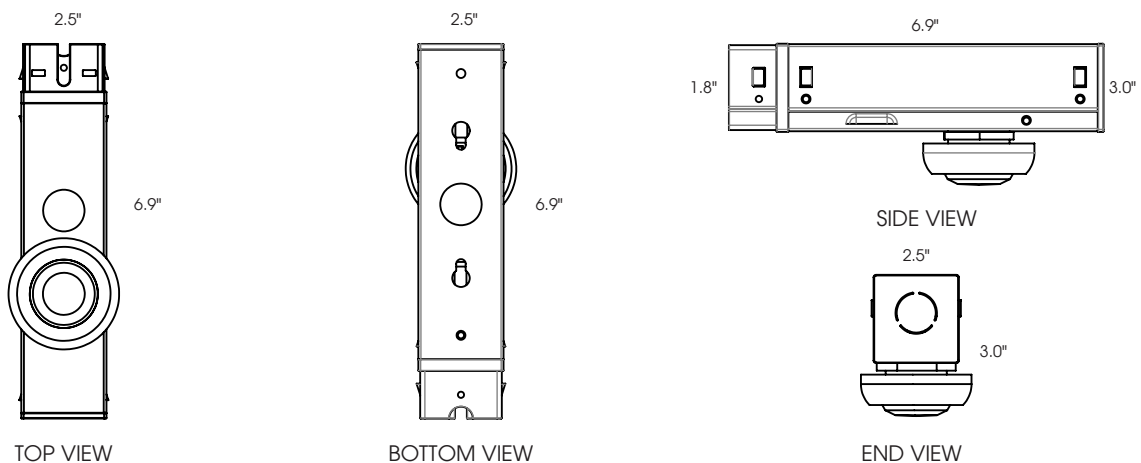
Model	Length (in)	Width (in)	Depth (in)	Weight (lb)
4' FXT/LNK	48.0	1.8	2.8	4.4
LS-OCC FXT/LNK	6.9	2.5	2.8	0.7

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

4' Fixture (FXT/LNK)



LS-OCC Sensor (FXT/LNK)





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