

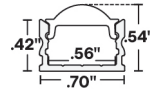
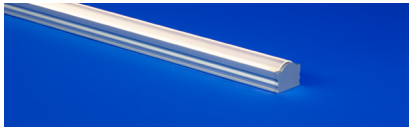


LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed



Declare.



- Shallow, low-profile linear fixture for surface or recessed installations
- Produces a 17° beam angle
- Mounting options include stainless steel clips, magnets, and low-profile magnet mounts
- Features painted end caps to match extrusion finish
- Suitable for installation in the storage area of a clothes closet when specified with LEDs at 4.0 watts or less per foot per NEC regulations
- Can be suitable for exterior use when specified as wet, contact factory for more information

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PRODUCT	WATTS/FT	CCT	RATED	EFFICIENCY	LENS	EXTERNAL LOUVER	WIRE INPUT/ OUTPUT	CONNECTOR / WIRE IN	CONNECTOR / WIRE OUT	WIRE COLOR	WIRE TYPE	MOUNTING	FINISH	LENGTH (IN)	EXACT/ OPTIMAL
LL2SW				STD	17DEG										

Sample Part Number: LL2SW-5.0-30-DRY-STD-17-P1-BW-BW-BK-CL2-SST-BK-48"-E

<div>1</div> <div>PRODUCT</div> <div>LL2SW</div> <div>See following pages for compatible power supplies.</div>	<div>2</div> <div>WATTS/FT</div> <div><div>1.51.5W/ft</div><div>3.03.0W/ft</div><div>4.04.0W/ft</div><div>5.05.0W/ft</div></div> <div><div>1.51.5W/ft</div><div>3.03.0W/ft</div><div>4.04.0W/ft</div><div>5.05.0W/ft</div></div>	<div>3</div> <div>CCT</div> <div><div>202000K</div><div>222200K</div><div>242400K</div><div>272700K</div><div>303000K</div><div>353500K</div><div>404000K</div></div> <div><div>242400K</div><div>272700K</div><div>303000K</div><div>353500K</div><div>404000K</div></div>	<div>4</div> <div>RATED</div> <div><div>DRYIP20</div><div>WETIP67</div></div> <div><div>DMPIP54</div></div>	<div>5</div> <div>EFFICIENCY</div> <div><div>STDStandard</div></div>	<div>6</div> <div>LENS</div> <div><div>17DEGOptical 17°</div><div>For representation of LED visibility, see Diode Visibility section on following pages. For beam angles, see Photometric Performance section on following pages</div></div>	<div>7</div> <div>EXTERNAL LOUVER</div> <div><div>L1-WHWhite Plastic</div><div>L1-BKBlack Plastic</div><div>N/ANo Louver</div><div>Louvers are shipped separately and require field assembly</div></div>
<div>8</div> <div>WIRE INPUT/OUTPUT</div> <div><div>S1Single 1 (Input only) - End Feed</div><div>S2Single 2 (Input only) - Bottom Feed</div><div>For continuous mounting, consider bottom feed.</div></div> <div><div>P1Pass Through 1 (Input/output) - End Feed</div><div>P2Pass Through 2 (Input/output) - Bottom Feed</div><div>For continuous mounting, consider bottom feed.</div></div>	<div>9</div> <div>CONNECTOR/WIRE IN</div> <div><div>BWBare Wire (Standard 24")</div><div>BRLBarrel</div><div>CON6Connector 6"</div><div>CON24Connector 24"</div><div>Connector/Wire In not needed to specify product. Typical selection is BW. BW: Standard length is 24"; Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div></div> <div><div>BWBare Wire (Standard 24")</div><div>BRLBarrel</div><div>CON6Connector 6"</div><div>CON24Connector 24"</div><div>Connector/Wire In not needed to specify product. Typical selection is BW. BW: Standard length is 24"; Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div></div>	<div>10</div> <div>CONNECTOR/WIRE OUT</div> <div><div>CLSClosed End (No feed)</div></div> <div><div>BWBare Wire (Standard 24")</div><div>BRLBarrel</div><div>CON6Connector 6"</div><div>CON24Connector 24"</div><div>Connector/Wire Out not needed to specify product. Typical selection is CLS or BW. BW: Standard length is 24"; Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div></div>	<div>11</div> <div>WIRE COLOR</div> <div><div>WHWhite</div><div>BKBlack</div><div>N/AFor Barrel</div><div>wet barrel only available in black</div></div>			
<div>12</div> <div>WIRE TYPE</div> <div><div>CL2Class 2</div><div>CL2PPlenum Rated</div><div>N/AFor Barrel</div><div>CL2P only available with bare wire leads (BW)</div></div>	<div>13</div> <div>MOUNTING</div> <div><div>SSTStainless Steel</div><div>M4Low Profile Magnet</div><div>MGMagnet</div></div>	<div>14</div> <div>FINISH</div> <div><div>STSatin</div><div>BKBlack</div></div>	<div>15</div> <div>LENGTH (IN)</div> <div><div>Fixture length min 12", max 98.43" not including end caps. Tolerance +0 – 1/8". Consult factory for lengths under 12".</div></div>	<div>16</div> <div>EXACT/OPTIMAL</div> <div><div>OOptimal Illumination</div><div>EExact Specified Length</div><div>Exact fixtures are the exact length specified +0 – 1/8". Optimal fixtures' length is rounded down with illumination end to end. See Exact/Optimal Fixture Length charts.</div></div>		

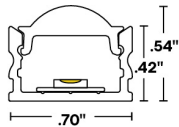
5 year warranty | Warranty only valid with QTL power supplies | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance



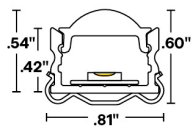
LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

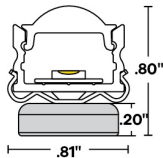
1 PRODUCT - DIMENSIONS



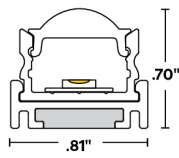
Profile with optical lens



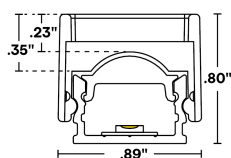
Profile with optical lens and stainless steel mounting clip



Profile with optical lens magnet mounting clip



Profile with optical lens and low profile magnet



Profile with optical lens and plastic louver

2 DELIVERED LUMENS

[Calculated L70 = 70000 hrs]
Tested with LL2SW-**-30-DRY-STD

	1.5 W/FT		3.0 W/FT		4.0 W/FT		5.0 W/FT	
	LM/FT	CRI	LM/FT	CRI	LM/FT	CRI	LM/FT	CRI
17	148	98	259	98	321	98	391	98

6 DIODE VISIBILITY

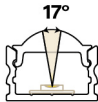


Optical lens

PHOTOMETRIC PERFORMANCE

Nominal beam spread shown, beam spread varies based on light engine. For more detailed information, see photometric data.

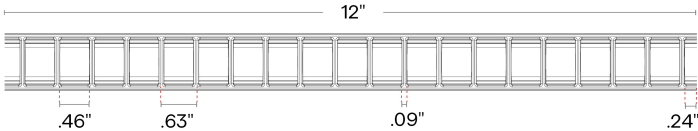
17DEG



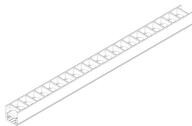
Optical 17°

7 EXTERNAL LOUVER

PLASTIC



L1-XX



Lumen Multiplier

WH

BK



0.72

0.53

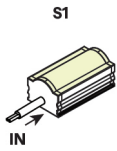


LALO-OPTICS (02) STATIC WHITE

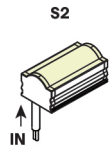
24VDC Linear Fixtures - Surface & Recessed

8 WIRE INPUT/OUTPUT

SINGLE (Input only)

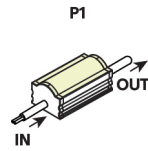


End Feed

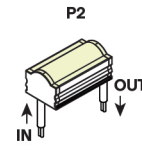


Bottom Feed

PASS THROUGH (Input/Output)

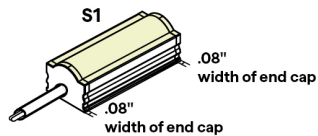


End Feed

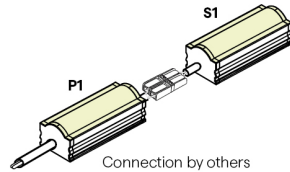


Bottom Feed

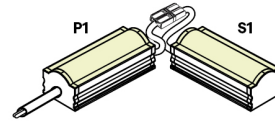
CONFIGURATION OPTIONS



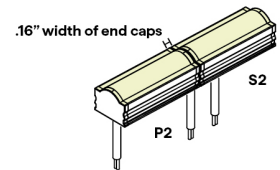
Single End Feed



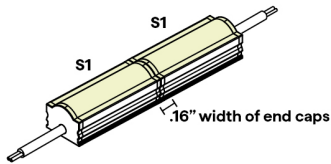
Connection by others
Non-Continuous End Feed



Connection by others
Non-Continuous Corner Feed



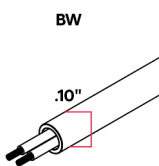
Continuous Bottom Feed



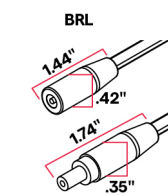
Continuous End to End Feed

9 / 10 CONNECTOR/WIRE - IN/OUT

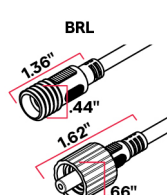
Connector/Wire In or Out not needed to specify product. Standard configuration is BW for Wire In and CLS for Wire out



Bare Wire 24"
Stranded 22 AWG



Barrel 6" - DRY/DMP |
22 AWG



Barrel 6" - WET | 22 AWG



6" or 24" Overall
Wire Connector | 22 AWG
IP67 Rated, UL Listed

11 WIRE COLOR





LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

13 MOUNTING

SST



Stainless Steel Clip

2 clips provided for 4' or less; 4 clips provided for greater than 4'

To order separately use SST-01

Each clip comes with a #4 x 5/8" Flat Head SS

M4



Low Profile Magnet

One M4 provided per foot.

To order separately use MG-04

MMA-04



Magnet Mount Accessory for M4

Sold separately, to order use MMA-04

Each bracket comes with 2 #6 x 5/8" Flat Head SS

Required when mounting to a non-magnetic surface

MG



Magnet Clip

One MG provided per foot

To order separately use MG-01

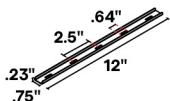
14 FINISH



Satin

Black

MMA-01



Magnet Mount Accessory of MG-01

Sold separately, to order use MMA-01

Each bracket comes with 2 #6 x 5/8" Flat Head SS

Required when mounting to a non-magnetic surface

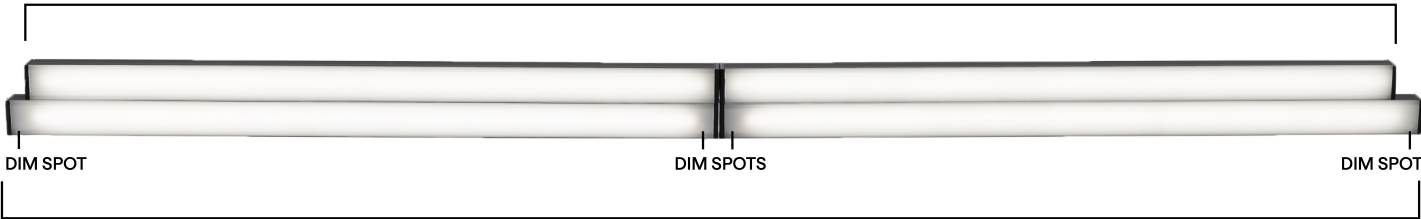
16 EXACT/OPTIMAL FIXTURE LENGTH

[E/O Length Calculator →](#)

[E/O Explained →](#)

Exact fixtures are the exact length specified. Optimal fixtures' length is rounded down based on LED cut points to allow the fixture to be illuminated end to end. For runs with multiple fixtures that need to fill a specific length, it's recommended to order all optimal fixtures with an exact fixture at the end of the run.

Optimal Fixtures



Exact Fixtures



LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

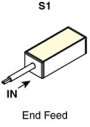
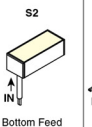
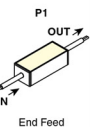
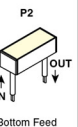
SW DRY, DMP LENGTHS BY INCH

Available in any length in between 12" and 98.43", chart below shows example lengths. Exact fixtures are the length specified. Optimal fixtures' length is rounded down with illumination end to end. All fixtures' tolerance is +0 - 1/8". Consult factory for lengths under 12".

EXACT LENGTH

Requested Length	Potential dim spot on either end of fixture
12"	.5"
13"	.5"
14"	.5"
15"	.5"
16"	.5"
17"	.5"
18"	.5"
19"	.5"
20"	.5"
21"	.5"
22"	.5"
23"	.5"
24"	.5"
36"	.5"
48"	.5"
60"	.5"
72"	.5"
84"	.5"
96"	.5"

OPTIMAL LENGTH

Requested Nominal Length	S1 & S2		P1 & P2	
				
12"	11.41"		11.66"	
13"	12.41"		12.66"	
14"	13.41"		13.66"	
15"	14.41"		14.66"	
16"	15.41"		15.66"	
17"	16.41"		16.66"	
18"	17.41"		17.66"	
19"	18.41"		18.66"	
20"	19.41"		19.66"	
21"	20.41"		20.66"	
22"	21.41"		21.66"	
23"	22.41"		22.66"	
24"	23.41"		23.66"	
36"	35.41"		35.66"	
48"	47.41"		47.66"	
60"	59.41"		59.66"	
72"	71.41"		71.66"	
84"	83.41"		83.66"	
96"	95.41"		95.66"	

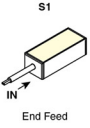
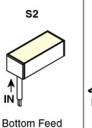
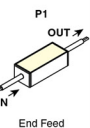
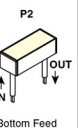
SW WET LENGTHS BY INCH

Available in any length in between 12" and 98.43", chart below shows example lengths. Exact fixtures are the length specified. Optimal fixtures' length is rounded down with illumination end to end. All fixtures' tolerance is +0 - 1/8". Consult factory for lengths under 12".

EXACT LENGTH

Requested Length	Potential dim spot on either end of fixture
12"	.5"
13"	.5"
14"	.5"
15"	.5"
16"	.5"
17"	.5"
18"	.5"
19"	.5"
20"	.5"
21"	.5"
22"	.5"
23"	.5"
24"	.5"
36"	.5"
48"	.5"
60"	.5"
72"	.5"
84"	.5"
96"	.5"

OPTIMAL LENGTH

Requested Nominal Length	S1 & S2		P1 & P2	
				
12"	11.41"		11.66"	
13"	12.41"		12.66"	
14"	13.41"		13.66"	
15"	14.41"		14.66"	
16"	15.41"		15.66"	
17"	16.41"		16.66"	
18"	17.41"		17.66"	
19"	18.41"		18.66"	
20"	19.41"		19.66"	
21"	20.41"		20.66"	
22"	21.41"		21.66"	
23"	22.41"		22.66"	
24"	23.41"		23.66"	
36"	35.41"		35.66"	
48"	47.41"		47.66"	
60"	59.41"		59.66"	
72"	71.41"		71.66"	
84"	83.41"		83.66"	
96"	95.41"		95.66"	



LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

COMPATIBLE POWER SUPPLIES

See power supplies cut sheets for more information. Data subject to change, all data has +/- 5% tolerance.

DIM TO LEVEL	INDOOR		OUTDOOR	
	SW24/1.5-4.0	SW24/5.0, SW-HE, SW-HE+	SW24/1.5-4.0	SW24/5.0, SW-HE, SW-HE+
Dim to Black	Q6M-DC+CAP QTM-DC+CAP iQ-PH iQ-PH+QD1	Q6M-DC+CAP QTM-DC+CAP iQ-PH iQ-PH+QD1	QOM-DC+CAP QOM-PH	QOM-DC+CAP QOM-PH
0.1%	QT-CAB-QZ-PH/0-10V QT-CAB-eLED+0-10V QT-CAB-eLED+0-10V-AWN QTM-eLED+0-10V QTM-eLED+0-10V-AWN QZ-BOWTIE+DIMMER QZ-DMX QZ-PH/0-10V QZ-STICK-PH/0-10V QZLP	QT-CAB-QZ-PH/0-10V QT-CAB-eLED+0-10V QT-CAB-eLED+0-10V-AWN QTM-eLED+0-10V QTM-eLED+0-10V-AWN QZ-BOWTIE+DIMMER QZ-DMX QZ-PH/0-10V QZ-STICK-PH/0-10V QZLP	Q-SET-QZ-DMX Q-SET-QZ-PH/0-10V Q-SET-eLED+0-10V QOM-eLED+0-10V QZ-DMX QZ-PH/0-10V	Q-SET-QZ-DMX Q-SET-QZ-PH/0-10V Q-SET-eLED+0-10V QOM-eLED+0-10V QZ-DMX QZ-PH/0-10V
1%	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT6-AWN QTM-eLED(E) QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT6-AWN QZ-DALI-DT6	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT6-AWN QTM-eLED(E) QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT6-AWN QZ-DALI-DT6	Q-SET+QZ-DALI-DT6 QOM-eLED+DALI-DT6 QOM-eLED+PS-DALI-DT6	Q-SET+QZ-DALI-DT6 QOM-eLED+DALI-DT6 QOM-eLED+PS-DALI-DT6
10%	Non-Dim Power Supply with SW App Dongle	Non-Dim Power Supply with SW App Dongle	Q-HEX-mini-DC Q-SET-mLED	


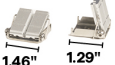








LALO-OPTICS (02) STATIC WHITE


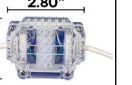





24VDC Linear Fixtures - Surface & Recessed

DIMMING PROTOCOL	INDOOR		OUTDOOR	
	SW24/1.5-4.0	SW24/5.0, SW-HE, SW-HE+	SW24/1.5-4.0	SW24/5.0, SW-HE, SW-HE+
Non-Dim	QT-CAB-eLED-ND QTM-eLED-ND QZ-ND	QT-CAB-eLED-ND QTM-eLED-ND QZ-ND	Q-SET-QZ-ND Q-SET-eLED-ND QOM-eLED-ND QZ-ND iQ-ND-50-65	Q-SET-QZ-ND Q-SET-eLED-ND QOM-eLED-ND QZ-ND iQ-ND-50-65
Phase	Q6M-DC+CAP QT-CAB-QZ-PH/0-10V QTM-DC+CAP QTM-eLED(E) QZ-BOWTIE+DIMMER QZ-PH/0-10V QZ-STICK-PH/0-10V QZLP iQ-PH iQ-PH+QD1	Q6M-DC+CAP QT-CAB-QZ-PH/0-10V QTM-DC+CAP QTM-eLED(E) QZ-BOWTIE+DIMMER QZ-PH/0-10V QZ-STICK-PH/0-10V QZLP iQ-PH iQ-PH+QD1	Q-HEX-mini-DC Q-SET-QZ-PH/0-10V Q-SET-mLED QOM-DC+CAP QOM-PH QZ-PH/0-10V	Q-SET-QZ-PH/0-10V QOM-DC+CAP QOM-PH QZ-PH/0-10V
0-10V	QT-CAB-QZ-PH/0-10V QT-CAB-eLED+0-10V QT-CAB-eLED+0-10V-AWN QTM-eLED+0-10V QTM-eLED+0-10V-AWN QZ-PH/0-10V QZ-STICK-PH/0-10V QZLP	QT-CAB-QZ-PH/0-10V QT-CAB-eLED+0-10V QT-CAB-eLED+0-10V-AWN QTM-eLED+0-10V QTM-eLED+0-10V-AWN QZ-PH/0-10V QZ-STICK-PH/0-10V QZLP	Q-SET-QZ-PH/0-10V Q-SET-eLED+0-10V QOM-eLED+0-10V QZ-PH/0-10V	Q-SET-QZ-PH/0-10V Q-SET-eLED+0-10V QOM-eLED+0-10V QZ-PH/0-10V
Lutron Athena	QT-CAB-eLED+0-10V-AWN QT-CAB-eLED+DALI-DT6-AWN QTM-eLED+0-10V-AWN QTM-eLED+DALI-DT6-AWN	QT-CAB-eLED+0-10V-AWN QT-CAB-eLED+DALI-DT6-AWN QTM-eLED+0-10V-AWN QTM-eLED+DALI-DT6-AWN		
ECO System	QTM-eLED(E)	QTM-eLED(E)		
DMX	QZ-DMX	QZ-DMX	Q-SET-QZ-DMX QZ-DMX	Q-SET-QZ-DMX QZ-DMX
DALI-2: DT6	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT6-AWN QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT6-AWN QZ-DALI-DT6	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT6-AWN QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT6-AWN QZ-DALI-DT6	Q-SET+QZ-DALI-DT6 QOM-eLED+DALI-DT6	Q-SET+QZ-DALI-DT6 QOM-eLED+DALI-DT6
SCENE App Dimmed	Non-Dim Power Supply with SW App Dongle	Non-Dim Power Supply with SW App Dongle		

COMPATIBLE MOUNTING ACCESSORIES

HINGE - HMB-M  1.41" .71" Adjustable mounting bracket - Medium	HINGE - HMB-L  1.46" 1.29" Adjustable mounting bracket - Large	HINGE - HMB-XL  1.46" 4" Adjustable mounting bracket - XLarge	Q-PIVOT  .75" 1.03" Small mounting accessory	Q-ANGLE  2.23" 1.38" Adjustable mounting accessory	NU-GRAZER  U Mounting Bracket	NJ-GRAZER  J Mounting Bracket	BL-GRAZER  Backwards L Mounting Bracket
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COMPATIBLE WIRING ACCESSORIES

Q-mini-J  2" 1.25" UL Listed, miniature junction box, DRY/DMP (WET rated with silicone)	Q-mini-J5  2.80" 2.27" UL Listed, miniature junction box, DRY/DMP (WET rated with silicone)	BARREL-EXT  8ft barrel cable extender DRY ONLY	BARREL FOUR-FER  Splits lead from one to four LED Barrel connector fixtures, DRY/DMP	CON120-EXT  10ft Con cable extender DRY/DMP/WET	CON FOUR-FER  Splits lead from one to four LED Con connectors DRY/DMP/WET	CON M - BARREL F  Male con to barrel cable adaptor DRY/DMP
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LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

COMPATIBLE CONTROL ACCESSORIES

SCENE APP DONGLE



Wi-Fi or Bluetooth
Connectivity