

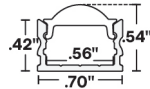
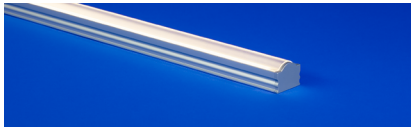


# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

## 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
PRODUCT	WATTS/ FT	CCT	RATED	EFFICIENCY	LENS	WIRE INPUT/ OUTPUT	CONNECTOR/ WIRE IN	CONNECTOR/ WIRE OUT	WIRE COLOR	WIRE TYPE	MOUNTING	FINISH	LENGTH (IN)	EXACT/ OPTIMAL
LL2SD				STD	17DEG									

Sample Part Number: LL2SD-3.0-30-DRY-STD-17-P1-BW-BW-BK-CL2-SST-BK-48"-E

<div>1</div> <div>PRODUCT</div> <div>LL2SD</div> <div>See following pages for compatible power supplies.</div>	<div>2</div> <div>WATTS/FT</div> <div>2.0 2.0W/ft 4.0 4.0W/ft 6.0 6.0W/ft</div>	<div>3</div> <div>CCT</div> <div>24 2400K 27 2700K 30 3000K 35 3500K 40 4000K</div>	<div>4</div> <div>RATED</div> <div>DRY IP20</div>	<div>5</div> <div>EFFICIENCY</div> <div>STD Standard</div>	<div>6</div> <div>LENS</div> <div>17DEG Optical 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. For optional snap-on louver ordering, see External Louver Accessory section on following pages</div>
	<div>2.0 2.0W/ft 4.0 4.0W/ft</div>	<div>24 2400K 27 2700K 30 3000K 35 3500K 40 4000K</div>	<div>WET IP67</div>		
<div>7</div> <div>WIRE INPUT/OUTPUT</div> <div>S1 Single 1 (Input only) - End Feed S2 Single 2 (Input only) - Bottom Feed</div> <div>For continuous mounting, consider bottom feed.</div>	<div>8</div> <div>CONNECTOR/WIRE IN</div> <div>BW Bare Wire (Standard 24") BRL Barrel CON6 Connector 6" CON24 Connector 24"</div> <div>BW: Standard length is 24". Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div>	<div>9</div> <div>CONNECTOR/WIRE OUT</div> <div>CLS Closed End (No feed)</div>	<div>10</div> <div>WIRE COLOR</div> <div>WH White BK Black N/A For Barrel</div> <div>wet barrel only available in black</div>		
<div>P1 Pass Through 1 (Input/output) - End Feed P2 Pass Through 2 (Input/output) - Bottom Feed</div> <div>For continuous mounting, consider bottom feed.</div>	<div>BW Bare Wire (Standard 24") BRL Barrel CON6 Connector 6" CON24 Connector 24"</div> <div>BW: Standard length is 24". Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div>	<div>BW Bare Wire (Standard 24") BRL Barrel CON6 Connector 6" CON24 Connector 24"</div> <div>BW: Standard length is 24". Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div>			
<div>11</div> <div>WIRE TYPE</div> <div>CL2 Class 2 CL2P Plenum Rated N/A For Barrel</div> <div>CL2P only available with bare wire leads (BW)</div>	<div>12</div> <div>MOUNTING</div> <div>SST Stainless Steel M4 Low Profile Magnet MG Magnet</div>	<div>13</div> <div>FINISH</div> <div>ST Satin BK Black</div>	<div>14</div> <div>LENGTH (IN)</div> <div>Minimum length is 12", maximum length is 98" not including end caps. Contact us for lengths under 12".</div>	<div>15</div> <div>EXACT/OPTIMAL</div> <div>O Optimal Illumination E Exact Specified Length</div> <div>Exact fixtures match the exact length you specify, but they may have dim spots at the ends. Optimal fixtures are slightly shorter than the length specified, but provide full illumination from end to end. See Exact/Optimal Fixture Length charts.</div>	

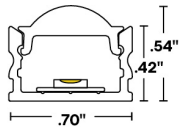
5 year warranty | Warranty only valid with QTL power supplies | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance



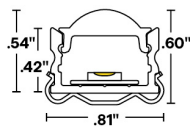
# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

24VDC Linear Fixtures - Surface & Recessed

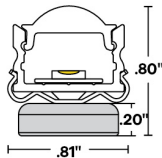
## 1 PRODUCT - DIMENSIONS



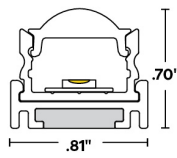
Profile with optical lens



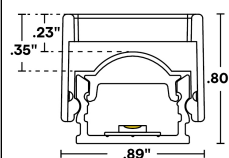
Profile with optical lens and stainless steel mounting clip



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, L70 = 50000 for HE+]  
Tested with LL2SW-\*\*-30-DRY-STD

	1.5HE W/FT		3.0HE W/FT		3.0HE+ W/FT		6.0HE W/FT		6.0HE+ W/FT	
	LM/FT	CRI	LM/FT	CRI	LM/FT	CRI	LM/FT	CRI	LM/FT	CRI
17	193	98	355	98	506	92	672	98	935	92

## 6 DIODE VISIBILITY

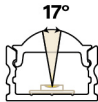


Optical lens

## PHOTOMETRIC PERFORMANCE

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

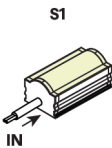
17DEG



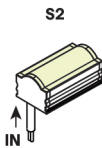
Optical 17°

## 7 WIRE INPUT/OUTPUT

SINGLE (Input only)

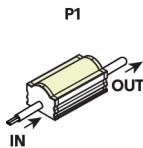


End Feed

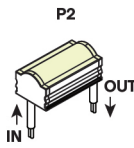


Bottom Feed

PASS THROUGH (Input/Output)



End Feed



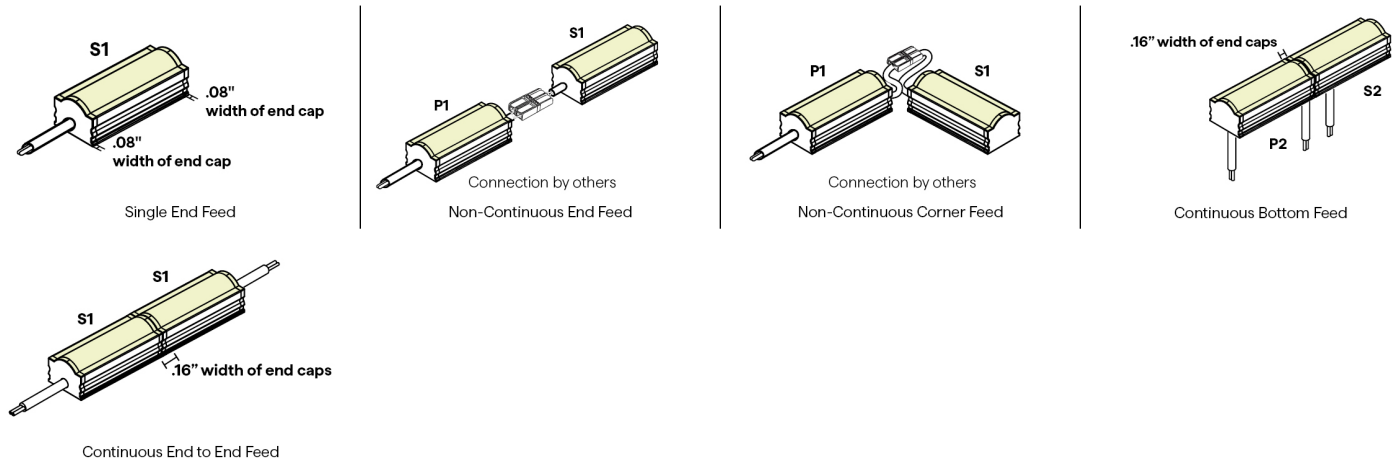
Bottom Feed



# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

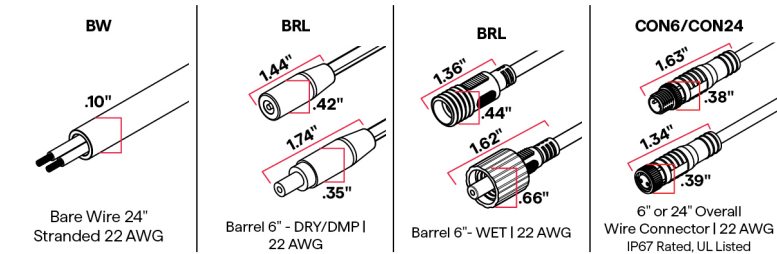
24VDC Linear Fixtures - Surface & Recessed

## CONFIGURATION OPTIONS



## 8 / 9 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

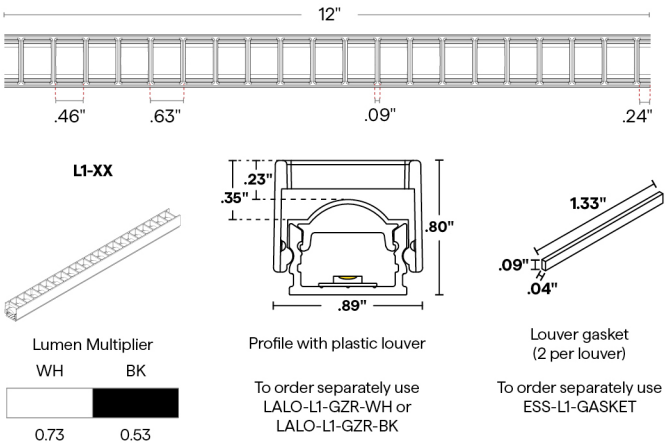


## 10 WIRE COLOR



## EXTERNAL LOUVER ACCESSORY

### PLASTIC



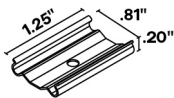


# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

24VDC Linear Fixtures - Surface & Recessed

## 12 MOUNTING

SST



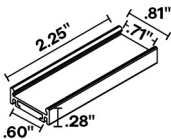
Stainless Steel Clip

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

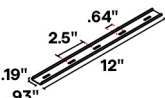


Low Profile Magnet

One M4 provided per foot.

To order separately use MG-04

MMA-04



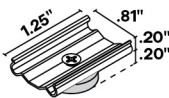
Magnet Mount Accessory for M4

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

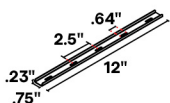
## 13 FINISH



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

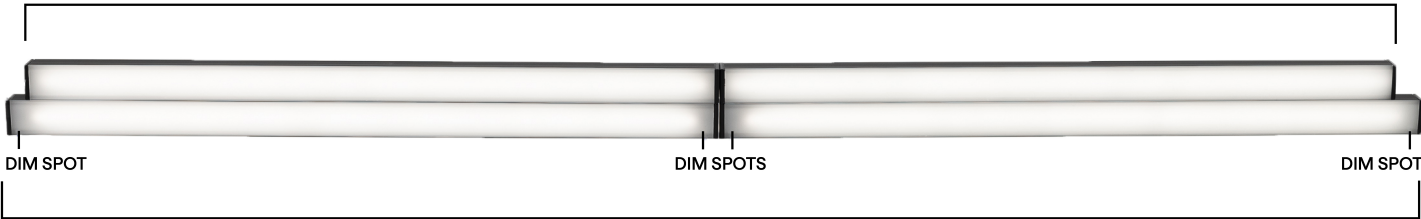
## 15 EXACT/OPTIMAL FIXTURE LENGTH

[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



# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

## 24VDC Linear Fixtures - Surface & Recessed

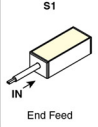
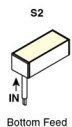
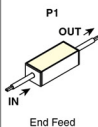
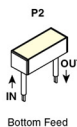
### SW-HE, SW-HE+ DRY LENGTHS BY INCH

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"	1"
13"	0.5"
14"	1"
15"	0.5"
16"	1"
17"	0.5"
18"	1"
19"	0.5"
20"	1"
21"	0.5"
22"	1"
23"	0.5"
24"	1"
36"	1"
48"	1"
60"	1"
72"	1"
84"	1"
96"	1"

#### OPTIMAL LENGTH: highlighted rows are closest to requested nominal length

Requested Nominal Length	S1 & S2		P1 & P2	
				
12"		10.41"		10.66"
13"		12.41"		12.66"
14"		12.41"		12.66"
15"		14.41"		14.66"
16"		14.41"		14.66"
17"		16.41"		16.66"
18"		16.41"		16.66"
19"		18.41"		18.66"
20"		18.41"		18.66"
21"		20.41"		20.66"
22"		20.41"		20.66"
23"		22.41"		22.66"
24"		22.41"		22.66"
36"		34.41"		34.66"
48"		46.41"		46.66"
60"		58.41"		58.66"
72"		70.41"		70.66"
84"		82.41"		82.66"
96"		94.41"		94.66"

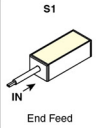
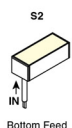
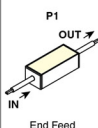
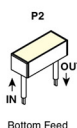
### SW-HE+ WET LENGTHS BY INCH

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"	1"
13"	0.5"
14"	1"
15"	0.5"
16"	1"
17"	0.5"
18"	1"
19"	0.5"
20"	1"
21"	0.5"
22"	1"
23"	0.5"
24"	1"
36"	1"
48"	1"
60"	1"
72"	1"
84"	1"
96"	1"

#### OPTIMAL LENGTH: highlighted rows are closest to requested nominal length

Requested Nominal Length	S1 & S2		P1 & P2	
				
12"		10.61"		10.76"
13"		12.61"		12.76"
14"		12.61"		12.76"
15"		14.61"		14.76"
16"		14.61"		14.76"
17"		16.61"		16.76"
18"		16.61"		16.76"
19"		18.61"		18.76"
20"		18.61"		18.76"
21"		20.61"		20.76"
22"		20.61"		20.76"
23"		22.61"		22.76"
24"		22.61"		22.76"
36"		34.61"		34.76"
48"		46.61"		46.76"
60"		58.61"		58.76"
72"		70.61"		70.76"
84"		82.61"		82.76"
96"		94.61"		94.76"



ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

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
	SW24/5.0, SW-HE, SW-HE+	SW24/5.0, SW-HE, SW-HE+
Dim to Black	Q6M-DC+CAP QTM-DC+CAP iQ-PH iQ-PH+QD1	QOM-DC+CAP QOM-PH
0.1%	QT-CAB-QZ-PH/0-10V QT-CAB-eLED+0-10V QT-CAB-eLED+0-10V-AWN QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT6-AWN QTM-eLED+0-10V QTM-eLED+0-10V-AWN QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT6-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 QOM-eLED+DALI-DT6 QOM-eLED+PS-DALI-DT6 QZ-DMX QZ-PH/0-10V
1%	QTM-eLED(E) QZ-DALI-DT6	Q-SET+QZ-DALI-DT6
10%	Non-Dim Power Supply with SW App Dongle	



# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

24VDC Linear Fixtures - Surface & Recessed

DIMMING PROTOCOL	INDOOR	OUTDOOR
	SW24/5.0, SW-HE, SW-HE+	SW24/5.0, SW-HE, SW-HE+
Non-Dim	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
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	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	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	
ECO System	QTM-eLED(E)	
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	Q-SET+QZ-DALI-DT6 QOM-eLED+DALI-DT6
SCENE App Dimmed	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

## 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



# ESSENTIALS LALO-OPTICS (02) STATIC WHITE STANDARD

24VDC Linear Fixtures - Surface & Recessed

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## COMPATIBLE CONTROL ACCESSORIES

### SCENE APP DONGLE



Wi-Fi or Bluetooth  
Connectivity