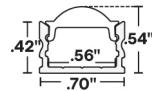
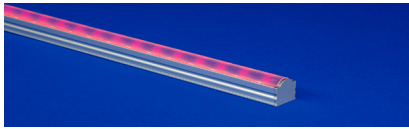




# ESSENTIALS LALO-OPTICS (02)

## STATIC COLOR

24VDC Linear Fixtures - Surface & Recessed



- 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
- Red, Green, Blue or Amber LEDs available
- Q-Tran Red & Amber LED products are Florida Fish and Wildlife Conservation Commission certified, making them safe for turtles and other wildlife
- Can be suitable for exterior use when specified as wet, contact factory for more information
- Optional plastic louver accessory available in white or black for added glare control

### INFORMATION REQUIRED FOR LIGHTING SCHEDULE

1	2	3	4	5	6
PRODUCT	WATTS/ FT	CCT	RATED	EFFICIENCY	LENS
LL2SC	5.0			STD	17DEG

### ADDITIONAL INFORMATION REQUIRED TO ORDER

7	8	9	10	11	12	13	14	15
WIRE INPUT/ OUTPUT	CONNECTOR/ WIRE IN	CONNECTOR/ WIRE OUT	WIRE COLOR	WIRE TYPE	MOUNTING	FINISH	LENGTH (IN)	EXACT/ OPTIMAL

Sample Part Number: **LL2SC-5.0-GR-DRY-STD-17-P1-BW-BW-BK-CL2-SST-BK-48"-E**

<b>1 PRODUCT</b> <b>LL2SC</b> See following pages for compatible power supplies.	<b>2 WATTS/FT</b> <b>5.0</b> 5.0W/ft	<b>3 CCT</b> <b>A</b> Amber <b>B</b> Blue <b>G</b> Green <b>R</b> Red	<b>4 RATED</b> <b>DRY</b> IP20 <b>DMP</b> IP54 <b>WET</b> IP67 Can be suitable for exterior use, contact factory for more information	<b>5 EFFICIENCY</b> <b>STD</b> Standard	<b>6 LENS</b> <b>17DEG</b> Optical 17° 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			
<b>7 WIRE INPUT/OUTPUT</b> <b>SINGLE (Input only)</b> <b>S1</b> End Feed <b>S2</b> Bottom Feed For continuous mounting, consider bottom feed.  <b>PASS THROUGH (Input/output)</b> <b>P1</b> End Feed <b>P2</b> Bottom Feed For continuous mounting, consider bottom feed.	<b>8 CONNECTOR/WIRE IN</b> <b>BW</b> Bare Wire (Standard 24") <b>BRL</b> Barrel <b>CON6</b> Connector 6" <b>CON24</b> Connector 24" BW: Standard length is 24". Max length is 120". Request custom length by writing in part number next to BW (example: BW48)  <b>BW</b> Bare Wire (Standard 24") <b>BRL</b> Barrel <b>CON6</b> Connector 6" <b>CON24</b> Connector 24" BW: Standard length is 24". Max length is 120". Request custom length by writing in part number next to BW (example: BW48)	<b>9 CONNECTOR/WIRE OUT</b> <b>CLS</b> Closed End (No feed)  <b>BW</b> Bare Wire (Standard 24") <b>BRL</b> Barrel <b>CON6</b> Connector 6" <b>CON24</b> Connector 24" BW: Standard length is 24". Max length is 120". Request custom length by writing in part number next to BW (example: BW48)	<b>10 WIRE COLOR</b> <b>WH</b> White <b>BK</b> Black <b>N/A</b> For Barrel wet barrel only available in black	<b>11 WIRE TYPE</b> <b>CL2</b> Class 2 <b>CL2P</b> Plenum Rated <b>N/A</b> For Barrel CL2P only available with bare wire leads (BW)	<b>12 MOUNTING</b> <b>SST</b> Stainless Steel <b>M4</b> Low Profile Magnet <b>MG</b> Magnet	<b>13 FINISH</b> <b>ST</b> Satin <b>BK</b> Black <b>CU</b> Custom	<b>14 LENGTH (IN)</b> Minimum length is 12", maximum length is 98" not including end caps. Contact us for lengths under 12".	<b>15 EXACT/OPTIMAL</b> <b>O</b> Optimal Illumination <b>E</b> Exact Specified Length 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.

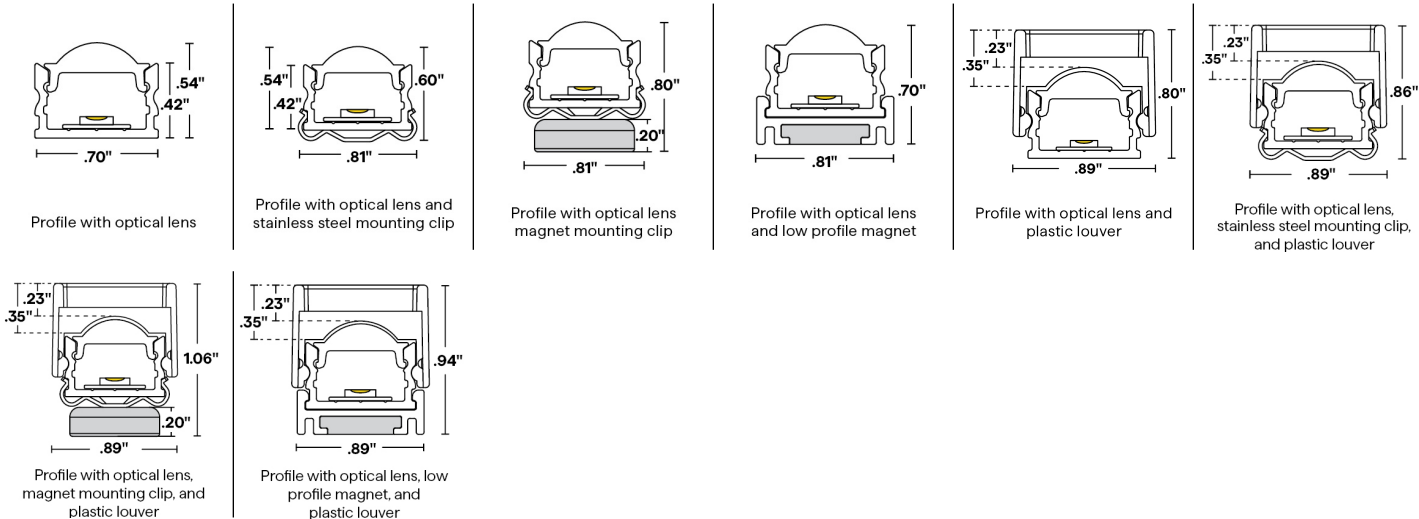
5 year warranty | Warranty only valid with QTL power supplies | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance | FWC rated Strips: DRY and WET rated, Red and Amber



# ESSENTIALS LALO-OPTICS (02) STATIC COLOR

## 24VDC Linear Fixtures - Surface & Recessed

### 1 PRODUCT - DIMENSIONS



### 2 DELIVERED LUMENS

[Calculated L70 = 30000 hrs]  
Tested with LL2SC-5.0-\*\*-DRY-STD

	Red		Green		Blue		Amber	
	LM/FT	WAVELENGTH	LM/FT	WAVELENGTH	LM/FT	WAVELENGTH	LM/FT	WAVELENGTH
17	90	633	485	517	126	466	81	597

### 6 DIODE VISIBILITY

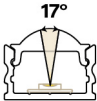


Optical lens

### PHOTOMETRIC PERFORMANCE

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

17DEG



Optical 17°

### TEMPERATURE RATINGS

		5.0 W/FT	
		Min	Max
DRY	Ambient Operating Temp - Surface	-4°F	125°F
DMP	Ambient Operating Temp - Surface	-4°F	120°F
WET	Ambient Operating Temp - Surface	-4°F	120°F

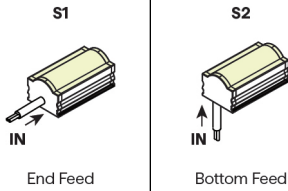


# ESSENTIALS LALO-OPTICS (02) STATIC COLOR

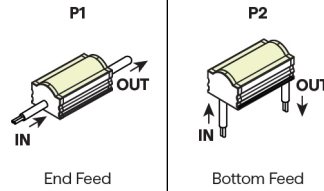
24VDC Linear Fixtures - Surface & Recessed

## 7 WIRE INPUT/OUTPUT

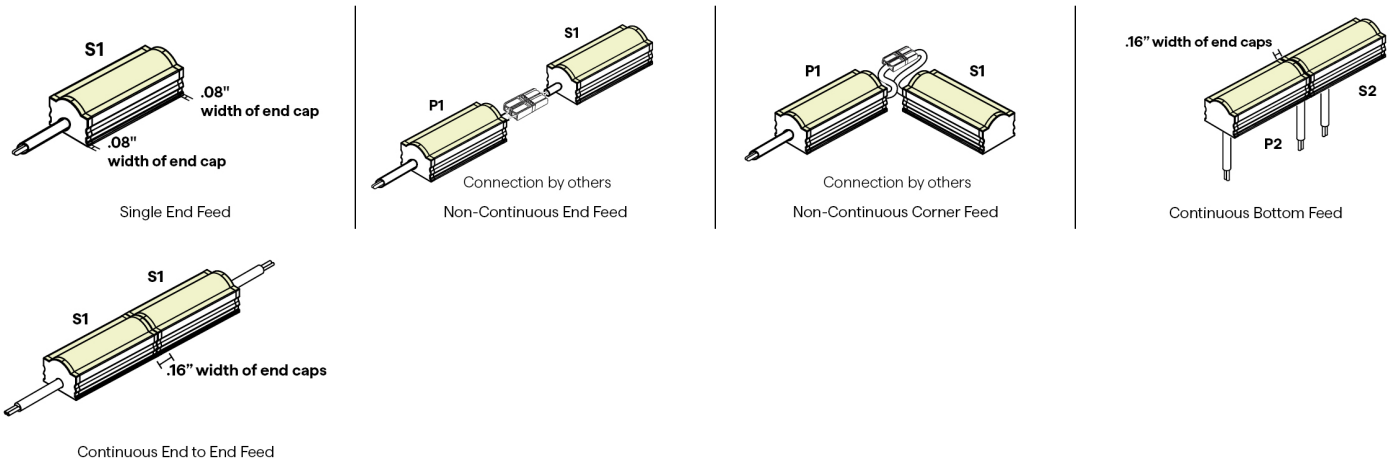
SINGLE (Input only)



PASS THROUGH (Input/Output)

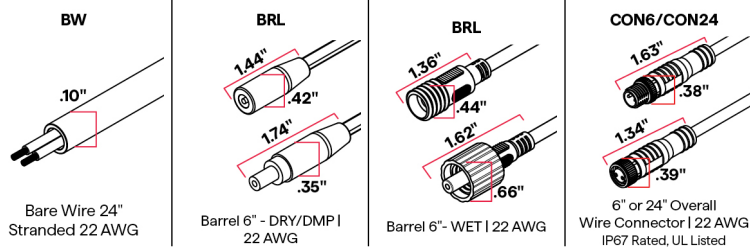


## CONFIGURATION OPTIONS

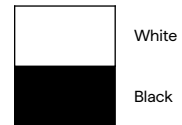


## 8 / 9 CONNECTOR/WIRE - IN/OUT

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



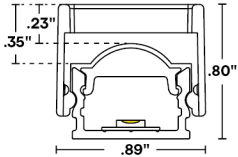
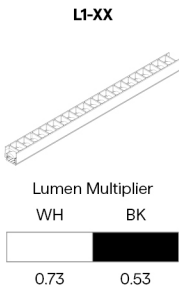
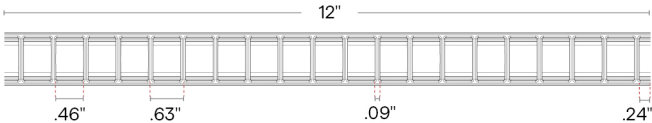


# ESSENTIALS LALO-OPTICS (02) STATIC COLOR

24VDC Linear Fixtures - Surface & Recessed

## EXTERNAL LOUVER ACCESSORY

PLASTIC

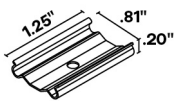


Profile with plastic louver

To order separately use  
LALO-L1-OPTICS-KIT-WH or  
LALO-L1-OPTICS-KIT-BK

## 12 MOUNTING

SST



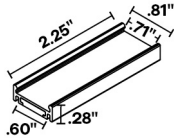
Stainless Steel Clip

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

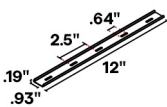


Low Profile Magnet

One M4 provided per foot.

To order separately use  
MG-04

MMA-04



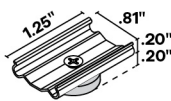
Magnet Mount  
Accessory for M4

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

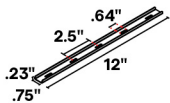


Satin

Black

Custom color available

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



# ESSENTIALS LALO-OPTICS (02) STATIC COLOR

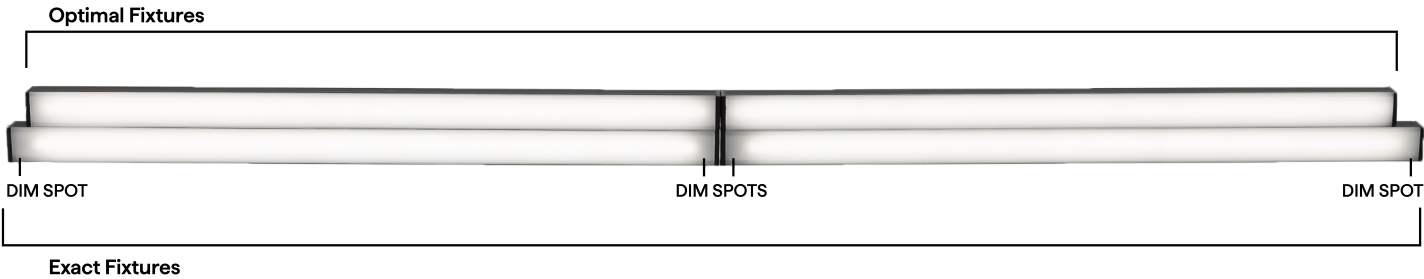
## 24VDC Linear Fixtures - Surface & Recessed

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.



### SC 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"	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	
	S1 End Feed	S2 Bottom Feed	P1 End Feed	P2 Bottom Feed
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"



# ESSENTIALS LALO-OPTICS (02) STATIC COLOR

## 24VDC Linear Fixtures - Surface & Recessed

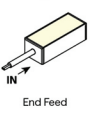
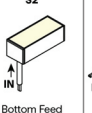
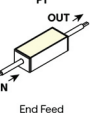
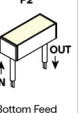
### SC WET LENGTHS BY INCH

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"

### 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
	SC	SC
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 COLOR

## 24VDC Linear Fixtures - Surface & Recessed

DIMMING PROTOCOL	INDOOR	OUTDOOR
	SC	SC
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