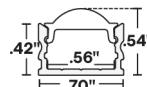




ESSENTIALS LALO-OPTICS (02)

STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed



410.2 & 410.16
Closet Rated
up to 4.0W/ft



EPD
ENVIRONMENTAL PRODUCT DECLARATION



SW/SW-HE
ONLY



SW/SW-HE
ONLY



Red List
Approved
Declare.

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

Sample Part Number: LL2SW-3.0HE-30-DRY-STD-17-P1-BW-BW-BK-CL2-SST-BK-48"-E

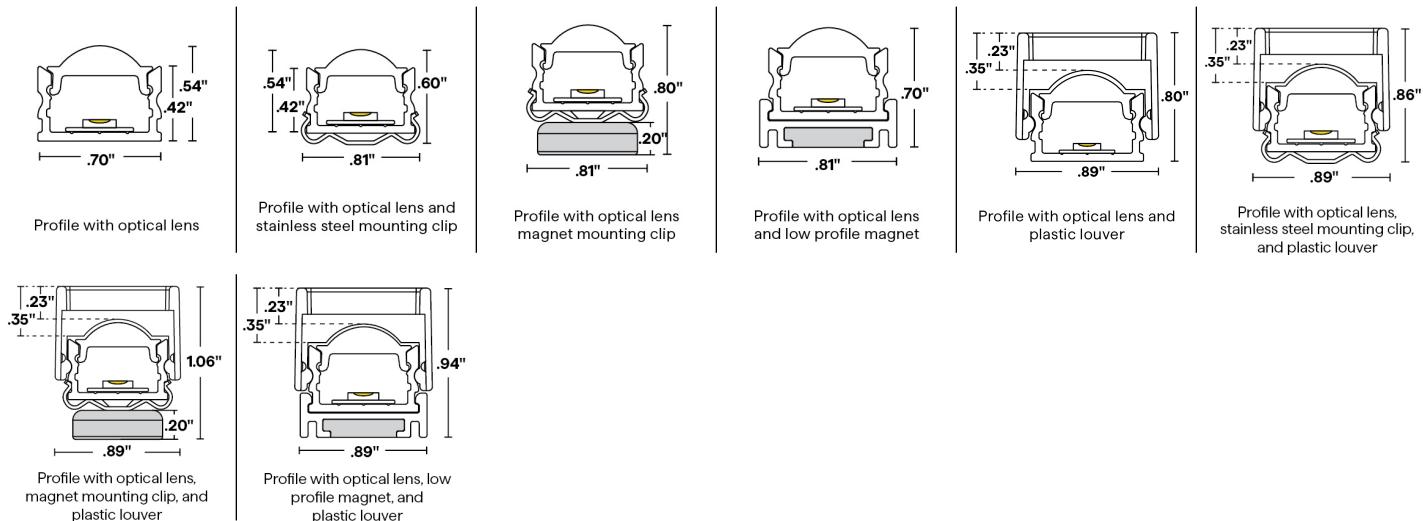
1 PRODUCT LL2SW LL2SW-USA Select USA option for BAA and BABA projects. SW and SW-HE only. Only DRY or WET ratings apply. See following pages for compatible power supplies.	2 WATTS/FT 1.5 1.5W/ft 3.0 3.0W/ft 4.0 4.0W/ft 5.0 5.0W/ft 1.5HE 1.5W/ft HE 3.0HE 3.0W/ft HE 6.0HE 6.0W/ft HE 3.0HE+ 3.0W/ft HE+ 6.0HE+ 6.0W/ft HE+ 1.5 1.5W/ft 3.0 3.0W/ft 4.0 4.0W/ft 5.0 5.0W/ft 1.5HE 1.5W/ft HE 3.0HE 3.0W/ft HE 6.0HE 6.0W/ft HE 1.5 1.5W/ft 3.0 3.0W/ft 4.0 4.0W/ft 5.0 5.0W/ft 3.0HE+ 3.0W/ft HE+ 6.0HE+ 6.0W/ft HE+	3 CCT 20 2000K 22 2200K 24 2400K 27 2700K 30 3000K 35 3500K 40 4000K 27 2700K 30 3000K 35 3500K 40 4000K 24 2400K 27 2700K 30 3000K 35 3500K 40 4000K 20 2000K 22 2200K 24 2400K 27 2700K 30 3000K 35 3500K 40 4000K 27 2700K 30 3000K 35 3500K 40 4000K	4 RATED DRY IP20 DMP IP54 WET IP67 Can be suitable for exterior use, contact factory for more information	5 EFFICIENCY STD Standard	6 LENS 17DEG 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
7 WIRE INPUT/OUTPUT S1 Single 1 (Input only) - End Feed S2 Single 2 (Input only) - Bottom Feed P1 Pass Through 1 (Input/output) - End Feed P2 Pass Through 2 (Input/output) - Bottom Feed	8 CONNECTOR/WIRE IN BW Bare Wire (Standard 24") BRL Barrel CON6 Connector 6" CON24 Connector 24" BW Bare Wire (Standard 24") BRL Barrel CON6 Connector 6" CON24 Connector 24"	9 CONNECTOR/WIRE OUT CLS Closed End (No feed) BW Bare Wire (Standard 24") BRL Barrel CON6 Connector 6" CON24 Connector 24"	10 WIRE COLOR WH White BK Black N/A For Barrel wet barrel only available in black		
For continuous mounting, consider bottom feed.	BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)	BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)			
11 WIRE TYPE CL2 Class 2 CL2P Plenum Rated N/A For Barrel CL2P only available with bare wire leads (BW)	12 MOUNTING SST Stainless Steel M4 Low Profile Magnet MG Magnet	13 FINISH ST Satin BK Black CU Custom Custom finishes require a longer lead time, consult factory	14 LENGTH (IN) Minimum length is 12", maximum length is 98" not including end caps. Contact us for lengths under 12".	15 EXACT/OPTIMAL O Optimal Illumination E Exact Specified Length Exact fixtures match the exact length you specify, but they may have dead 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.	



ESSENTIALS LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

1 PRODUCT - DIMENSIONS



2 DELIVERED LUMENS

[Calculated L70 = 70000 hrs, L70 = 50000 for HE+]

Tested with LL2SW-**-30-DRY-STD

	1.5 W/FT	1.5HE W/FT	3.0 W/FT	3.0HE W/FT	3.0HE+ W/FT	4.0 W/FT	5.0 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	148	98	193	98	259	98	355	98	506

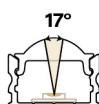
6 DIODE VISIBILITY



PHOTOMETRIC PERFORMANCE

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

17DEG



Optical 17°



ESSENTIALS LALO-OPTICS (02) STATIC WHITE

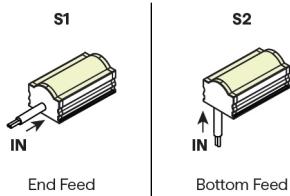
24VDC Linear Fixtures - Surface & Recessed

TEMPERATURE RATINGS

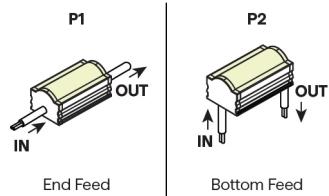
		1.5 W/FT		1.5 HE W/FT		3.0 W/FT		3.0 HE W/FT		3.0 HE+ W/FT		6.0 HE W/FT		6.0 HE+ W/FT		4.0 W/FT		5.0 W/FT	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
DRY	Ambient Operating Temp - Surface	-4°F	140°F	-4°F	145°F	-4°F	130°F	-4°F	135°F	-13°F	135°F	-4°F	120°F	-13°F	120°F	-4°F	125°F	-4°F	120°F
DMP	Ambient Operating Temp - Surface	-4°F	135°F	-4°F	140°F	-4°F	125°F	-4°F	130°F	**	**	-4°F	115°F	**	**	-4°F	120°F	-4°F	115°F
WET	Ambient Operating Temp - Surface	-4°F	135°F	**	**	-4°F	125°F	**	**	-13°F	130°F	**	**	-13°F	115°F	-4°F	120°F	-4°F	115°F

7 WIRE INPUT/OUTPUT

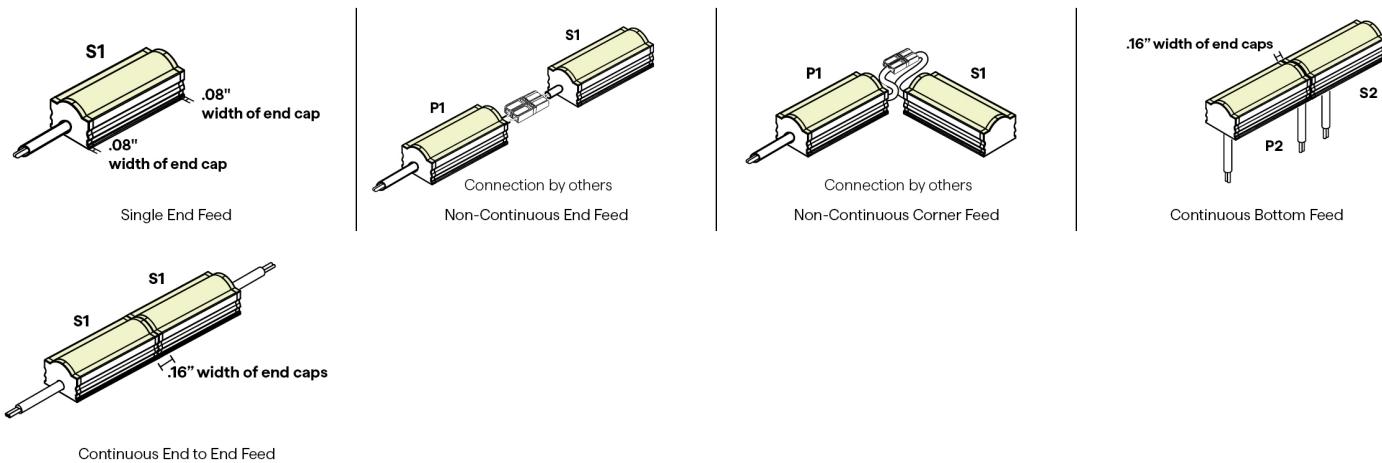
SINGLE (Input only)



PASS THROUGH (Input/Output)

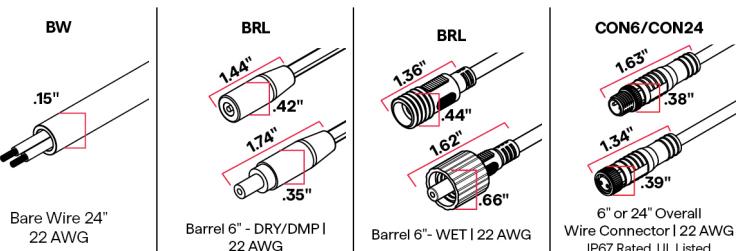


CONFIGURATION OPTIONS



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



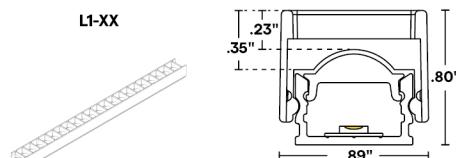
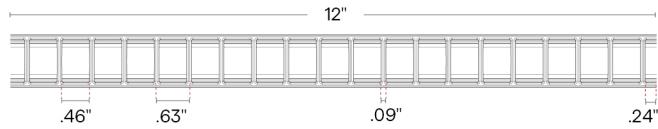


ESSENTIALS LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

EXTERNAL LOUVER ACCESSORY

PLASTIC



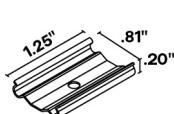
Lumen Multiplier
WH BK

Profile with plastic louver
To order separately use
LALO-L1-OPTICS-KIT-WH or
LALO-L1-OPTICS-KIT-BK

0.73 0.53

12 MOUNTING

SST



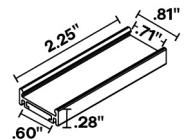
Stainless Steel Clip

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

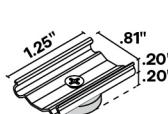


Magnet Mount
Accessory for M4

Sold separately, to order use
MMA-04

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

MG



Magnet Clip

One MG provided per foot

To order separately use MG-01

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

13 FINISH



Satin

Black

Custom finishes require a longer
lead time, consult factory



ESSENTIALS LALO-OPTICS (02) STATIC WHITE

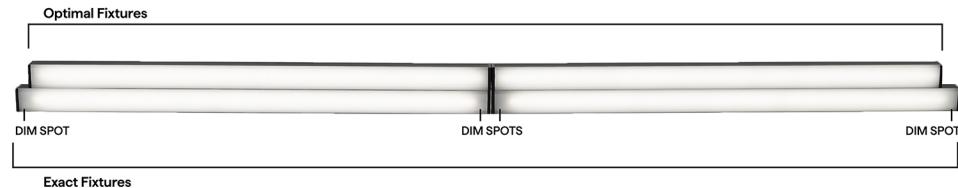
24VDC Linear Fixtures - Surface & Recessed

14 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.



SW DRY DMP LENGTHS BY INCH

EXACT LENGTH

Requested Length	Potential dim spot on either end of a S1 fixture
12"	0.5"
13"	0.5"
14"	0.5"
15"	0.5"
16"	0.5"
17"	0.5"
18"	0.5"
19"	0.5"
20"	0.5"
21"	0.5"
22"	0.5"
23"	0.5"
24"	0.5"
36"	0.5"
48"	0.5"
60"	0.5"
72"	0.5"
84"	0.5"
96"	0.5"

OPTIMAL LENGTH

Requested Nominal Length	S1 & S2		P1 & P2	
	S1 End Feed	S2 Bottom Feed	P1 End Feed	P2 Bottom Feed
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"	



ESSENTIALS LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

SW WET LENGTHS BY INCH

EXACT LENGTH

Requested Length	Potential dim spot on either end of a S1 fixture	
	S1	End Feed
12"	0.5"	
13"	0.5"	
14"	0.5"	
15"	0.5"	
16"	0.5"	
17"	0.5"	
18"	0.5"	
19"	0.5"	
20"	0.5"	
21"	0.5"	
22"	0.5"	
23"	0.5"	
24"	0.5"	
36"	0.5"	
48"	0.5"	
60"	0.5"	
72"	0.5"	
84"	0.5"	
96"	0.5"	

OPTIMAL LENGTH

Requested Nominal Length	S1 & S2		P1 & P2	
	S1	S2	P1	P2
12"	11.56"		11.71"	
13"	12.56"		12.71"	
14"	13.56"		13.71"	
15"	14.56"		14.71"	
16"	15.56"		15.71"	
17"	16.56"		16.71"	
18"	17.56"		17.71"	
19"	18.56"		18.71"	
20"	19.56"		19.71"	
21"	20.56"		20.71"	
22"	21.56"		21.71"	
23"	22.56"		22.71"	
24"	23.56"		23.71"	
36"	35.56"		35.71"	
48"	47.56"		47.71"	
60"	59.56"		59.71"	
72"	71.56"		71.71"	
84"	83.56"		83.71"	
96"	95.56"		95.71"	

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

EXACT LENGTH

Requested Length	Potential dim spot on either end of a S1 fixture	
	S1	End Feed
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

Requested Nominal Length	S1 & S2		P1 & P2	
	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"	



ESSENTIALS LALO-OPTICS (02) STATIC WHITE

24VDC Linear Fixtures - Surface & Recessed

SW-HE+ WET LENGTHS BY INCH

EXACT LENGTH

Requested Length	Potential dim spot on either end of a S1 fixture	
	S1	End Feed
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

Requested Nominal Length	S1 & S2		P1 & P2	
	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	
	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+QD1	Q6M-DC+CAP QTM-DC+CAP 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 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	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	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	QTM-eLED(E) QZ-DALI-DT6	Q-SET+QZ-DALI-DT6 QZ-DALI-DT6	Q-SET+QZ-DALI-DT6 QZ-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	



ESSENTIALS 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	Q-SET-QZ-ND Q-SET-eLED-ND QOM-eLED-ND QZ-ND
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+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+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 QZ-DALI-DT6	Q-SET+QZ-DALI-DT6 QOM-eLED+DALI-DT6 QZ-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	HINGE - HMB-L	HINGE - HMB-XL	Q-PIVOT	Q-ANGLE	NU-GRAZER	NJ-GRAZER	BL-GRAZER	MMA-01	MMA-04
1.41" .71"	1.46" 1.29" 1.46"	4" 1.46"	.75" 1.03"	1.38" 2.23"	U Mounting Bracket	J Mounting Bracket	Backwards L Mounting Bracket	Magnet Mount Accessory of MG-01 .23" .75"	Magnet Mount Accessory of MG-04 .19" .93"

Adjustable mounting bracket - Medium

Adjustable mounting bracket - Large

Adjustable mounting bracket - XLarge

Small mounting accessory

Adjustable mounting accessory

U Mounting Bracket

J Mounting Bracket

Backwards L Mounting Bracket

Magnet Mount Accessory of MG-01

Magnet Mount Accessory of MG-04