



ESSENTIALS LALO- ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed



Declare



- Shallow, low-profile fixture for surface or recessed installations
- Features high quality LED strips encapsulated in polyurethane in a rigid extrusion providing a robust fixture
- Encapsulation available in clear or translucent
- Suitable for indoor and outdoor locations (IK10)
- Three mounting options
- Features painted end caps to match extrusion finish or clear end caps to achieve seamless appearance of long runs
- 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
- Used in applications to provide warmer CCTs as the light is dimmed
- When using DALI and DMX power supplies, LED wattage must be doubled
- Optional plastic louver accessory available in white or black for added glare control

INFORMATION REQUIRED FOR LIGHTING SCHEDULE

1 PRODUCT	2 WATTS/FT	3 CCT	4 RATED	5 EFFICIENCY	6 LENS
LL3DW			ENC	STD	

ADDITIONAL INFORMATION REQUIRED TO ORDER

7 WIRE INPUT/OUTPUT	8 CONNECTOR / WIRE IN	9 CONNECTOR / WIRE OUT	10 INPUT END CAP	11 OUTPUT END CAP	12 WIRE COLOR	13 WIRE TYPE	14 MOUNTING	15 FINISH	16 LENGTH (IN)	17 EXACT/ OPTIMAL

Sample Part Number: LL3DW-6.0-24/30-ENC-STD-TL-P1-BW-BW-STD-STD-BK-CL2-SST-ST-48"-E

1 PRODUCT LL3DW LED engine is built with 3 wires requiring 0-10V, DMX or DALI control. Using DALI, DMX, or non QTL power supplies may double watts/ft. See following pages for compatible power supplies.	2 WATTS/FT 1.5HE 1.5W/ft HE 2.5HE 2.5W/ft HE ▶	3 CCT 24/30 2400K/3000K 27/40 2700K/4000K ▶	4 RATED ENC IP67 ▶	5 EFFICIENCY STD Standard ▶	6 LENS CL Clear TL Translucent 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 SINGLE (Input only) S1 End Feed S2 Bottom Feed For continuous mounting, consider bottom feed ▶	8 CONNECTOR/WIRE IN BW Bare Wire (Standard 24") CON6 Connector 6" CON24 Connector 24" BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48) ▶	9 CONNECTOR/WIRE OUT CLS Closed End (No feed) ▶			
10 INPUT END CAP STD Standard CL Clear STD - End cap matches fixture finish chosen Select CL for continuous runs ▶	11 OUTPUT END CAP STD Standard CL Clear STD - End cap matches fixture finish chosen Select CL for continuous runs ▶	12 WIRE COLOR WH White BK Black ▶	13 WIRE TYPE CL2 Class 2 CL2P Plenum Rated CL2P only available with bare wire leads (BVW) ▶		
14 MOUNTING SST Stainless Steel M4 Low Profile Magnet MG Magnet ▶	15 FINISH ST Satin BK Black CU Custom ▶	16 LENGTH (IN) Minimum length is 12", maximum length is 98" not including end caps. Contact us for lengths under 12". ▶	17 EXACT/OPTIMAL O Optimal Illumination E 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. ▶		

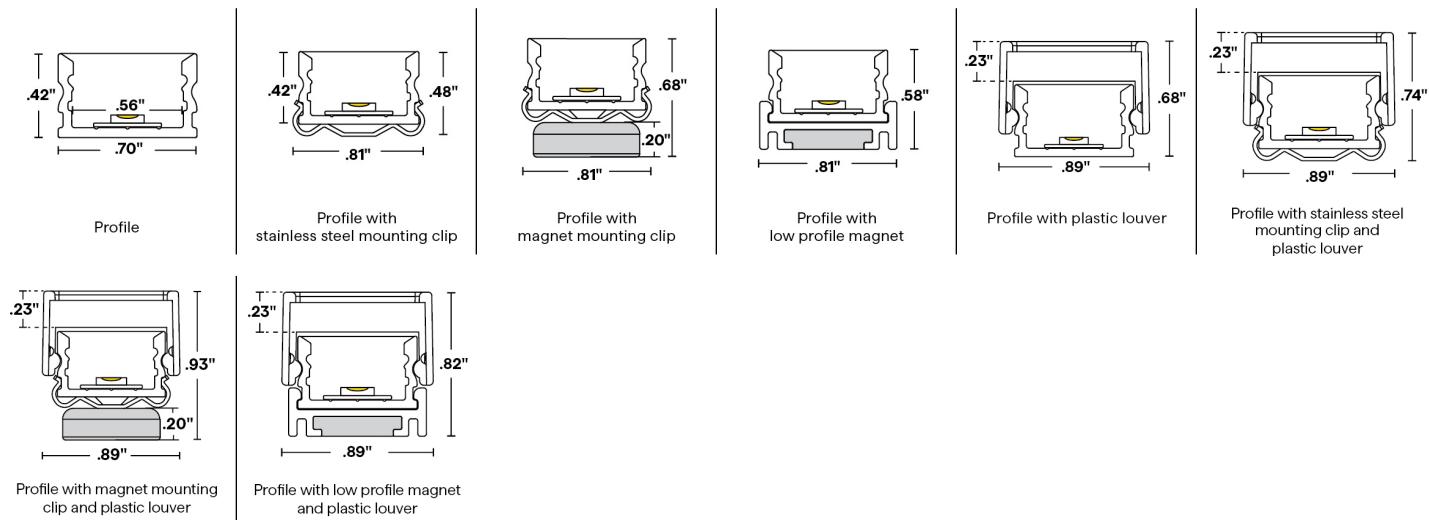
5 year warranty | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance | Compatible for use with QTL power supplies | IK10 rated



ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

1 PRODUCT - DIMENSIONS

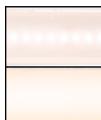


2 DELIVERED LUMENS

[Calculated L70 = 40000 hrs]
Tested with LL3DW-**-30-ENC-STD

	1.5HE W/FT	2.5HE W/FT		
LM/FT	CRI	LM/FT	CRI	
CL	105	98	166	98
TL	60	98	94	98

6 DIODE VISIBILITY



ENC/CL - Clear encapsulation

ENC/TL - Translucent encapsulation

TEMPERATURE RATINGS

	DW 1.5 HE W/FT				DW 2.5 HE W/FT			
	Q-Tran power supply other than DALI, DMX		DALI, DMX, or non-Q-Tran power supply		Q-Tran power supply other than DALI, DMX		DALI, DMX, or non-Q-Tran power supply	
	Min	Max	Min	Max	Min	Max	Min	Max
Ambient Operating Temp - Surface	-4°F	135°F	-4°F	120°F	-4°F	125°F	-4°F	105°F

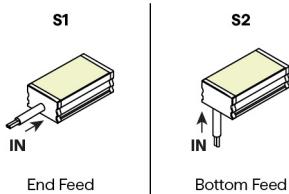


ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

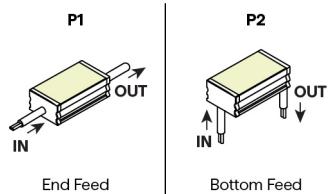
24VDC Linear Fixtures - Surface & Recessed

7 WIRE INPUT/OUTPUT

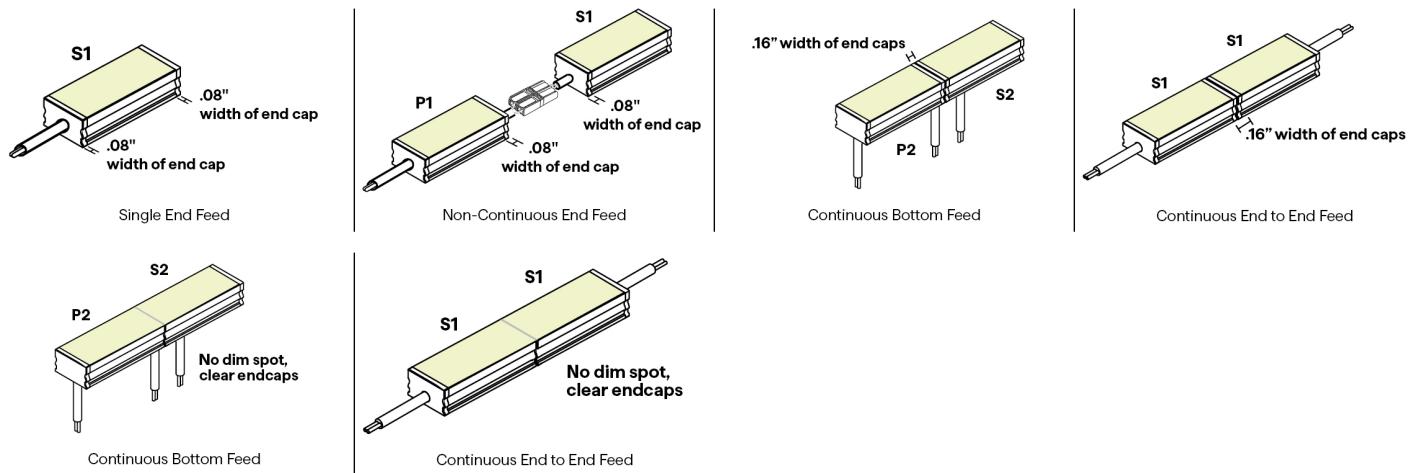
SINGLE (Input only)



PASS THROUGH (Input/Output)

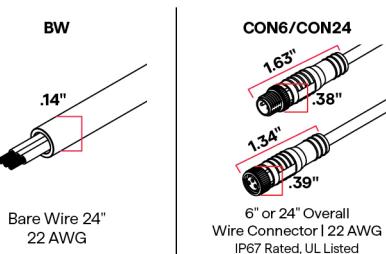


CONFIGURATION OPTIONS

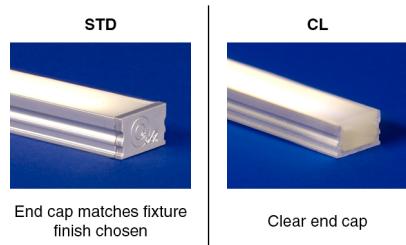


8 / 9 CONNECTOR/WIRE – IN/OUT

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



10 / 11 END CAP – IN/OUT



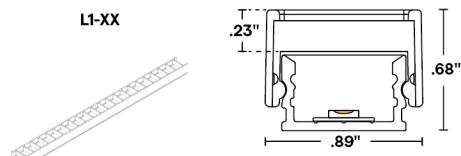
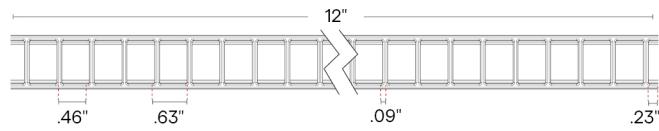


ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

EXTERNAL LOUVER ACCESSORY

PLASTIC



Lumen Multiplier
WH BK

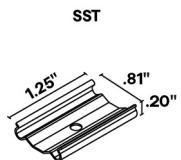


Profile with plastic louver
To order separately use
LALO-L1-FLAT-KIT-WH or
LALO-L1-FLAT-KIT-BK

12 WIRE COLOR



White
Black



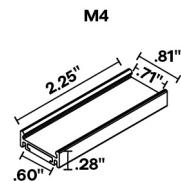
Stainless Steel Clip

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 screw

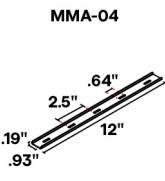
14 MOUNTING



Low Profile Magnet

One M4 provided per foot.

To order separately use
MG-04

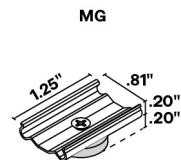


Magnet Mount
Accessory for M4

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



Magnet Clip

One MG provided per foot

To order separately use MG-01

15 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-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

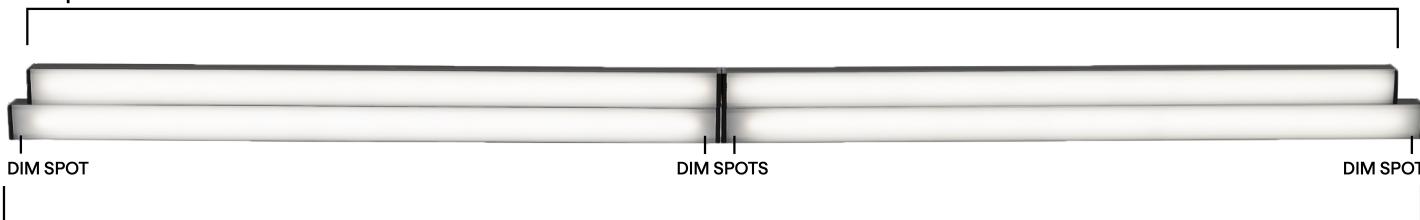
17 EXACT/OPTIMAL FIXTURE LENGTH

[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

WD ENC 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-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

DW-HE ENC 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 $\pm 0 - 1/8"$. 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"		10.51"		10.86"
13"		12.51"		12.86"
14"		12.51"		12.86"
15"		14.51"		14.86"
16"		14.51"		14.86"
17"		16.51"		16.86"
18"		16.51"		16.86"
19"		18.51"		18.86"
20"		18.51"		18.86"
21"		20.51"		20.86"
22"		20.51"		20.86"
23"		22.51"		22.86"
24"		22.51"		22.86"
36"		34.51"		34.86"
48"		46.51"		46.86"
60"		58.51"		58.86"
72"		70.51"		70.86"
84"		82.51"		82.86"
96"		94.51"		94.86"

COMPATIBLE POWER SUPPLIES

See power supplies cut sheets for more information. Data subject to change, all data has $\pm 5\%$ tolerance.

DIM TO LEVEL	INDOOR	OUTDOOR
	DW-HE Warm Dim Applications	DW-HE Warm Dim Applications
0.1%	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT8 QT-CAB-eLED+DALI-DT8-AWN QT-CAB-eLED+WD QT-CAB-eLED+WD-AWN QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT8 QTM-eLED+DALI-DT8-AWN QTM-eLED+WD QTM-eLED+WD-AWN QZ-DW	Q-SET-QZ-DW QOM-eLED+DALI-DT6 QOM-eLED+DALI-DT8 QOM-eLED+PS-DALI-DT6 QOM-eLED+PS-DALI-DT8 QOM-eLED+WD QZ-DW
1%	QZ-DALI-DT8	Q-SET+QZ-DALI-DT8
10%	Non-Dim Power Supply with WD App Dongle	

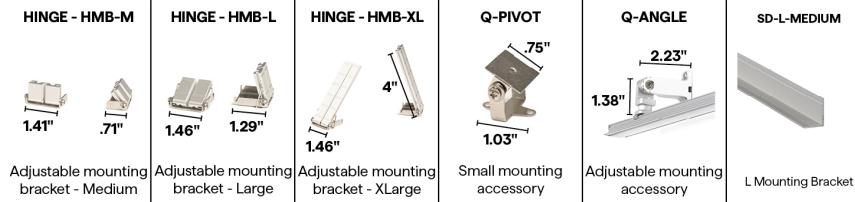


ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

DIMMING PROTOCOL	INDOOR	OUTDOOR
	DW-HE Warm Dim Applications	DW-HE Warm Dim Applications
Phase	QZ-DW	Q-SET-QZ-DW QZ-DW
0-10V	QT-CAB-eLED+WD QT-CAB-eLED+WD-AWN QTM-eLED+WD QTM-eLED+WD-AWN QZ-DW	Q-SET-QZ-DW QOM-eLED+WD QZ-DW
Lutron Athena	QT-CAB-eLED+DALI-DT8-AWN QT-CAB-eLED+WD-AWN QTM-eLED+DALI-DT8-AWN QTM-eLED+WD-AWN	
DALI-2: DT6 LED wattage must be doubled for DW-HE products except for AWN	QT-CAB-eLED+DALI-DT6 QTM-eLED+DALI-DT6	QOM-eLED+DALI-DT6
DALI-2: DT8 LED wattage must be doubled for DW-HE products except for AWN	QT-CAB-eLED+DALI-DT8 QT-CAB-eLED+DALI-DT8-AWN QTM-eLED+DALI-DT8 QTM-eLED+DALI-DT8-AWN QZ-DALI-DT8	Q-SET+QZ-DALI-DT8 QOM-eLED+DALI-DT8
SCENE App Dimmed	Non-Dim Power Supply with WD App Dongle	

COMPATIBLE MOUNTING ACCESSORIES



COMPATIBLE WIRING ACCESSORIES



UL Listed, miniature junction box, DRY/DMP (WET rated with silicone)

COMPATIBLE CONTROL ACCESSORIES





ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

COMPATIBLE APPS

NFC APP



Read and write
DMX addresses and
adjust voltage