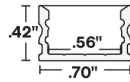
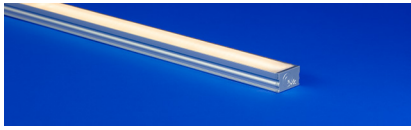




ESSENTIALS LALO- ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed



- 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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
PRODUCT	WATTS/FT	CCT	RATED	EFFICIENCY	LENS	EXTERNAL LOUVER	WIRE INPUT/ OUTPUT	CONNECTOR / WIRE IN	CONNECTOR / WIRE OUT	INPUT END CAP	OUTPUT END CAP	WIRE COLOR	WIRE TYPE	MOUNTING	FINISH	LENGTH (IN)	EXACT/ OPTIMAL
LL3DW			ENC	STD													

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	7 EXTERNAL LOUVER L1-WH White Plastic L1-BK Black Plastic N/A No Louver Louvers are shipped separately and require field assembly
8 WIRE INPUT/OUTPUT S1 Single 1 (Input only) - End Feed S2 Single 2 (Input only) - Bottom Feed For continuous mounting, consider bottom feed P1 Pass Through 1 (Input/output) - End Feed P2 Pass Through 2 (Input/output) - Bottom Feed For continuous mounting, consider bottom feed	9 CONNECTOR/WIRE IN BW Bare Wire (Standard 24") CON6 Connector 6" CON24 Connector 24" 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) BW Bare Wire (Standard 24") CON6 Connector 6" CON24 Connector 24" 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)	10 CONNECTOR/WIRE OUT CLS Closed End (No feed) BW Bare Wire (Standard 24") CON6 Connector 6" CON24 Connector 24" 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)	11 INPUT END CAP STD Standard CL Clear STD - End cap matches fixture finish chosen Select CL for continuous runs	12 OUTPUT END CAP STD Standard CL Clear STD - End cap matches fixture finish chosen Select CL for continuous runs	13 WIRE COLOR WH White BK Black	14 WIRE TYPE CL2 Class 2 CL2P Plenum Rated CL2P only available with bare wire leads (BW)
15 MOUNTING SST Stainless Steel M4 Low Profile Magnet MG Magnet	16 FINISH ST Satin BK Black CU Custom	17 LENGTH (IN) Fixture length min 12", max 98.43" not including end caps. Tolerance +0 - 1/8". Consult factory for lengths under 12".	18 EXACT/OPTIMAL O Optimal Illumination E Exact Specified Length 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.			

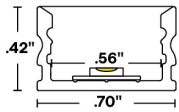
5 year warranty | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance | Compatible for use with QTL power supplies | IK10 rated



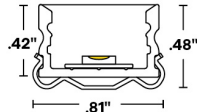
ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

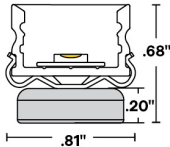
1 PRODUCT - DIMENSIONS



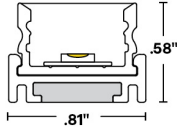
Profile



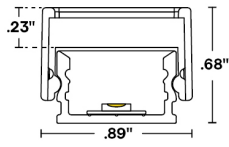
Profile with stainless steel mounting clip



Profile with magnet mounting clip



Profile with low profile magnet



Profile with plastic louver

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

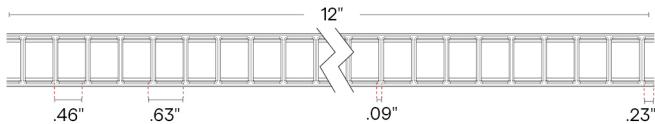
ENC/TL - Translucent encapsulation

TEMPERATURE RATINGS

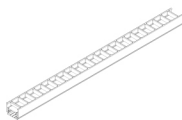
	DW 1.5 HE W/FT				DW 2.5 HE W/FT			
	Q-Tran power supply other than DALI, DMX		DALI, DMX, or non-Q-Tran power supply		Q-Tran power supply other than DALI, DMX		DALI, DMX, or non-Q-Tran power supply	
	Min	Max	Min	Max	Min	Max	Min	Max
Ambient Operating Temp - Surface	-4°F	135°F	-4°F	120°F	-4°F	125°F	-4°F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

7 EXTERNAL LOUVER

PLASTIC



L1-XX



Lumen Multiplier

WH BK

0.72 0.53

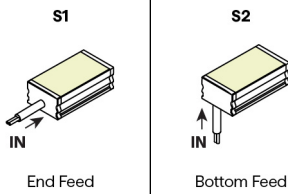


ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

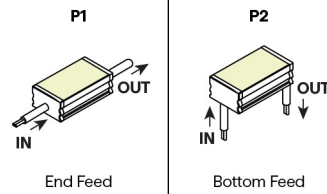
24VDC Linear Fixtures - Surface & Recessed

8 WIRE INPUT/OUTPUT

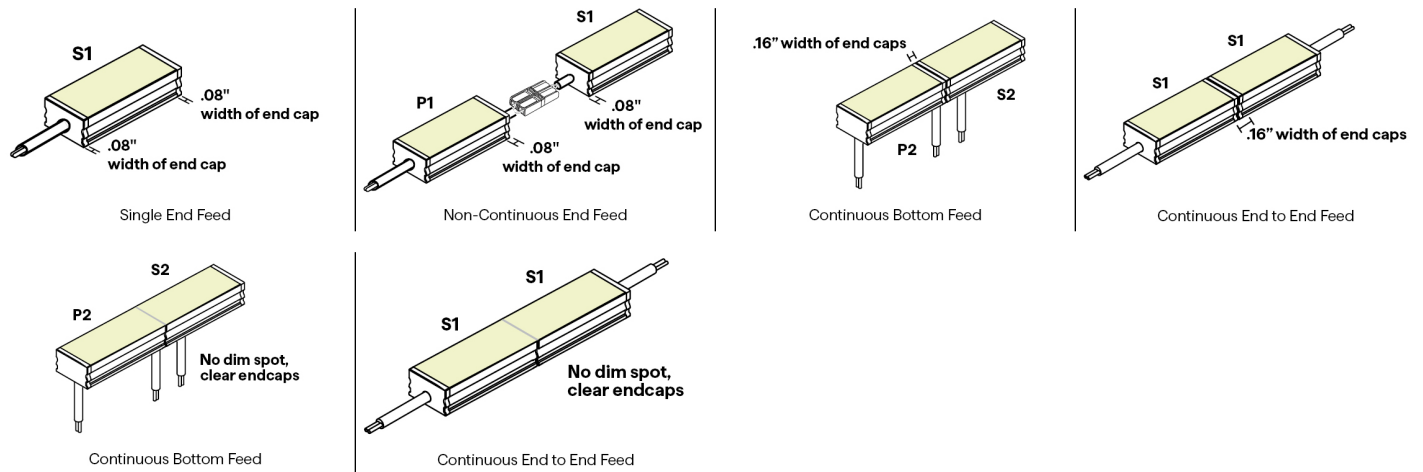
SINGLE (Input only)



PASS THROUGH (Input/Output)

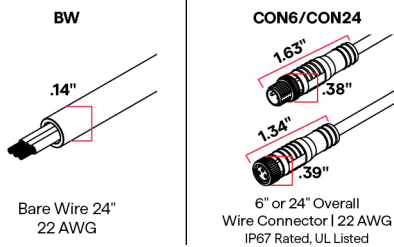


CONFIGURATION OPTIONS

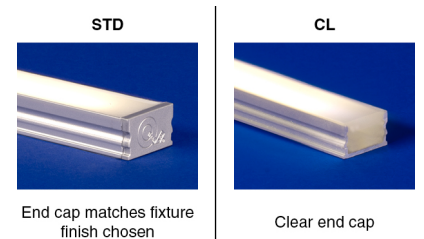


9 / 10 CONNECTOR/WIRE - IN/OUT

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



11 / 12 END CAP - IN/OUT





ESSENTIALS LALO-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

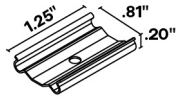
24VDC Linear Fixtures - Surface & Recessed

13 WIRE COLOR



15 MOUNTING

SST



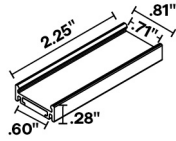
Stainless Steel Clip

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 screw

M4

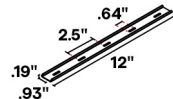


Low Profile Magnet

One M4 provided per foot

To order separately use MG-04

MMA-04



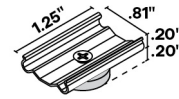
Magnet Mount Accessory for M4

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

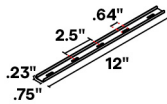
To order separately use MG-01

16 FINISH



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

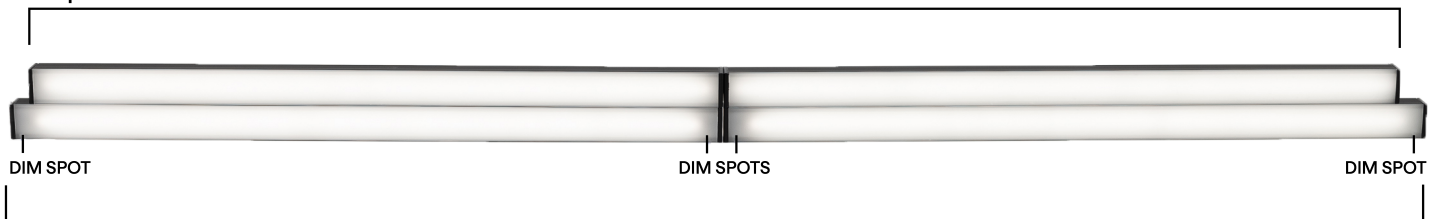
18 EXACT/OPTIMAL FIXTURE LENGTH

[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-ENCAPSULATED (03) FOR WARM DIM APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

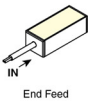
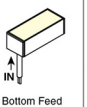
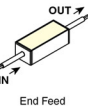
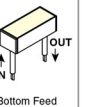
WD, DW-HE ENC LENGTHS BY INCH

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 +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"	

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
	DW-HE Warm Dim Applications	DW-HE Warm Dim Applications
0.1%	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
1%	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT8 QT-CAB-eLED+DALI-DT8-AWN QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT8 QTM-eLED+DALI-DT8-AWN QZ-DALI-DT8	Q-SET+QZ-DALI-DT8 QOM-eLED+DALI-DT6 QOM-eLED+DALI-DT8 QOM-eLED+PS-DALI-DT6 QOM-eLED+PS-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	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	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

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

SD-L-MEDIUM

L Mounting Bracket

COMPATIBLE WIRING ACCESSORIES

Q-mini-J5

2.80" 2.27"

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

COMPATIBLE CONTROL ACCESSORIES

SCENE APP DONGLE

1.36" 2.58"

Wi-Fi or Bluetooth Connectivity



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