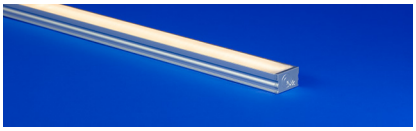
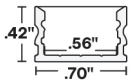
ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

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 where CCT and brightness need to be controlled separately
- 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	2	3	4	5	6
PRODUCT	WATTS/ FT	CCT	RATED	EFFICIENCY	LENS
			ENC	STD	

ADDITIONAL INFORMATION REQUIRED TO ORDER

7	8	9	10	11	12	13	14	15	16	17
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

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
LL3DW-USA

Select USA option for BAA and BABA projects.

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

22/30 2200K/3000K
22/35 2200K/3500K
24/30 2400K/3000K
24/40 2400K/4000K
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

PASS THROUGH (Input/output)
P1 End Feed
P2 Bottom Feed

For continuous mounting, consider bottom feed

8 CONNECTOR/WIRE IN

BW Bare Wire (Standard 24")
CON6 Connector 6"
CON24 Connector 24"

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)

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)

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 (BW)

14 MOUNTING

SST Stainless Steel
M4 Low Profile Magnet
MG Magnet

15 FINISH

ST Satin
BK Black
CU Custom

Custom finishes require a longer lead time, consult factory

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.

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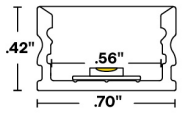
Specification subject to change. Rev-04-01-26

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

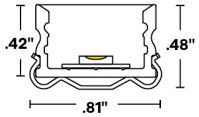
ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

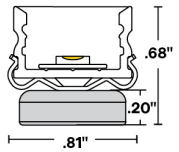
1 PRODUCT - DIMENSIONS



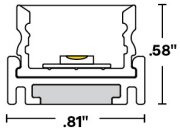
Profile



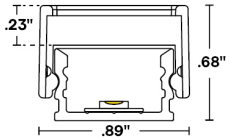
Profile with stainless steel mounting clip



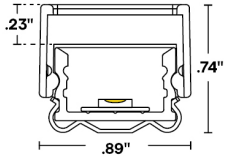
Profile with magnet mounting clip



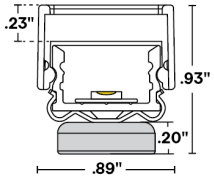
Profile with low profile magnet



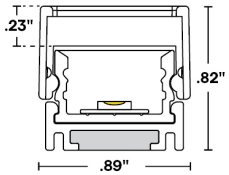
Profile with plastic louver



Profile with stainless steel mounting clip and plastic louver



Profile with magnet mounting clip and plastic louver



Profile with low profile magnet and 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 3.0 HE W/FT		DW 2.5 HE W/FT		DW 5.0 HE W/FT	
	QTL power supply other than DALI, DMX		DALI, DMX, or non-QTL power supply		QTL power supply other than DALI, DMX		DALI, DMX, or non-QTL 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

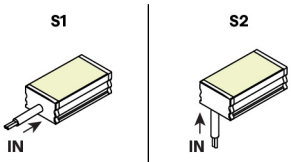
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ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

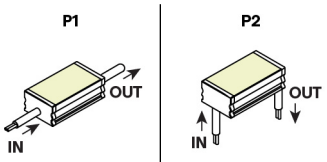
7 WIRE INPUT/OUTPUT

SINGLE (Input only)



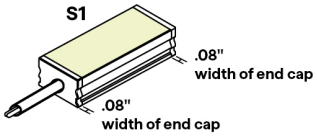
End Feed | Bottom Feed

PASS THROUGH (Input/Output)

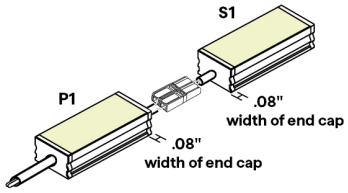


End Feed | Bottom Feed

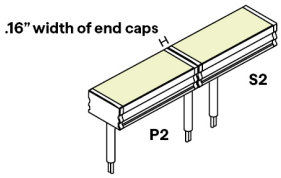
CONFIGURATION OPTIONS



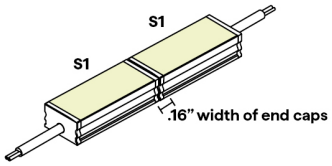
Single End Feed



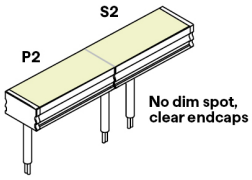
Non-Continuous End Feed



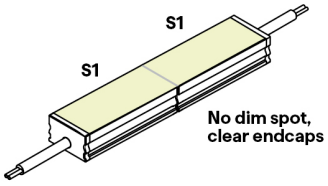
Continuous Bottom Feed



Continuous End to End Feed



Continuous Bottom Feed

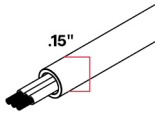


Continuous End to End Feed

8/9 CONNECTOR/WIRE – IN/OUT

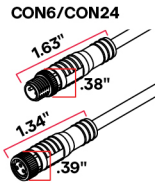
Connector/Wire In or Out not needed to specify product. Standard configuration is BW for Wire In and CLS for Wire out

BW



Bare Wire 24"
22 AWG

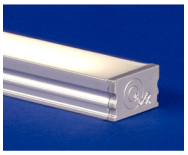
CON6/CON24



6" or 24" Overall
Wire Connector | 22 AWG
IP67 Rated, UL Listed

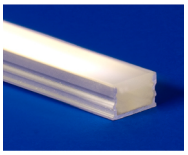
10/11 END CAP – IN/OUT

STD



End cap matches fixture finish chosen

CL



Clear end cap

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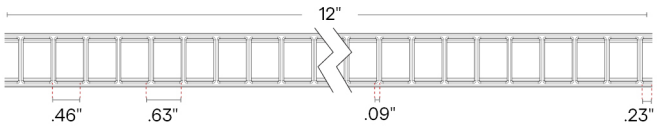
Specification subject to change. Rev-04-01-26

ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

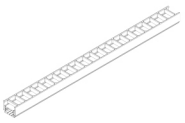
24VDC Linear Fixtures - Surface & Recessed

EXTERNAL LOUVER ACCESSORY

PLASTIC

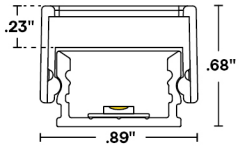


L1-XX



Lumen Multiplier

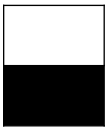
WH	BK
0.71	0.48



Profile with plastic louver

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

12 WIRE COLOR

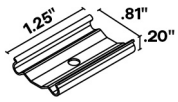


White

Black

14 MOUNTING

SST



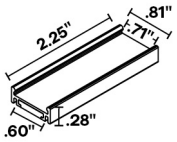
Stainless Steel Clip

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

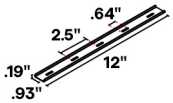


Low Profile Magnet

One M4 provided per foot.

To order separately use MG-04

MMA-04



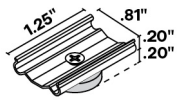
Magnet Mount Accessory for M4

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

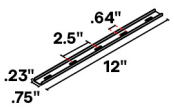


Magnet Clip

One MG provided per foot

To order separately use MG-01

MMA-01



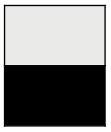
Magnet Mount Accessory of MG-01

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 FINISH



Satin

Black

Custom finishes require a longer lead time, consult factory

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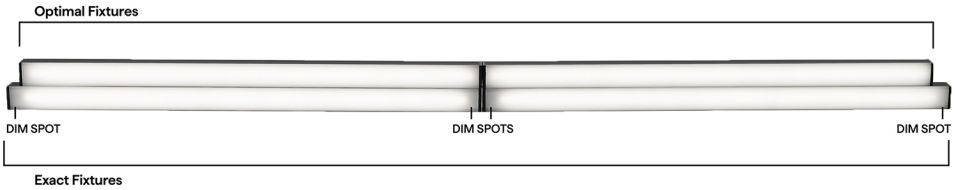
ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

17 EXACT/OPTIMAL FIXTURE LENGTH

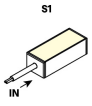
E/O Length Calculator → E/O Explained →

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.

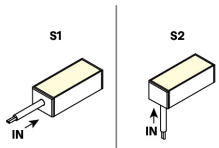
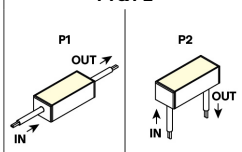


DW-HE ENC LENGTHS BY INCH

EXACT LENGTH

Requested Length	Potential dim spot on either end of a S1 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

Requested Nominal Length	S1 & S2 		P1 & P2 	
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"	

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ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

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
	DW-HE Tunable Applications	DW-HE Tunable Applications
0.1%	QT-CAB-eLED+DALI-DT6 QT-CAB-eLED+DALI-DT8 QT-CAB-eLED+DALI-DT8-AWN QT-CAB-eLED+TW QTM-eLED+DALI-DT6 QTM-eLED+DALI-DT8 QTM-eLED+DALI-DT8-AWN QTM-eLED+TW QZ-DMX	Q-SET-QZ-DMX QOM-eLED+DALI-DT6 QOM-eLED+DALI-DT8 QOM-eLED+PS-DALI-DT6 QOM-eLED+PS-DALI-DT8 QOM-eLED+TW QZ-DMX
1%	QZ-DALI-DT8	Q-SET+QZ-DALI-DT8 QZ-DALI-DT8
10%	Non-Dim Power Supply with TW App Dongle	

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

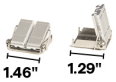
COMPATIBLE MOUNTING ACCESSORIES

HINGE - HMB-M



Adjustable mounting bracket - Medium

HINGE - HMB-L



Adjustable mounting bracket - Large

HINGE - HMB-XL



Adjustable mounting bracket - XLarge

Q-PIVOT



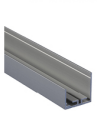
Small mounting accessory

Q-ANGLE



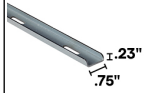
Adjustable mounting accessory

NJ-MEDIUM



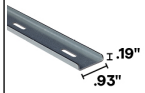
J Mounting Bracket

MMA-01



Magnet Mount Accessory of MG-01

MMA-04



Magnet Mount Accessory of MG-04

SD-L-MEDIUM



L Mounting Bracket

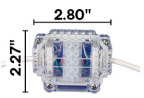
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ESSENTIALS LALO-ENCAPSULATED (03) FOR TUNABLE APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

COMPATIBLE WIRING ACCESSORIES

Q-mini-J5



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

COMPATIBLE CONTROL ACCESSORIES

SCENE APP DONGLE



Wi-Fi or Bluetooth Connectivity

COMPATIBLE APPS

NFC APP

Q-NFC

Read and write DMX addresses and adjust voltage

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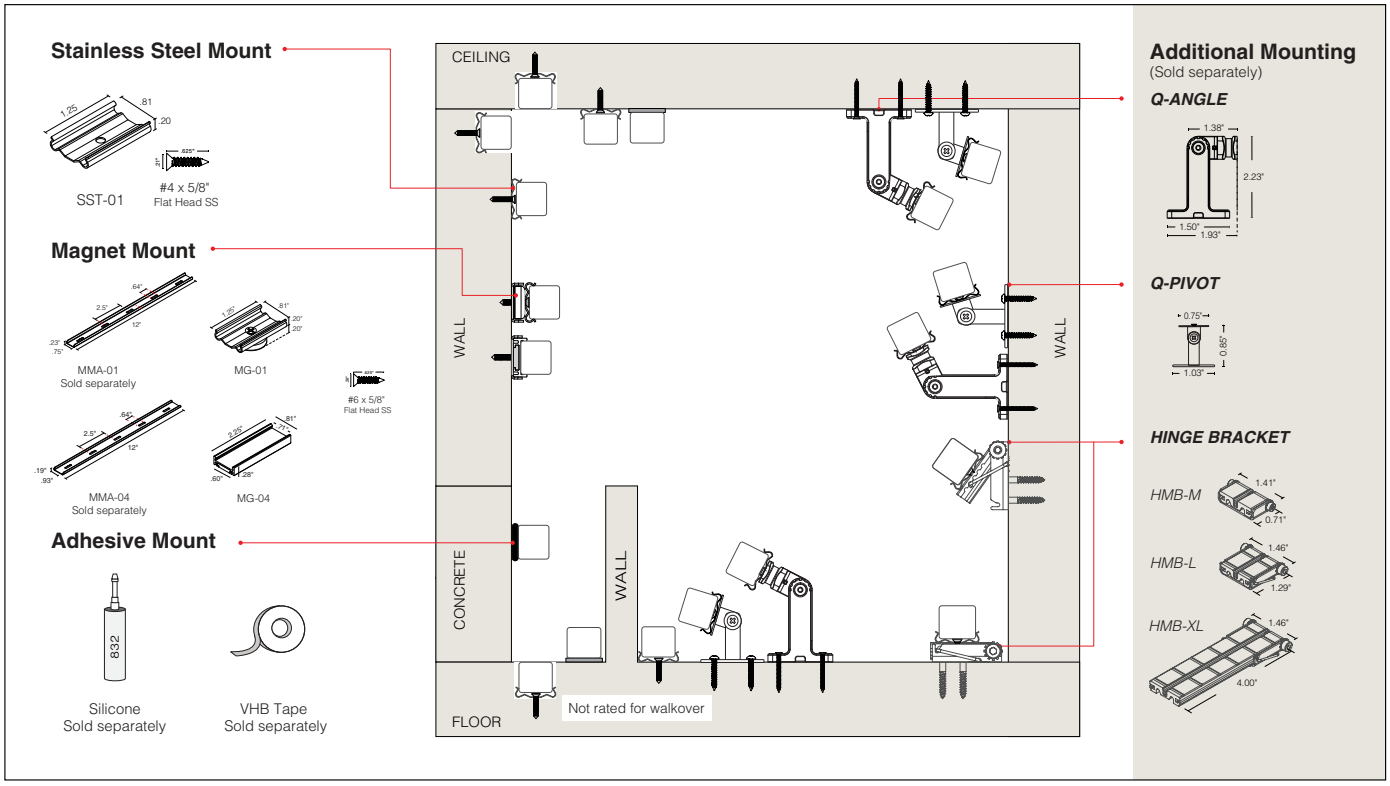
ESSENTIALS LALO

Linear Fixture Installation Instructions

ATTENTION: Please read all instructions BEFORE installation

- Product to be installed by a licensed electrician - Field modifications void warranty
- Use only with Class 2 power supply unit — Warranty only valid with QTL power supplies
- Surface mount or recessed in millwork
- Suitable for installation in storage area of a clothes closet when assembled as a finished fixture up to 4W/ft at QTL facility
- Not rated for walkover
- Input Voltage: 24VDC
- Diagrams for representation only and not to scale.

METHODS OF INSTALLATION:



Surface Mounting Method

- VHB Mount (page 5-6)
- Silicone Mount (page 7)
- Screw Mount (page 8)
- Magnet Mount (page 9)
- Low Profile Magnet Mount (page 10)

Recessed Mounting Method

- Magnet Mount : Millwork (page 11)

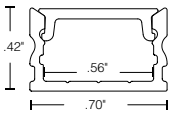
Louver Install Method

- Install Louver (page 12)
- Install Gasket For Vertical Louver (page 13)

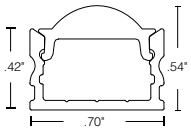
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ESSENTIALS LALO

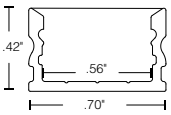
Linear Fixture Installation Instructions



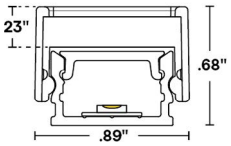
LALO-FLAT (01)



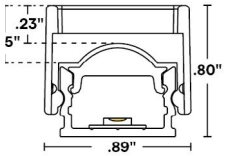
LALO-OPTICS (02)



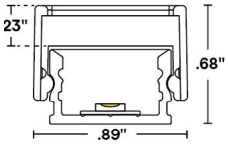
LALO-ENCAPSULATED (03)



LALO-FLAT (01)
With Louver



LALO-OPTICS (02)
With Louver

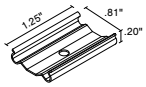


LALO-ENCAPSULATED (03)
With Louver

COMPONENTS & HARDWARE

Alternate screw lengths can be used in installation as long as the screw diameter size is consistent with the included screw diameter size

STAINLESS STEEL CLIP

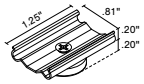


SST-01

Included	
	Flat Head Screw #4x5/8"

- 2 clips provided for 4' or less; 4 clips provided for greater than 4'

MAGNET CLIP

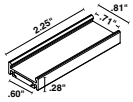


MG-01

Included	
	Flat Head Screw #6x5/8"

- One magnet clip per foot

LOW PROFILE MAGNET CLIP



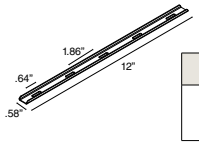
MG-04

Included	
	Flat Head Screw #6x5/8"

- One magnet clip per foot

ACCESSORIES SOLD SEPARATELY

MAGNET MOUNT ACCESSORY; sold individually



MMA-01

Included
Flat Head Screw #6x5/8"

- MMA-01 comes in 12" pieces; use at least one clip per MMA-01 accessory
- MMA-01 can be cut into smaller pieces, if desired

HINGE BRACKET; sold individually

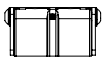
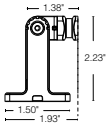


Image shows HMB-M

HMB-M
HMB-L
HMB-XL

Included
• 3/4" long mount screw • 1/4" #4 clip mount screw

Q-ANGLE; sold in pairs



Q-ANGLE

Included
• 3/4" long mount screw • 1/4" #4 clip mount screw

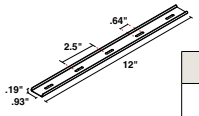
Q-PIVOT; sold in pairs



Q-PIVOT

Included
• SS #4-40x3/16 Flat head screw • 2 #4x3/4 Pan head screws

LOW PROFILE MAGNET MOUNT ACCESSORY; sold Individually

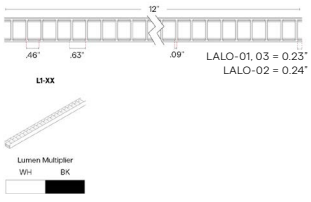


MMA-04

Included
2 #6x5/8" Flat Head screws

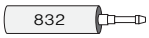
- MMA-04 comes in 12" pieces; use at least one clip per MMA-04 accessory
- MMA-04 can be cut into smaller pieces, if desired

EXTERNAL LOUVER



- L1-WH - White Plastic
- L1-BK - Black plastic

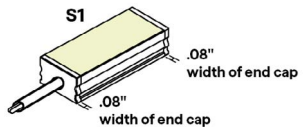
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ADHESIVE SOLD SEPARATELY	
SILICONE	VHB TAPE; sold in 15' increments
 DOWSIL 832	 TAPE-VHB-IP20

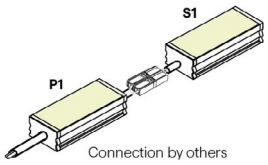
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CONFIGURATION OPTIONS

LALO-FLAT & LALO-ENC

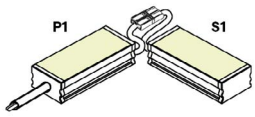


Single End Feed



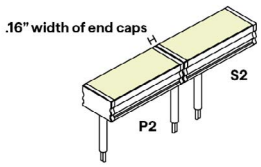
Connection by others

Non-Continuous End Feed

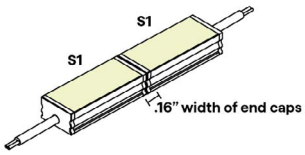


Connection by others

Non-Continuous Corner Feed

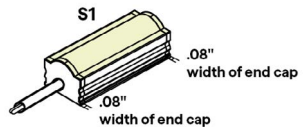


Continuous Bottom Feed

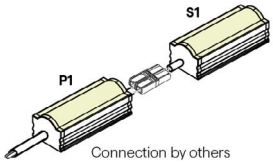


Continuous End to End Feed

LALO-OPTICS

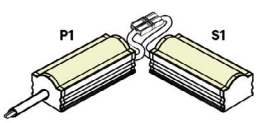


Single End Feed



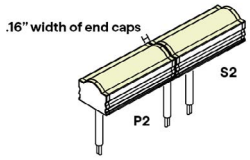
Connection by others

Non-Continuous End Feed

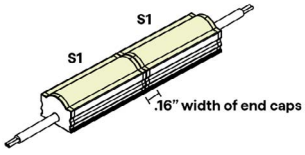


Connection by others

Non-Continuous Corner Feed



Continuous Bottom Feed



Continuous End to End Feed

Review wire method to ensure clean installation prior to mounting finished Fixture.

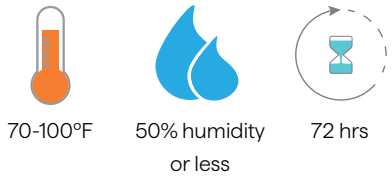
NOTE: Additional wire methods include:
S1 & S2: Connector/Wire Input only
P1 & P2: Connector/Wire Input and Output

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SURFACE MOUNTING METHOD

SURFACE PREPARATION

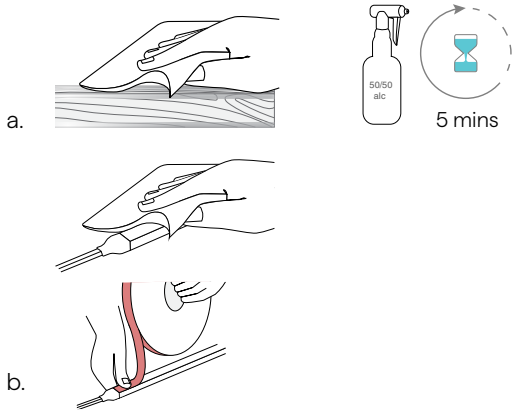
1



Temperature and environmental concerns:

- Ideal application environment is 70-100°F in 50% humidity or less.
- Minimum application temperature: 50°F
- This temperature and humidity should be maintained for 72 hours after application for maximum bond strength.

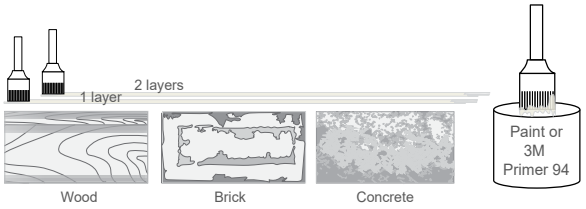
2



a. Using a 50/50 alcohol mix, thoroughly clean the backside of the Fixture and the surface area where Fixture will be installed. Allow 5 minutes to dry.

b. Peel back 0.5" of the VHB tape's protective film on one end and use firm pressure to adhere it to the desired surface, avoiding air bubbles. Continue peeling the film and adhering the tape in small sections until the entire length is installed.

3



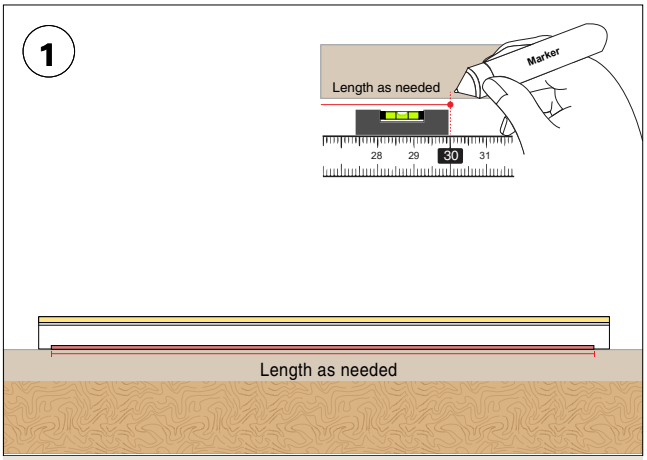
For porous materials (Wood, Brick, Concrete etc.) apply two layers of paint or primer to the surface. This will help create a better bonding surface for these materials. These can be purchased from a local hardware store.

MATERIALS	SUGGESTED EPOXIES
Concrete, Stone, Cinderblock, Metal, and Brick	Loctite Metal and Concrete Two-Part Epoxy
ABS, Fiberglass, Plastic, and PVC	Loctite Plastic Two-Part Epoxy
Tile, Wood, Ceramic, Glass, or Metal	Loctite Clear Two-Part Epoxy
All Purpose	Strong Stik

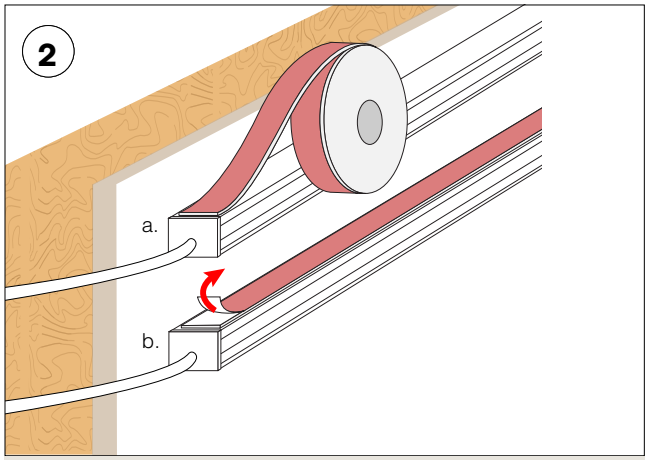
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SURFACE MOUNTING METHOD: **VHB ADHESIVE MOUNT**

BEFORE installation, the surface must be thoroughly cleaned and dried for maximum bond strength.

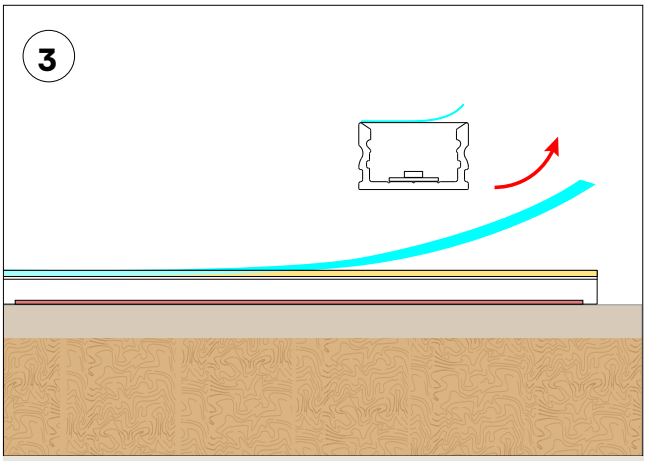


Determine the LALO fixture(s) location and positioning on desired surface before adhering Fixture to surface. Make any necessary reference markings to indicate fixture placement.



a. To adhere the VHB adhesive, peel the white film back while evenly applying the tape to the mounting side of the fixture. The red side should be visible.

b. Remove the red film and position fixture in place according to your previous reference marking(s).



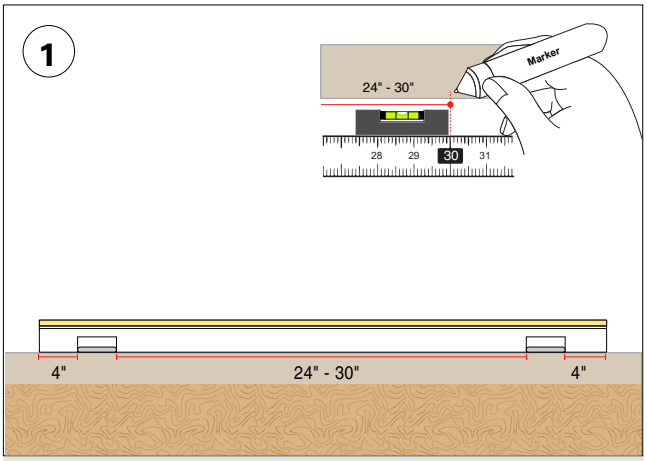
Remove protective film from the surface of the fixture's lens.

NOTES: *EPOXY ALTERNATIVE: For improved bonding strength, apply a small amount of epoxy at each end. Refer to table on* page 5 *for suggested epoxies. These can be purchased at a local hardware store. Please follow all manufacturer instructions for suggested epoxy.*

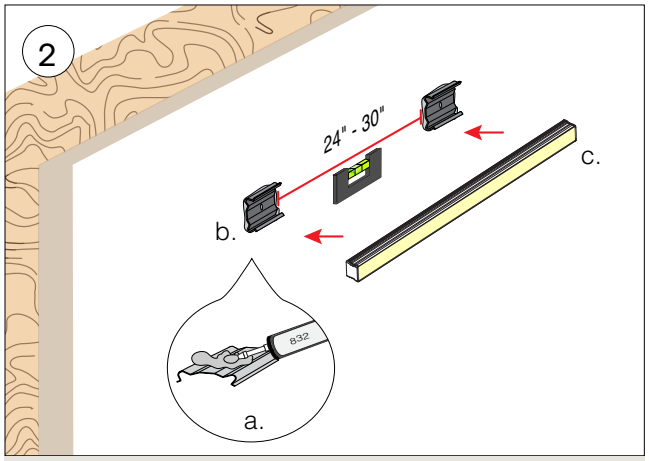
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SURFACE MOUNTING METHOD: **SILICONE**

- 2 clips provided for 4’ or less; 4 clips provided for greater than 4’



Determine the LALO fixture(s) location and positioning on desired surface; evenly distribute clips. Make any necessary reference markings to indicate where each clip is to be secured in place. Recommended every 24” - 30”.

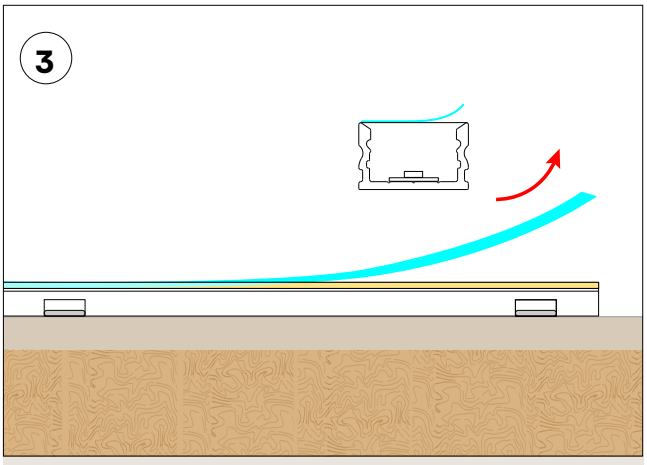


a. Firmly press the silicone-coated clips on the marked reference points.

b. Wait for silicone adhesive to cure completely before snapping fixture into place.

c. Snap fixture onto clips.

NOTE: Cure time is dependent on the type of silicone adhesive used. Refer to silicone product manufacturer for accurate drying time.

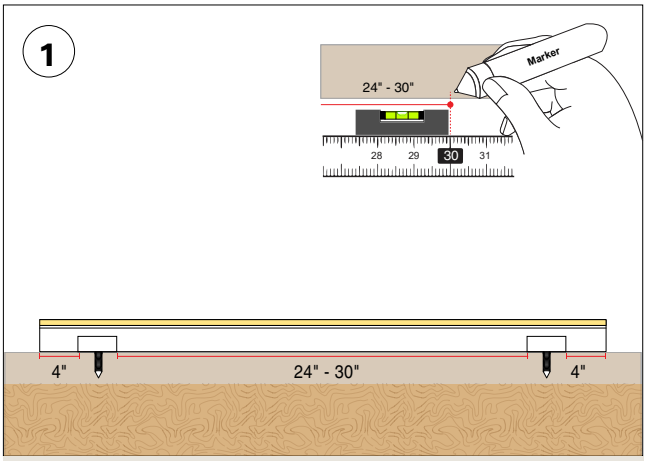


Remove protective film from the surface of the fixture’s lens.

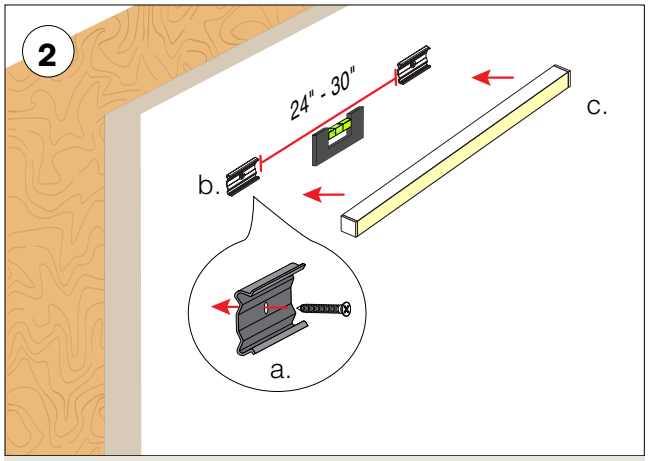
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SURFACE MOUNTING METHOD: **SCREW MOUNT**

- 2 clips provided for 4’ or less; 4 clips provided for greater than 4’



Determine the LALO fixture(s) location and positioning on desired surface; evenly distribute clips. Make any necessary reference markings to indicate where each clip is to be secured in place. Recommended every 24” - 30”.

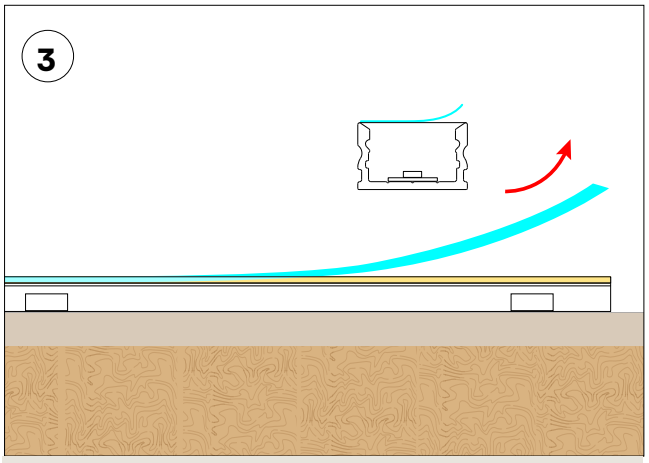


a. Secure clips using the #4 flat head hardware provided.

b. Ensure the screw head is flush with the clip’s base.

c. Snap fixture onto clips.

NOTE: Flat head screw type is dependent on surface/application material. Alternative flat head screws may be required. Refer to the surface material manufacturer for suggested screw type.

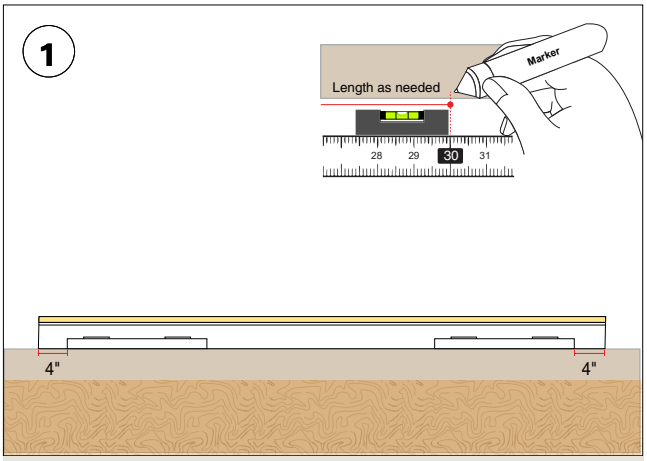


Remove protective film from the surface of the fixture’s lens.

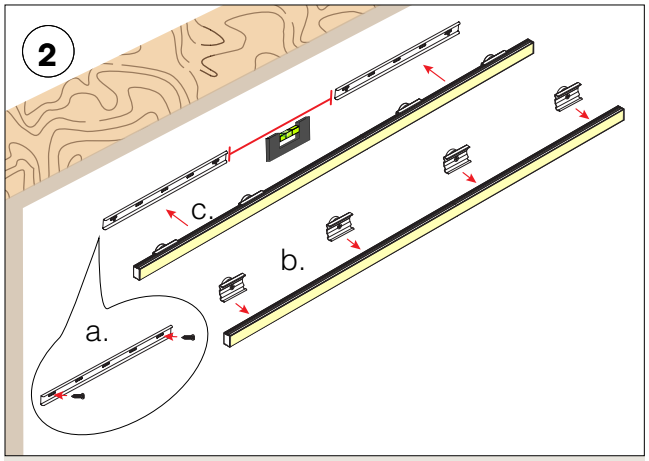
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SURFACE MOUNTING METHOD: **MAGNET MOUNT**

- One magnet clip per foot
- MMA-01 comes in 12" pieces; use at least one clip per MMA-01 accessory
- MMA-01 can be cut into smaller pieces, if desired



Determine the LALO fixture(s) location and positioning on desired surface. Make any necessary reference markings to indicate where the magnet mount accessory bracket is to be secured in place.

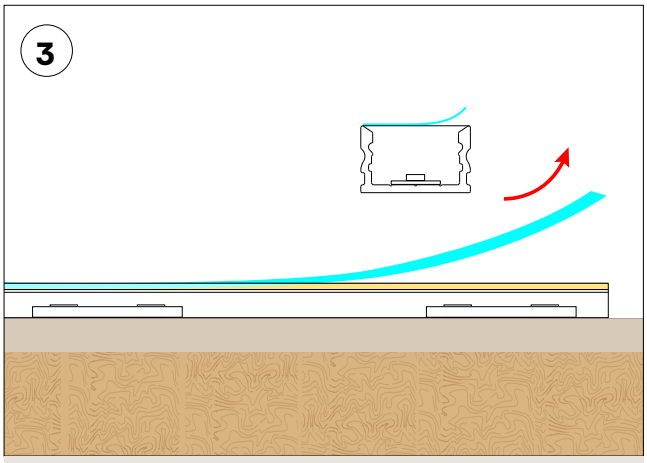


a. Mount the two #6 flat head screws into the 12" magnet mount accessory bracket through the slotted holes at each end. Ensure the screw head is flush with the magnet mount bracket.

b. Snap the magnet clips onto the backside of the fixture. They should be offset to the accessory bracket screws to maximize magnetic connection.

c. Place the assembled fixture into the magnet mount bracket.

NOTE: If surface application requires a longer screw, the screw size must be a #6 Flat Head.

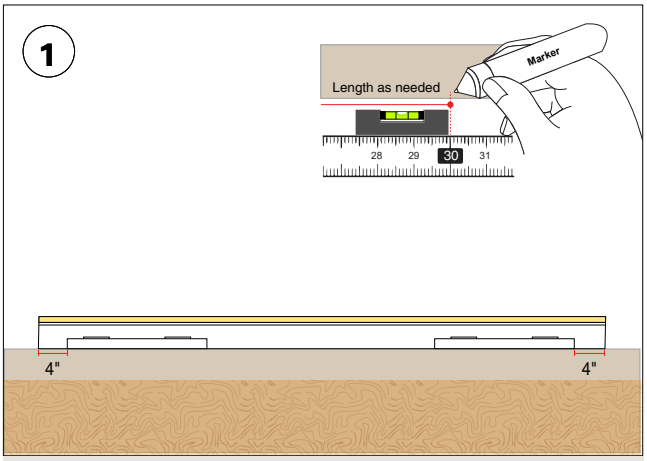


Remove protective film from the surface of the fixture's lens.

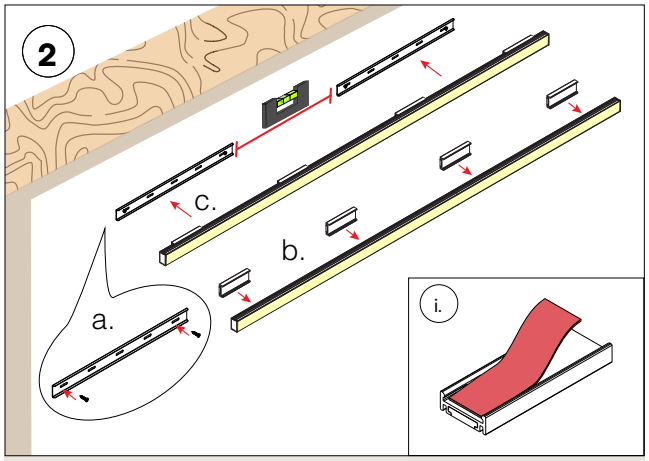
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SURFACE MOUNTING METHOD: **LOW PROFILE MAGNET MOUNT**

- One magnet clip per foot
- MMA-04 comes in 12" pieces; use at least one clip per MMA-04 accessory
- MMA-04 can be cut into smaller pieces, if desired



Determine the LALO fixture(s) location and positioning on desired surface. Make any necessary reference markings to indicate where the magnet mount accessory bracket is to be secured in place.

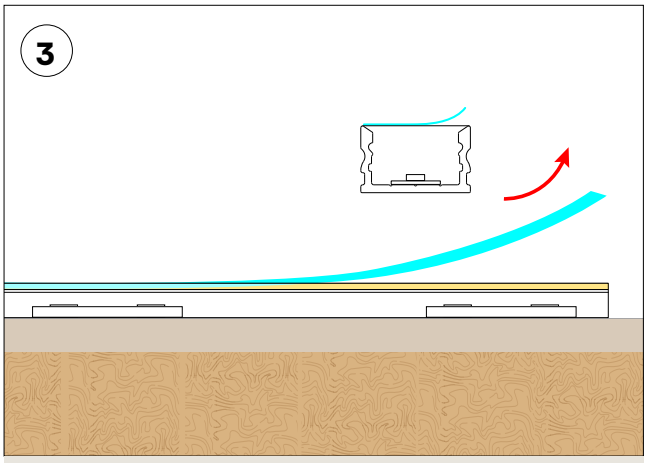


a. Mount the two #6 flat head screws into the magnet mount accessory bracket through the slotted holes at each end. Ensure the screw head is flush with the magnet mount bracket.

b. Snap the magnet clips onto the backside of the fixture. They should be offset to the accessory bracket screws to maximize magnetic connection.
i. If the clip does not fit securely onto the extrusion, apply the provided foam onto the inner face of the magnet clip.

c. Place the assembled fixture into the magnet mount bracket.

NOTE: If surface application requires a longer screw, the screw size must be a #6 Flat Head.

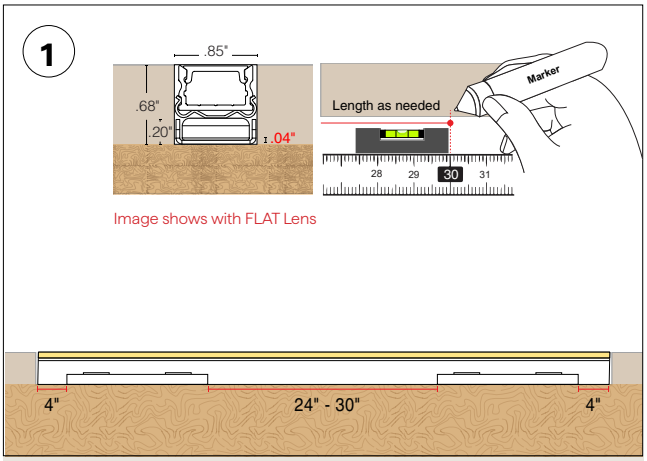


Remove protective film from the surface of the fixture's lens.

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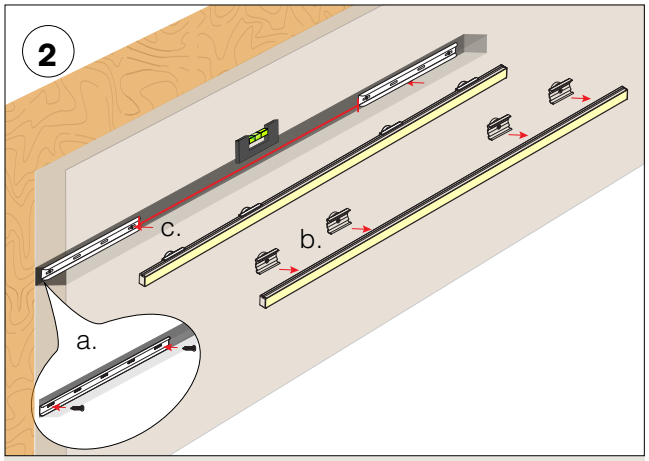
RECESSED MOUNTING METHOD: **MILLWORK**

- One magnet clip per foot
- MMA-01 comes in 12" pieces; use at least one clip per MMA-01 accessory
- MMA-01 can be cut into smaller pieces, if desired



Determine the LALO fixture(s) location and positioning on desired surface. Make any necessary reference markings to indicate where the magnet mount accessory bracket is to be secured in place.

NOTE: Depth of the channel in the millwork is dependent on overall height with the magnet clip and Magnet Mount Accessory.

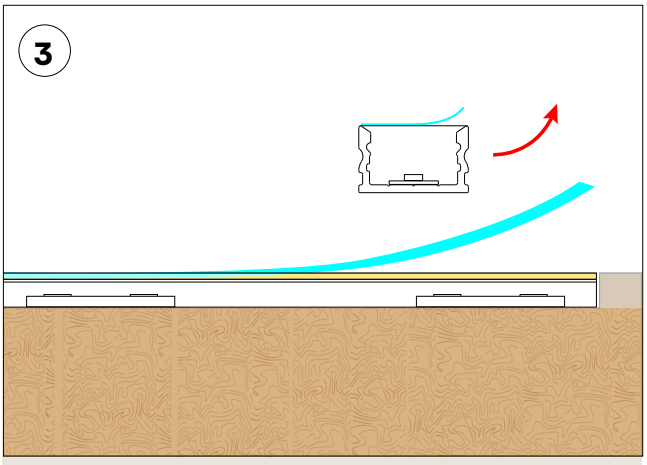


a. Mount the two #6 flat head screws into the 12" magnet mount accessory bracket through the slotted holes at each end. Ensure the screw head is flush with the magnet mount bracket.

b. Snap the magnet clips onto the backside of the fixture. They should be offset to the accessory bracket screws to maximize magnetic connection.

c. Place the assembled fixture into the magnet mount bracket.

NOTE: If surface application requires a longer screw, the screw size must be a #6 Flat Head.

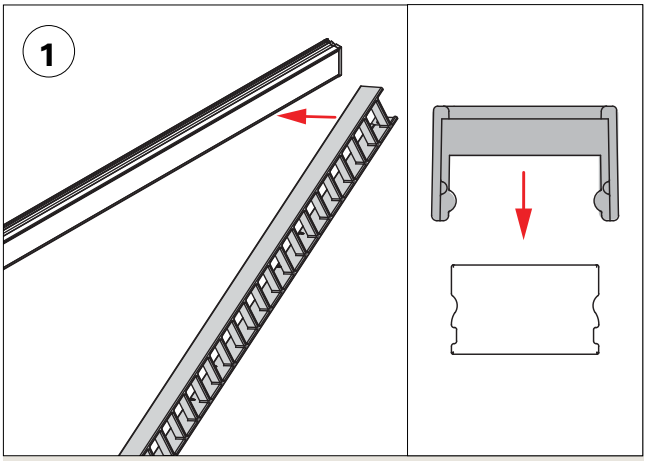


Remove protective film from the surface of the fixture's lens.

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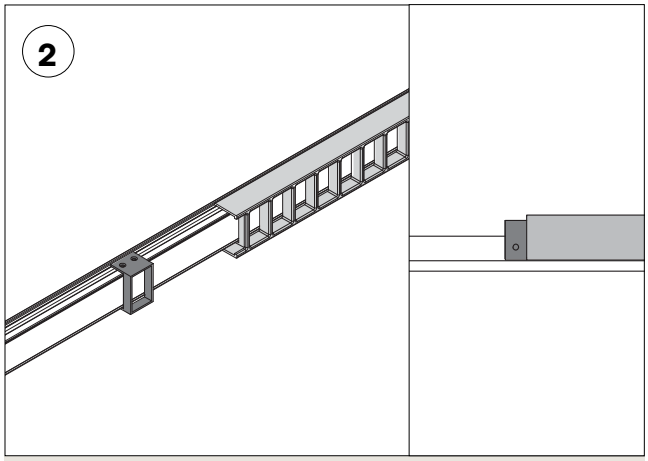
INSTALL METHOD: **LOUVER**

Louvers can be snapped onto the fixture either before or after it is mounted to the surface using the provided mounting clip.

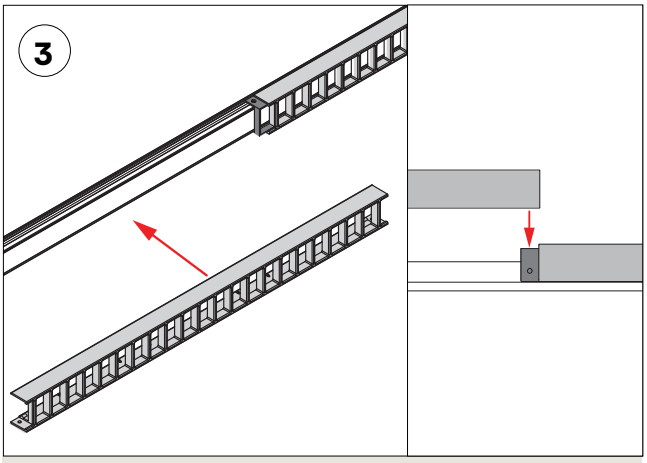


Snap the louver onto the fixture.

NOTE: Tilting the louver and snapping on one end first, then pressing down on the remaining length makes for an easier install.



Snap the louver connector onto the fixture, then slide it into the end of the mounted louver.



Snap the next louver onto the fixture and over the connector, the louver can also be slid into the connector.

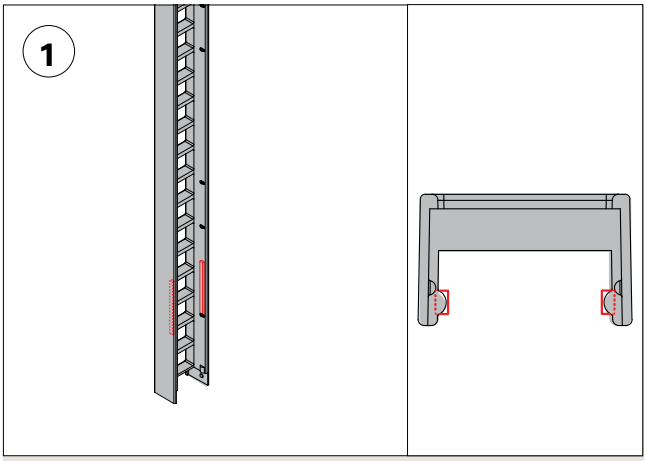
NOTE: These plastic louvers are field-cuttable. We recommend trimming the last segment as needed and positioning the cut end at the fixture's edge for a clean finish.

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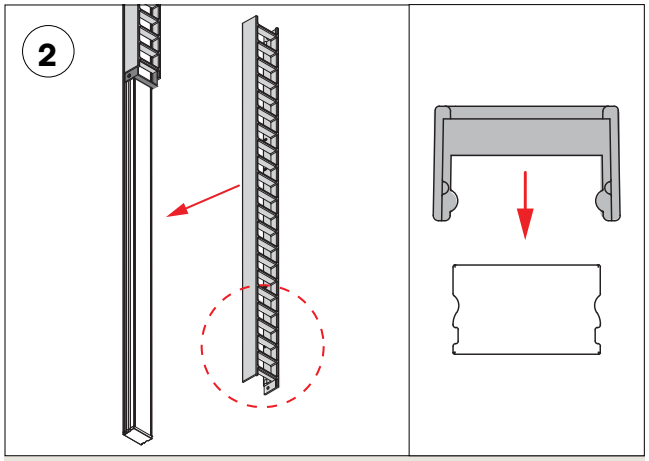
INSTALL METHOD: **LOUVER-GASKET**

Louvers can be snapped onto the fixture either before or after it is mounted to the surface using the provided mounting clip.

- When the fixture is mounted vertically, install a pair of gaskets on the inner side of the lowest louver to act as a stopper.



Remove the adhesive backing on the gasket, then place one on each side of the louver's inner walls, towards the bottom edge.



Snap last louver onto the fixture (should be lowest louver on fixture, when mounted vertically).

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ESSENTIALS LALO-ENCAPSULATED-DW-HE(03)

Linear Fixtures Color Data

LL3DW-2.5HE-24-DRY-STD-CL

2396 K

CRI: 92.6

CRI R9: 64.4

TM30 Rf: 89.9

TM30 Rg: 103.2

CQS: 86.5

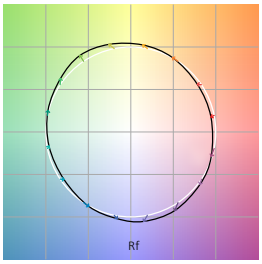
X: 0.485

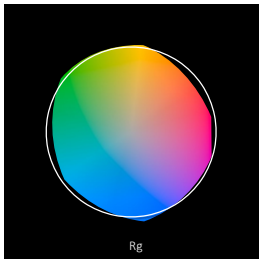
Y: 0.411

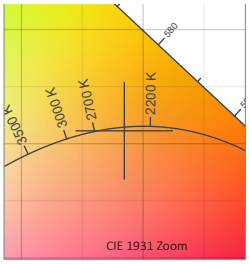
U: 0.278

V: 0.354

Δuv: -0.0011







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
93.8	95.7	94.6	93.4	92.6	94.8	92.5	83.7	64.4	87.7	93.9	82.8	94.4	95.5	90.1
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
84.2	92.9	84.4	85.8	87.6	83.9	81.1	85.7	94.3	88.9	88.8	89.0	89.6	86.0	84.9
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
91.5	91.5	84.1	89.3	91.3	89.3	88.4	91.4	93.9	92.1	89.3	87.8	90.4	85.4	91.1	87.1

TM30			
Hue Bin	R_f	Chroma	Hue
1	91	-4%	-1%
2	92	-4%	3%
3	84	0%	8%
4	89	3%	6%
5	91	6%	5%
6	89	8%	0%
7	88	4%	-6%
8	91	1%	-6%
9	94	-2%	-2%
10	92	-4%	3%
11	89	0%	8%
12	88	3%	4%
13	90	6%	-6%
14	85	6%	-8%
15	91	2%	-6%
16	87	-2%	-10%

LL3DW-2.5HE-27-DRY-STD-CL

2825 K

CRI: 96.6

CRI R9: 93.8

TM30 Rf: 93.1

TM30 Rg: 104.1

CQS: 92.2

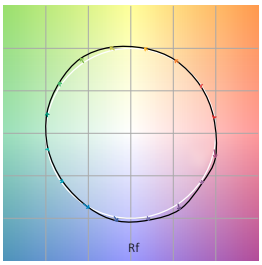
X: 0.447

Y: 0.402

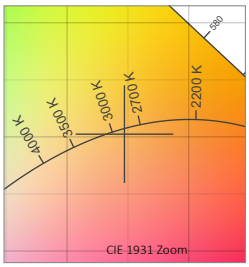
U: 0.258

V: 0.348

Δuv: -0.0019







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
99.3	97.2	92.7	95.8	98.0	95.5	96.6	97.5	93.8	91.8	94.7	83.4	98.7	94.8	99.0
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
94.4	97.2	87.0	90.2	93.3	89.2	87.2	93.0	95.5	92.6	93.6	94.8	96.2	96.3	95.4
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
96.4	97.3	91.3	92.5	93.2	91.1	93.0	93.6	96.2	93.9	89.2	89.5	94.2	91.9	94.0	89.5

TM30			
Hue Bin	R_f	Chroma	Hue
1	96	-1%	-1%
2	97	-1%	1%
3	91	1%	4%
4	92	1%	4%
5	93	4%	4%
6	91	6%	0%
7	93	3%	-3%
8	94	1%	-4%
9	96	-1%	-1%
10	94	-2%	3%
11	89	0%	8%
12	90	4%	5%
13	94	4%	1%
14	92	7%	-2%
15	94	2%	-2%
16	90	3%	-8%

LL3DW-2.5HE-40-DRY-STD-CL

4100 K

CRI: 97.8

CRI R9: 97.6

TM30 Rf: 92.7

TM30 Rg: 100.0

CQS: 95.2

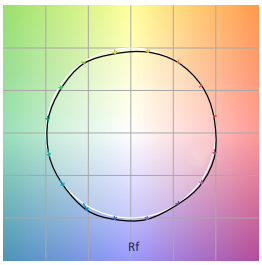
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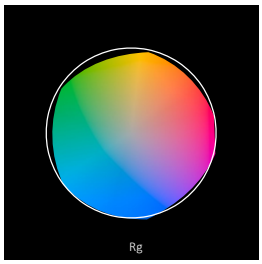
Y: 0.371

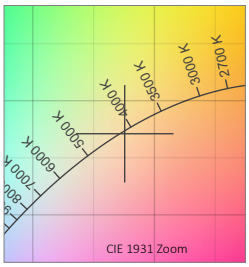
U: 0.224

V: 0.332

Δuv: -0.0012







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98.1	99.6	96.4	98.9	97.5	96.1	98.3	97.8	97.6	97.9	98.1	74.6	98.6	97.3	96.1
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
93.5	98.8	89.9	89.3	93.3	96.5	97.6	98.8	97.8	98.1	98.2	99.4	100.0	98.1	96.6
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
94.9	97.0	96.3	93.4	92.0	96.4	94.6	93.2	89.9	88.4	87.2	93.2	94.1	95.0	90.2	90.2

TM30			
Hue Bin	R_f	Chroma	Hue
1	95	0%	1%
2	97	0%	0%
3	96	0%	0%
4	93	-3%	-1%
5	92	-5%	0%
6	96	-1%	1%
7	95	-3%	2%
8	93	-1%	4%
9	90	-1%	8%
10	88	0%	7%
11	87	4%	8%
12	93	3%	2%
13	94	3%	-2%
14	95	1%	0%
15	90	2%	-4%
16	90	2%	-5%

NOTES:
- CRI R values, only R1-R8 are used to calculate RA CRI values
- TM30 C values, 16 binned values out of total of 99 C values
- CQS Q values
- Data subject to change, all data has +/- 5% tolerance

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Specification subject to change. Rev-03-04-24

ESSENTIALS LALO-ENCAPSULATED-DW-HE(03)

Linear Fixtures Color Data

LL3DW-2.5HE-24-DRY-STD-TL

2343 K

CRI: 92.9

CRI R9: 65.9

TM30 Rf: 90.0

TM30 Rg: 103.3

CQS: 86.0

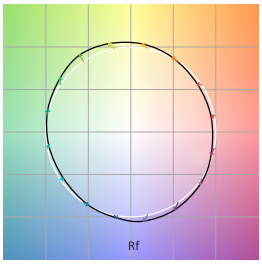
X: 0.490

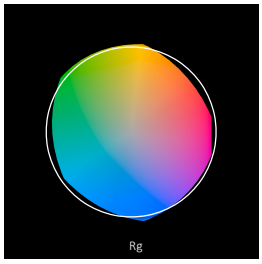
Y: 0.412

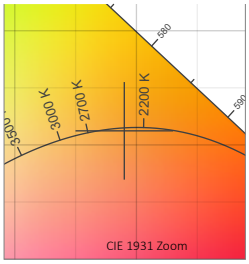
U: 0.281

V: 0.355

Δuv: -0.0009







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94.1	95.7	94.4	93.9	93.0	95.1	93.0	84.4	65.9	87.8	94.5	84.5	94.6	95.3	90.5
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
83.1	92.2	84.7	86.1	86.8	82.8	80.5	85.2	93.6	88.4	88.6	88.7	89.5	85.8	84.3
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
91.7	91.5	84.3	88.9	90.4	88.6	87.2	90.2	92.7	92.9	90.2	89.4	90.5	86.7	91.0	89.2

TM30			
Hue Bin	R_f	Chroma	Hue
1	92	-4%	-1%
2	92	-4%	3%
3	84	0%	8%
4	89	4%	7%
5	90	7%	5%
6	89	9%	0%
7	87	4%	-7%
8	90	1%	-7%
9	93	-2%	-4%
10	93	-4%	2%
11	90	-1%	6%
12	89	3%	4%
13	91	6%	-6%
14	87	5%	-8%
15	91	2%	-6%
16	89	-2%	-8%

LL3DW-2.5HE-27-DRY-STD-TL

2742 K

CRI: 96.9

CRI R9: 95.9

TM30 Rf: 93.8

TM30 Rg: 104.1

CQS: 92.6

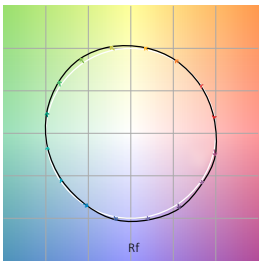
X: 0.454

Y: 0.405

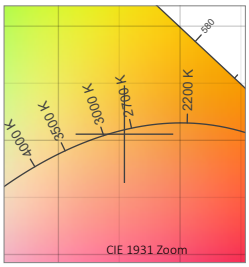
U: 0.261

V: 0.350

Δuv: -0.0015







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
99.7	97.5	92.9	95.8	98.4	96.4	96.7	97.9	95.9	92.7	94.8	87.5	99.0	95.0	99.2
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
93.7	97.1	88.9	92.1	93.0	88.7	87.8	93.3	95.6	93.1	94.2	95.4	96.6	96.7	95.2
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
96.7	97.6	92.2	92.8	93.1	91.1	91.4	92.9	95.2	96.1	91.9	91.4	94.7	93.4	93.8	92.1

TM30			
Hue Bin	R_f	Chroma	Hue
1	97	-1%	-1%
2	98	-1%	1%
3	92	1%	4%
4	93	2%	4%
5	93	4%	4%
6	91	6%	0%
7	91	4%	-4%
8	93	2%	-4%
9	95	-1%	-3%
10	96	-2%	1%
11	92	0%	6%
12	91	3%	4%
13	95	4%	0%
14	93	5%	-1%
15	94	3%	-3%
16	92	3%	-6%

LL3DW-2.5HE-30-DRY-STD-TL

3043 K

CRI: 96.0

CRI R9: 90.5

TM30 Rf: 93.1

TM30 Rg: 102.6

CQS: 92.6

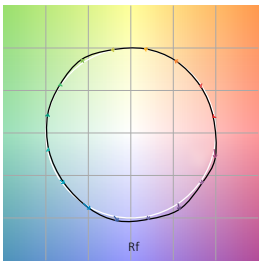
X: 0.433

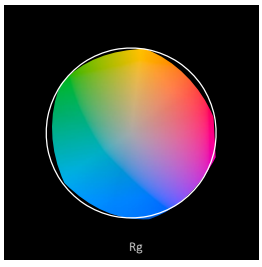
Y: 0.400

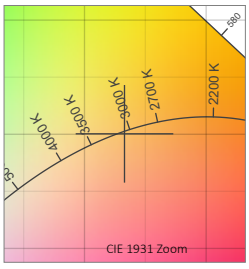
U: 0.250

V: 0.346

Δuv: -0.0009







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97.8	96.4	92.7	96.4	96.4	94.0	97.3	96.8	90.5	89.8	95.6	78.3	97.3	95.0	97.5
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
96.0	97.6	86.4	88.4	93.0	91.7	89.4	94.0	95.4	93.0	93.7	95.1	96.4	95.8	95.7
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
96.3	96.6	92.0	93.9	92.9	93.7	94.9	96.3	95.9	90.3	87.3	89.0	94.9	91.9	93.2	89.1

TM30			
Hue Bin	R_f	Chroma	Hue
1	96	-1%	-1%
2	97	-1%	1%
3	92	0%	4%
4	94	0%	3%
5	93	0%	3%
6	94	4%	0%
7	95	1%	-2%
8	96	0%	-2%
9	96	-2%	1%
10	90	-2%	5%
11	87	1%	9%
12	89	4%	5%
13	95	4%	1%
14	92	7%	-2%
15	93	2%	-3%
16	89	3%	-9%

NOTES:
- CRI R values, only R1-R8 are used to calculate RA CRI values
- TM30 C values, 16 binned values out of total of 99 C values
- CQS Q values
- Data subject to change, all data has +/- 5% tolerance

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Specification subject to change. Rev-03-04-24

ESSENTIALS LALO-ENCAPSULATED-DW-HE(03)

Linear Fixtures Color Data

LL3DW-2.5HE-40-DRY-STD-TL

4006 K

CRI: 97.4

CRI R9: 96.7

TM30 Rf: 92.1

TM30 Rg: 99.0

CQS: 94.8

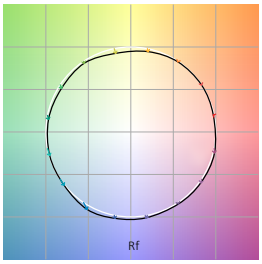
X: 0.380

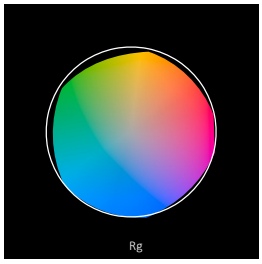
Y: 0.377

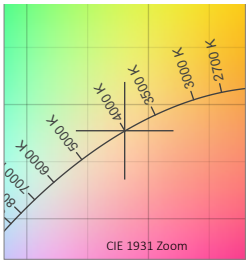
U: 0.225

V: 0.334

Δuv: 0.0002







R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98.7	99.5	96.3	97.3	96.6	96.0	97.6	97.2	96.7	96.1	97.9	73.2	99.3	97.2	96.5
Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**	**Q11**	**Q12**	**Q13**	**Q14**	**Q15**
92.5	98.3	90.2	88.7	92.2	94.8	97.7	98.4	98.1	98.2	98.2	99.4	99.8	98.3	96.3
C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**	**C9**	**C10**	**C11**	**C12**	**C13**	**C14**	**C15**	**C16**
94.4	97.0	96.2	92.7	91.2	95.9	93.3	92.1	88.8	87.1	87.0	92.8	93.8	94.7	89.8	90.0

TM30			
Hue Bin	R_f	Chroma	Hue
1	94	-1%	1%
2	97	0%	0%
3	96	-1%	0%
4	93	-3%	-2%
5	91	-6%	-1%
6	96	-2%	1%
7	93	-4%	3%
8	92	-2%	4%
9	89	-1%	8%
10	87	0%	8%
11	87	4%	8%
12	93	3%	2%
13	94	3%	-2%
14	95	2%	0%
15	90	2%	-4%
16	90	1%	-5%

NOTES:
- CRI R values, only R1-R8 are used to calculate RA CRI values
- TM30 C values, 16 binned values out of total of 99 C values
- CQS Q values
- Data subject to change, all data has +/- 5% tolerance

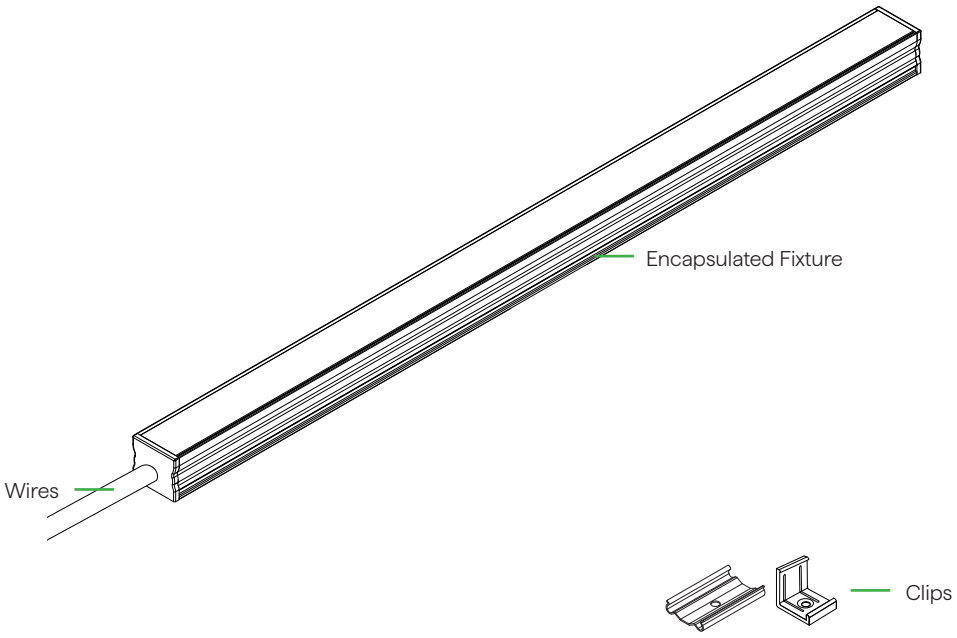
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MATERIAL RECYCLING

ENCAPSULATED LINEAR FIXTURES

You may be done with your products, but chances are they still have more to give. Follow these instructions to break down and sort recyclable components. Check with local recycling collection to ensure they accept the materials listed below.

Additionally, Q-Tran offers a Takeback Program. Contact factory for information.



7	E	40
Plastic Clips	Encapsulated Fixture Wires	Stainless Steel Clips

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