

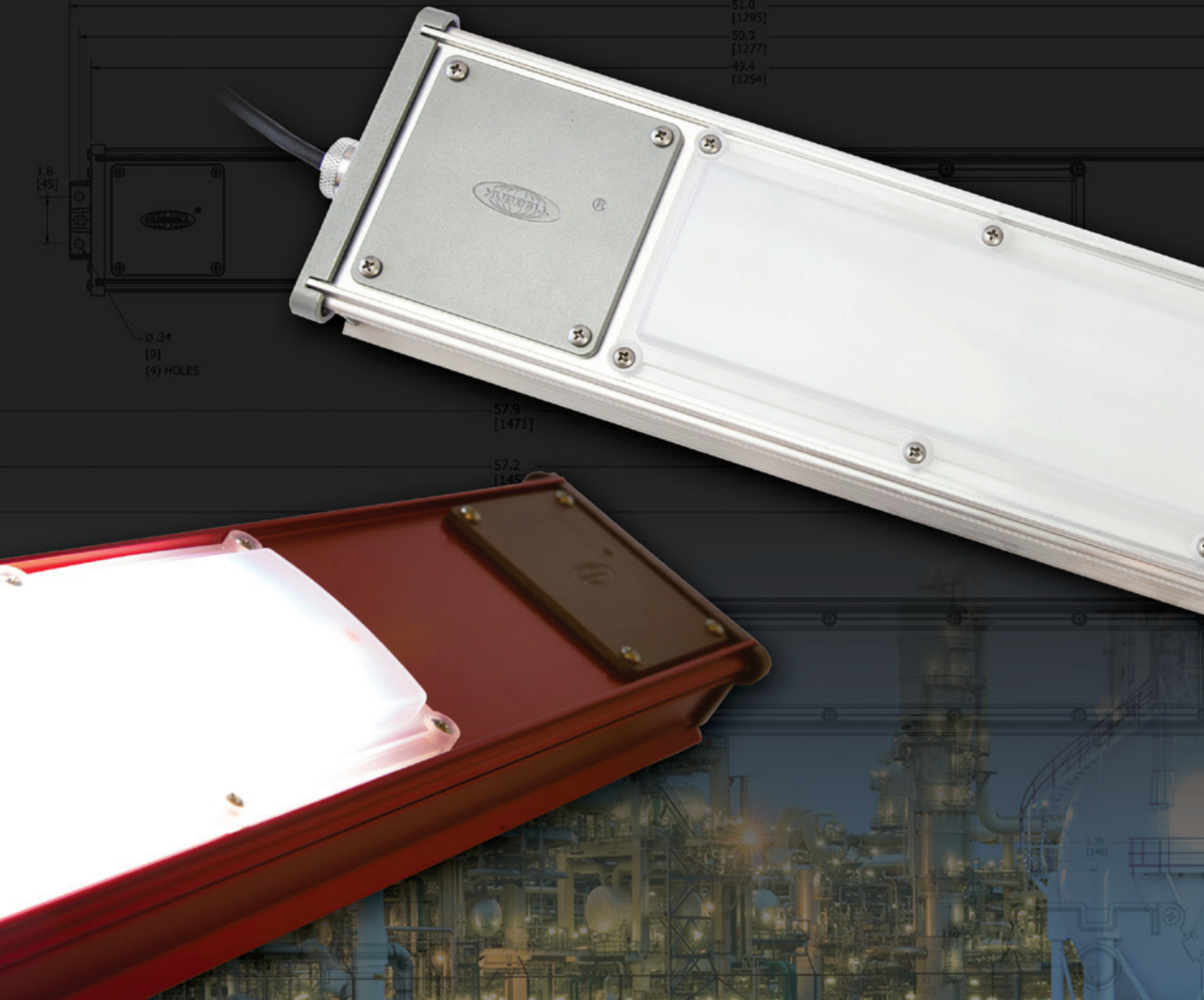


Harsh & Hazardous

KILLARK®

LAL Series LINEAR LED TECHNOLOGY

for Harsh and Hazardous Environments





LAL/LALxE/LALC SERIES

KILLARK

LOW PROFILE LINEAR ALUMINUM LED • EXCLUSIVE DESIGN FEATURES

High temperature rated silicone gasketing provides NEMA 4X & IP66 sealing.



Diffused



Clear

2 Lens Choices:

- Clear for maximum lumens
- Diffused for glare control



Looping Terminal Blocks under Wiring Access Plate(s).

Optional Through Wiring

2 Access Plates for feed through wiring

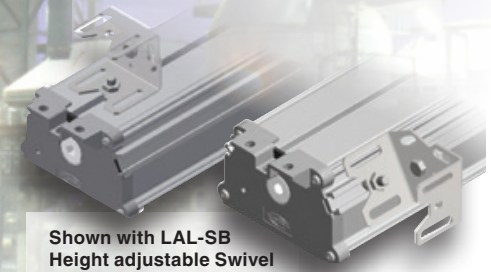
Battery

E13 and E26 models include internal Emergency battery systems to 50°C suitability

Surge

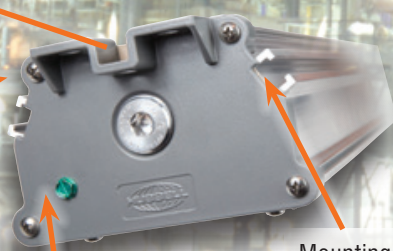
Standard with internal 20kA/10kA Supplemental Surge Protection

Endcaps standard with 1 x 3/4" hub. 1/2" NPT and M20 available.



Shown with LAL-SB Height adjustable Swivel Brackets

End Caps include feet for direct ceiling mounting and safety cable connection



Mounting Slots on back and at 45°

Earth

External Earth Ground for IECEx requirement

LIGHTING

LAL/LALxE/LALC SERIES



LINEAR LED TECHNOLOGY



Segurança
N IEx



Class I, Div. 2, Groups A, B, C, D
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
AEx nAII, Ex nAII
Wet Locations
NEMA 4X
IP66

Certified - File LR11713

IECEX Rated
Zone 2 and Zone 21 areas
Ex nA IIC T6 to T3, Gc
Ex tb IIC T95°C Db
Tamb -50°C < Tz < +65°C, IP66

IECEX Certificate
QPS 15.0010

ATEX Certificate
CML 15ATEX4081X (nA)
&
CML15ATEX3082X (tb)

LINEARLITE®*

* marca registrada MEXICO

FEATURES-SPECIFICATIONS

Applications

Linear LED Luminaires are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, and NEMA 3, 4X, IP66 areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC/IECEX.

Typical applications include land based oil rigs, offshore oil platforms, dockside installations, chemical and petrochemical processing facilities, sewage treatment plants, garages, storage facilities, tunnels, and grain/food facilities.

ABS (American Bureau of Shipping) type approval for use on decks, vessels, platforms, barges, ships and boats. Also suitable for docks and marinas.

Compliances

- UL-8750 for LED lighting
- ANSI/UL 1598(A)
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- IEC suffix Zone 2/21 to IEC 60079-0, 60079-15, 60079-31 Standards
- Enclosed and gasketed
- NEMA 3, 4X
- IP66

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models)
10KA/10KV Surge Protection (for 347-480 VAC)

Materials

- NEMA 4X & IP66 rated
- Housing – one piece natural finish \leq .1% copper-free aluminum extrusion
- Endcaps & wiring – Access covers are copper-free (\leq .4%) aluminum with gray baked powder epoxy-polyester finish, electrostatically applied for complete uniform corrosion resistance.
- External screws are 316 stainless steel
- Lens – Impact resistant polycarbonate lens available in diffuse or clear

LAL & LALxE Product Features

- LALxE models have “built-in” battery backup for 90 minute emergency exit
- Shallow design minimizes profile in work areas with low ceiling heights
- Diffuse Lens Standard to minimize glare; Clear Lens available
- Polycarbonate Single Lens 18W to 60W; Double Lens model 34W – 120W
- Slot Back Design allows multiple mounting access points across length – slots can also be used with 5/16” or 8mm bolts & nuts, 3 housing slots, 1 center back and 2 at 45°.
- Variety of mounting options including swivel brackets, wall, ceiling brackets, or beam clamps

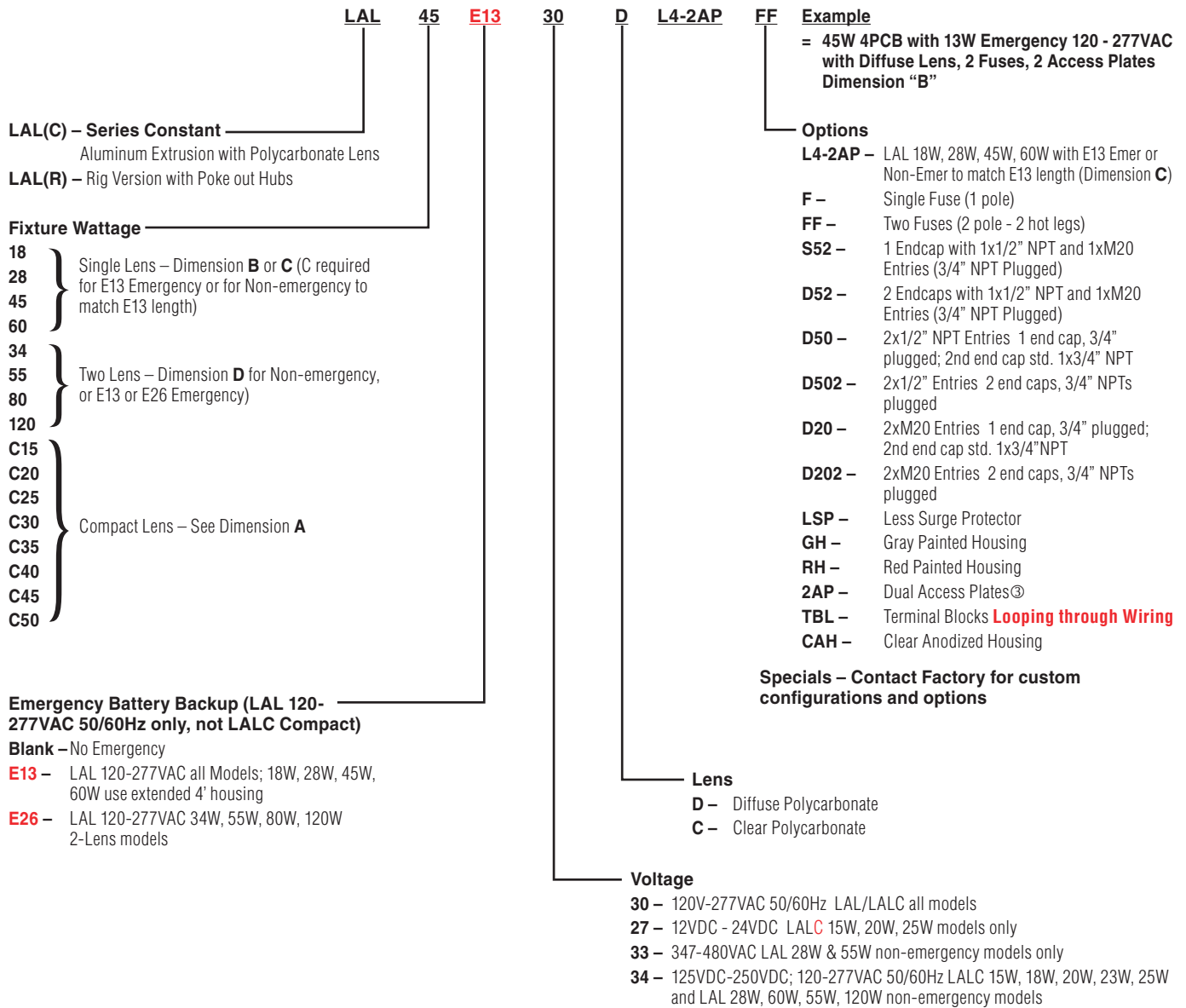
- End Caps each have 2 mounting feet built-in plus a safety strap attachment point
- Standard unit End Caps each have single a 3/4” NPT hub, and fixture is furnished with one 3/4” close-up plug and two 3/4” to 1/2” reducers – provides out of the box 1/2” dead-end to 3/4” feed-through flexibility. Metric openings are available.
- Standard LALs have one wiring Access Plate for easy access to driver leads.

LED Features and Standards

- Many Midpower LEDs blend light to simulate fluorescent tubes
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- LED Array Life – to 212,000 maintenance free hours to 70% initial lumens
- Ambient suitability -40°C to 65°C (see tables). **0°C to 50°C Ambient suitability for Emergency models.**
- Instant On – Including after power interruption
- World Voltage 120 - 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- LM80-08 Measurement of lumen maintenance for LED light sources
- LM79-08 Certified “Absolute” Photometry, including Chromaticity Color for Solid State Lighting
- L70 Values – Industry Nomenclature for Hours of use to 70% of initial Lumens – TM-21* & Calculated



CATALOG LOGIC



Energy Savings

LED VS FLUORESCENT WATTAGE & DELIVERED LUMENS ^{① ②}					
LED WATT	LUMENS	L/W	FLUORESCENT	LUMENS	L/W
18W	2557	150	40W 1x40W BX	2471	63
28W	3775	144	55W 1x55W BX	3766	65
34W	5075	149	56W 2x28T5	4676	71
45W	5562	137	64W 2x32T8	4772	80
55W	7577	144	108W 2x54T5HO	8088	67
60W	7618	132	120W 2x60T12HO	6965	56
80W	11140	137	162W 3x54T5HO	11619	65

① Cataloged Wattage in L22x Fluorescent or LALx LED luminaires – actual varies with driver or ballast losses – Delivered Lumens and L/W from photometry testing
 ② LAL L70 Life 99,600-212,000 hours L22x Fluorescent 10,000-60,000 hours
 ③ 2AP Length Dimensions will increase by 4.2".

LIGHTING

LAL/LALxE/LALC SERIES



ORDERING INFORMATION

ORDERING INFORMATION AND AMBIENT SUITABILITY							C1D2 ABCD/ ZONE 2 IIC, IIB, IIA②③			C1D2②③ GRPS. EFG SIMULTANEOUS			C2D1②③ GRPS. EFG			IEC ZONE 2③			IEC ZONE 21③					
CATALOG NUMBER W/ DIFFUSE LENS ①	WEIGHT LBS./KG	WATTS STD. POWER	LENGTH STYLE - INCHES (MM)	VOLTAGE	AMPS ②	DELIVERED LUMENS Diffuse/ Clear	40°C	55°C ④	65°C ④	40°C	55°C ④	65°C ④	40°C	55°C ④	65°C ④	40°C	55°C ④	65°C ④	40°C	55°C ④	65°C ④			
LAL1830D	17.9 / 8.1	18	B-32.6 (828)	120-277VAC	0.15 - 0.06	2272 / 2479	T6	T6	T5	T4A	T4A	T4A	T4A	T4A	T4A	T6	T6	T5	T4	T4	T4			
LAL1830D-L4-2AP	21.9 / 9.9		C-51 (1295)				T6	T6	T5	T4A	T4A	T4A	T4A	T4A	T4A	T6	T6	T5	T4	T4	T4			
LAL18E1330D-L4-2AP	31.9 / 14.5		C-51 (1295)				T6	T6	T5	T4A	T4A	T4A	T4A	T4A	T4A	T6	T6	T5	T4	T4	T4			
LAL2830D	17.9 / 8.1	28	B-32.6 (828)		120-277VAC	0.23 - 0.10	3321 / 3624	T6	T6	T5	T4A	T4A	T4A	T4A	T4A	T4A	T6	T6	T5	T4	T4	T4		
LAL2830D-L4-2AP	21.9 / 9.9		C-51 (1295)					T6	T6	T5	T4A	T4A	T4A	T4A	T4A	T4A	T6	T6	T5	T4	T4	T4		
LAL28E1330D-L4-2AP	31.9 / 14.5		C-51 (1295)					T6	T6	T5	T4A	T4A	T4A	T4A	T4A	T4A	T6	T6	T5	T4	T4	T4		
LAL4530D	17.9 / 8.1	45	B-32.6 (828)			120-277VAC	0.38 - 0.16	5054 / 5515	T6	T5	-	T4A	T4A	T4A	T4A	T4A	T4A	T6	T5	T5	T4	T4	T4	
LAL4530D-L4-2AP	21.9 / 9.9		C-51 (1295)						T6	T5	-	T4A	T4A	T4A	T4A	T4A	T4A	T6	T5	T5	T4	T4	T4	
LAL45E1330D-L4-2AP	31.9 / 14.5		C-51 (1295)						T6	T5	-	T4A	T4A	T4A	T4A	T4A	T4A	T6	T5	T5	T4	T4	T4	
LAL6030D	18.9 / 8.6	60	B-32.6 (828)				120-277VAC	0.50 - 0.22	7064 / 7709	T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL6030D-L4-2AP	22.9 / 10.4		C-51 (1295)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL60E1330D-L4-2AP	32.9 / 14.9		C-51 (1295)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL3430D	34.5 / 15.6	34	D-57.9 (1471)	120-277VAC				0.28 - 0.12	4517 / 4929	T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL34E1330D	44.5 / 20.2		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL34E2630D	54.5 / 24.7		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL5530D	34.5 / 15.6	55	D-57.9 (1471)		120-277VAC			0.46 - 0.20	6864 / 7490	T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL55E1330D	44.5 / 20.2		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL55E2630D	54.5 / 24.7		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL8030D	34.5 / 15.6	80	D-57.9 (1471)			120-277VAC		0.67 - 0.29	10110 / 11032	T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL80E1330D	44.5 / 20.2		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL80E2630D	54.5 / 24.7		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL12030D	36.5 / 16.6	120	D-57.9 (1471)				120-277VAC	1.00 - 0.43	15090 / 16467	T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL120E1330D	46.5 / 21.1		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LAL120E2630D	56.5 / 25.6		D-57.9 (1471)							T6	T5	-	T4A	T4A	-	T4A	T4A	-	T6	T5	-	T4	T4	-
LALC1527D	12.03 / 4.49	15	A-18.73 (476)	12-24VDC				1.3-0.6	1503 / 1640	T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-
LALC1530D				120-277VAC				0.15-0.06		T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-
LALC1534D				120-250VDC				0.2-0.1		T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-
LALC2027D		20	A-18.73 (476)	12-24VDC	1.7-0.8			2337 / 2550	T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-	
LALC2030D				120-277VAC	0.17-0.08				T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-	
LALC2034D				120-250VDC	0.2-0.1				T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-	
LALC2527D		25	A-18.73 (476)	12-24VDC	2.1-1.0	3019 / 3294		T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-		
LALC2530D				120-277VAC	0.18-0.08			T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-		
LALC2534D				120-250VDC	0.2-0.1			T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-		
LALC3030D		30	A-18.73 (476)	120-277VAC	0.26-0.11	2726 / 2974	T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-			
LALC3530D		35	A-18.73 (476)	120-277VAC	0.30-0.13	3261 / 3558	T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-			
LALC4030D		40	A-18.73 (476)	120-277VAC	0.34-0.15	4152 / 4530	T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-			
LALC4530D	45	A-18.73 (476)	120-277VAC	0.38-0.17	5136 / 5604	T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-				
LALC5030D	50	A-18.73 (476)	120-277VAC	0.42-0.18	6039 / 6590	T5	-	-	T4A	-	-	T4A	-	-	T5	-	-	T4	-	-				

① See Logic Notes for Options

② Use 75°C Minimum Supply Wire @ 40°C; Use 90°C Wire at 55° or 65°C

③ 55°C or 65°C where listed

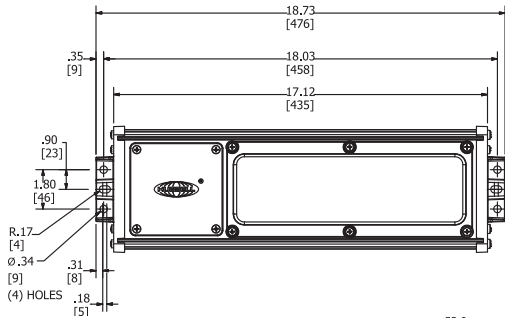
④ T-Codes for 55°C or 65°C reflect maximum internal or external temperatures. However, E13 or E26 Emergency units are limited to -20°C to 50°C ambient to protect electronics and batteries.

LAL		
LED LUMEN LIFE	L70 CALCULATED	L70 TM-21**
40°C Ambient	212,000 Hours to 70% Initial	60,600 Hours Official Reported
55°C/65°C Ambient⑥	99,600 Hours to 70% Initial	60,400 Hours Official Reported

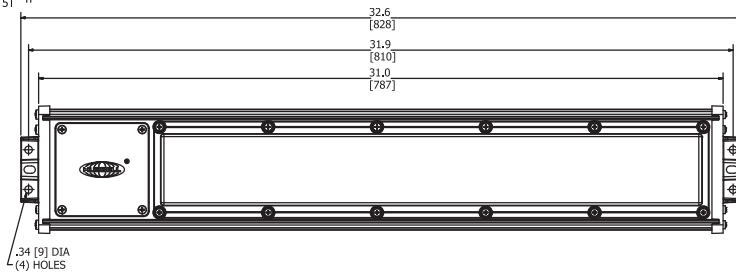
LALC		
LED LUMEN LIFE	L70 CALCULATED	L70 TM-21**
Extra High L/W Models	278,000 Hours to 70% Initial	72,600 Hours Official Reported
High L/W Models	270,000 Hours to 70% Initial	60,100 Hours Official Reported
50W High L/W Models	190,000 Hours to 70% Initial	60,300 Hours Official Reported



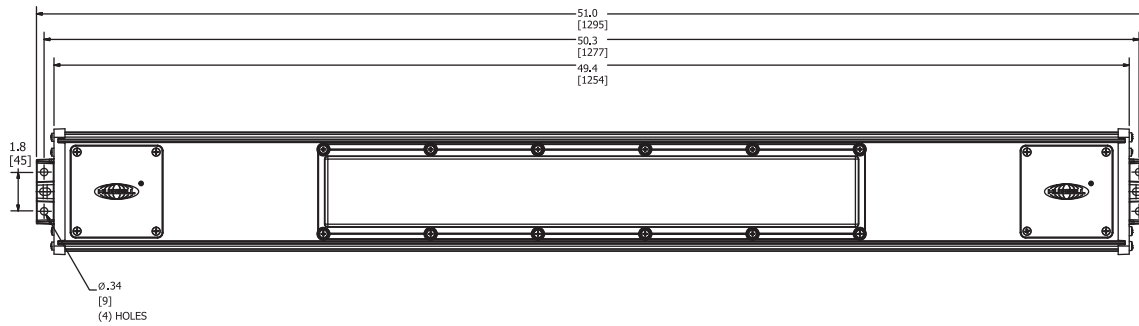
DIMENSIONS AND ACCESSORIES



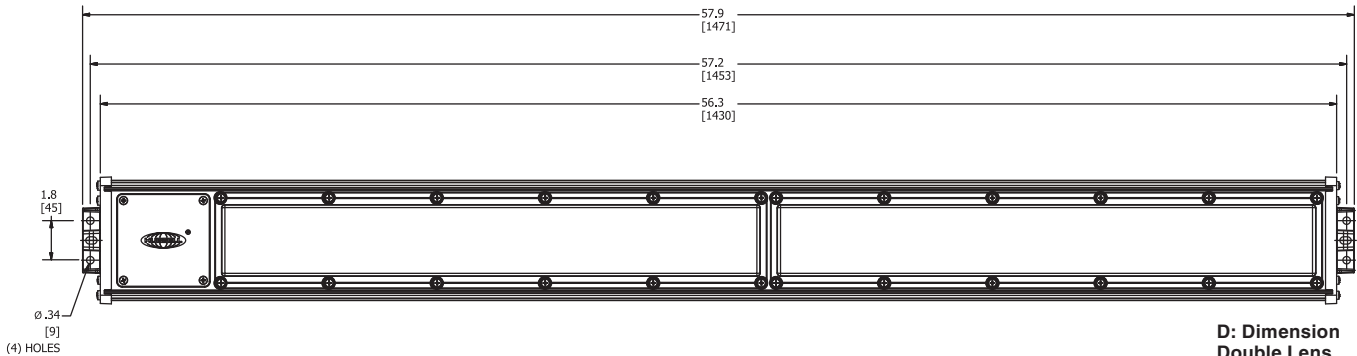
A: Dimensions for LALC



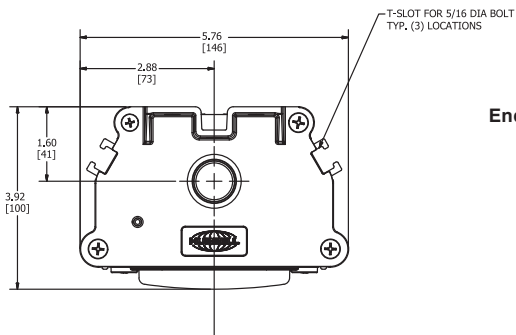
B: Dimension for Single Lens



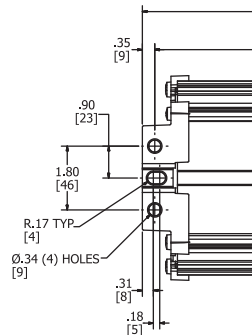
C: Dimension Single Lens with Emergency Battery or Extended Model to Match Emergency Length



D: Dimension Double Lens with or without Emergency Battery



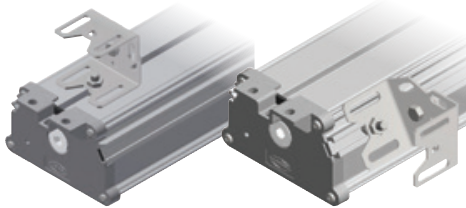
End Views





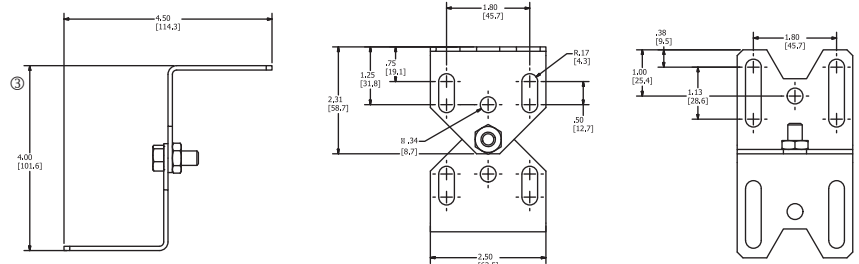
ACCESSORIES AND REPLACEMENT PARTS

ACCESSORIES AND REPLACEMENT PARTS: ① ②	
LAL-SB	Swivel Bracket Set w/ Adjustable Height; includes 5/16" bolts/nuts/lock-washers for attachment to LAL(C) "slots"; can also be attached to end cap mounting feet with FBO bolts.
LZCB	Ceiling Bracket Set with Stainless Steel Bolts to attach to LAL(C) "slots"
LZWB	Wall Bracket Set with Stainless Steel Bolts to attach to LAL(C) "slots"
LAL-BC	Steel/malleable Iron with Zinc electroplate for corrosion resistance; includes Stainless Steel Bolts to attach to LAL(C) "slots"
LAL-EB	Eyebolt Set with Stainless Steel Bolts to attach to LAL(C) "slots"
VMSC10	10' Stainless Steel Safety Cable with loop grip
LALG	Stainless Guard for 1 LAL Lens, order two for 2 lens models
LALCG	LALC Stainless Guard
LAL-LENSCLR	Single Clear Lens with Gasket for LAL Series
LAL-LENSDIF	Single Diffuse Lens with Gasket for LAL Series
LALC-LENSCLR	Single Clear Lens with Gasket for LALC Series
LALC-LENSDIF	Single Diffuse Lens with Gasket for LALC Series
LAL-RIG-CB	Rig Mounting Style Ceiling Bracket
LAL-RIG-WB	Rig Mounting Style Wall Bracket
RIG-LALC	Rig End Caps for LALC



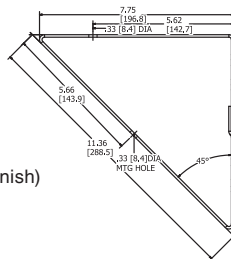
LAL-SB on Center Slot

LAL-SB on 45° Slot

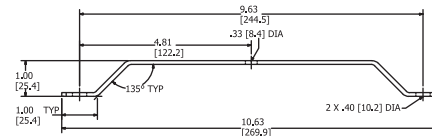
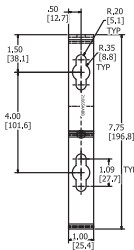


LAL-SB Dimensions – extended shown

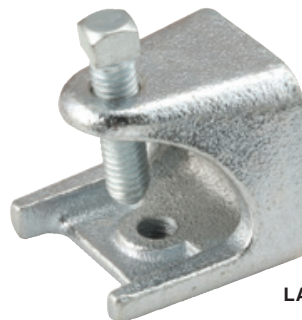
Wall Bracket Set^②
Part Number LZWB
Stainless Steel (natural finish)



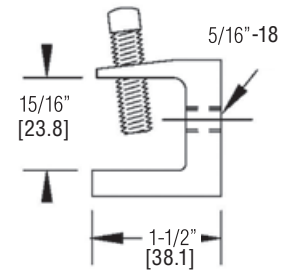
Ceiling Bracket Set^②
Part Number LZCB
Stainless Steel (natural finish)



VMSC10 Safety Cable



LAL-BC Beam Clamp



① Dimensions in () are millimeters.

② Product accessories have hardware for attachment to fixture; hardware to attach to wall/ceiling F.B.O.

③ Un-extended height 3.25" (82.6)



CERTILITE[®] DESIGN

LIGHTING DESIGN SOFTWARE

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- **Modern “Ribbon” Windows Interface with “Real Time” Calculations**
- **Easily import/export of CAD files (DWG/DXF/PDF)**
- **Enhanced photometric database with luminaire images and wireframes**
- **Ability to draw round or complex rooms and grids**
- **False Colors to indicate “Relative Brightness”**

See “Lighting Software link” at www.hubbell-killark.com to download

HKSB-LAL 01-17 © Killark, 2017

KILLARK[®]

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Harsh & Hazardous