

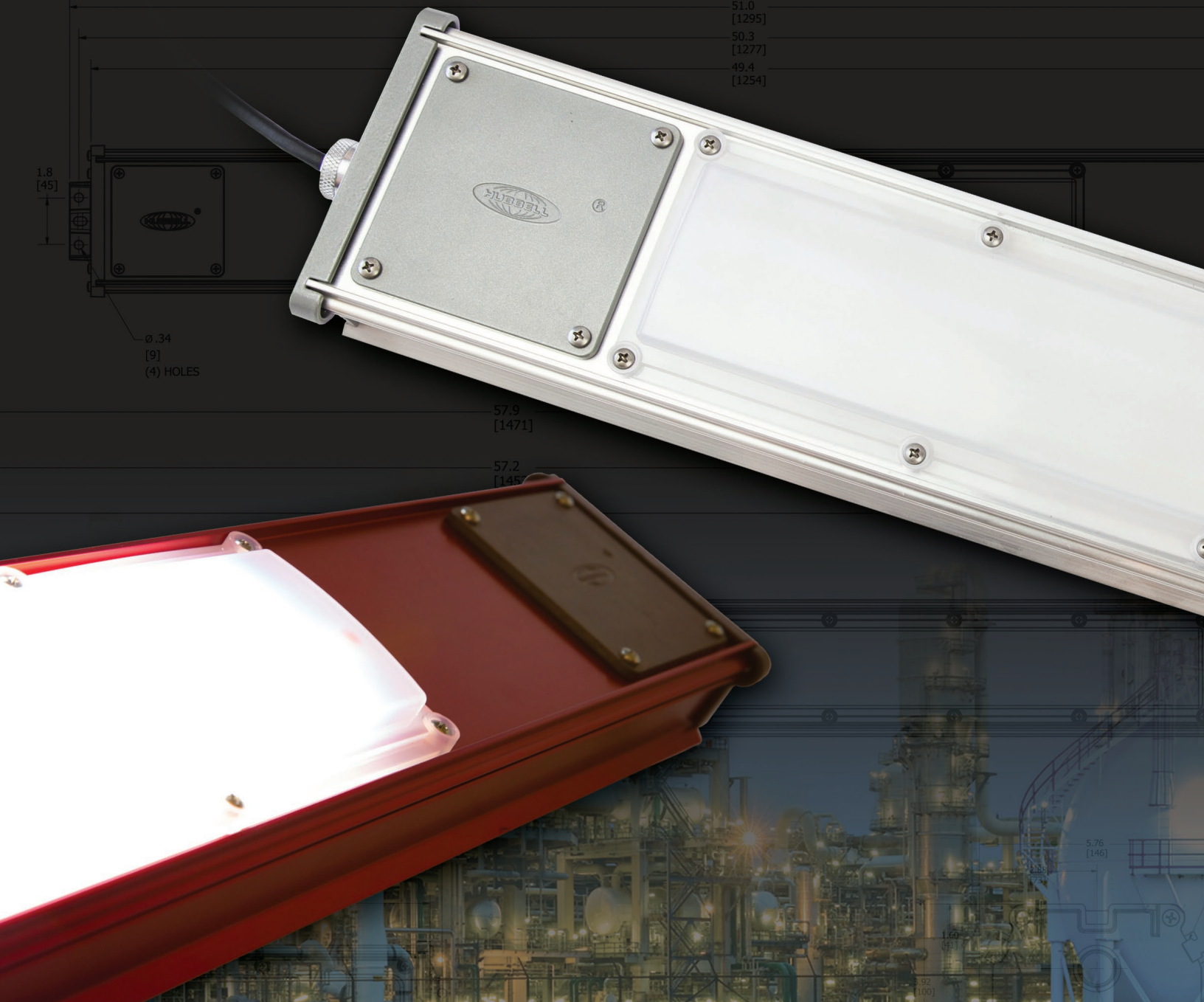


Harsh & Hazardous

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 Type 4X & IP66 sealing.



Diffused



Clear

2 Lens Choices:

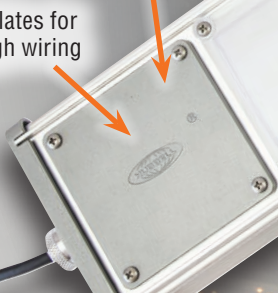
- Clear for maximum lumens
- Diffused for glare control

Looping Terminal Blocks under Wiring Access Plate(s).



Optional Through Wiring

2 Access Plates for feed through wiring



Battery

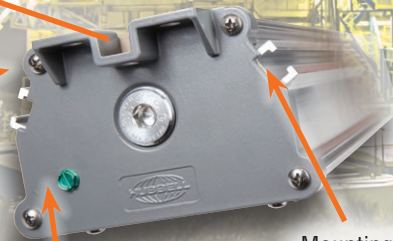
E5, E13 and E26 models include internal Emergency battery systems to 50°C suitability

Surge

Standard with internal 20kA/10kA Supplemental Surge Protection

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

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



Shown with LAL-SB Height adjustable Swivel Brackets



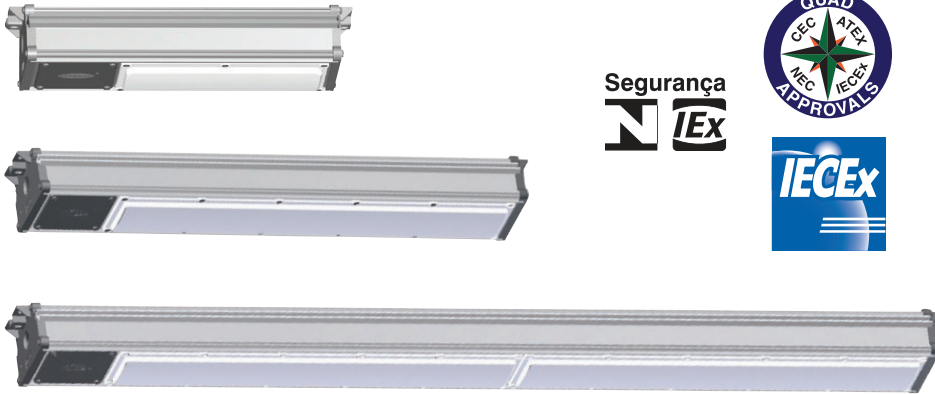
Mounting Slots on back and at 45°

Earth

External Earth Ground for IECEx requirement



LINEAR LED TECHNOLOGY



LINEAR^{LITE}® *

* marca registrada MEXICO

FEATURES-SPECIFICATIONS

Applications

Linear LED Luminaires are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, and Type 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 & INMETRO.

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
- Type 3, 4X
- IP66

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

Materials

- 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 or 180 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 80W & 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

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 nAll, Ex nAll
Wet Locations
Type 4X
IP66
Marine Rated (US only)

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)

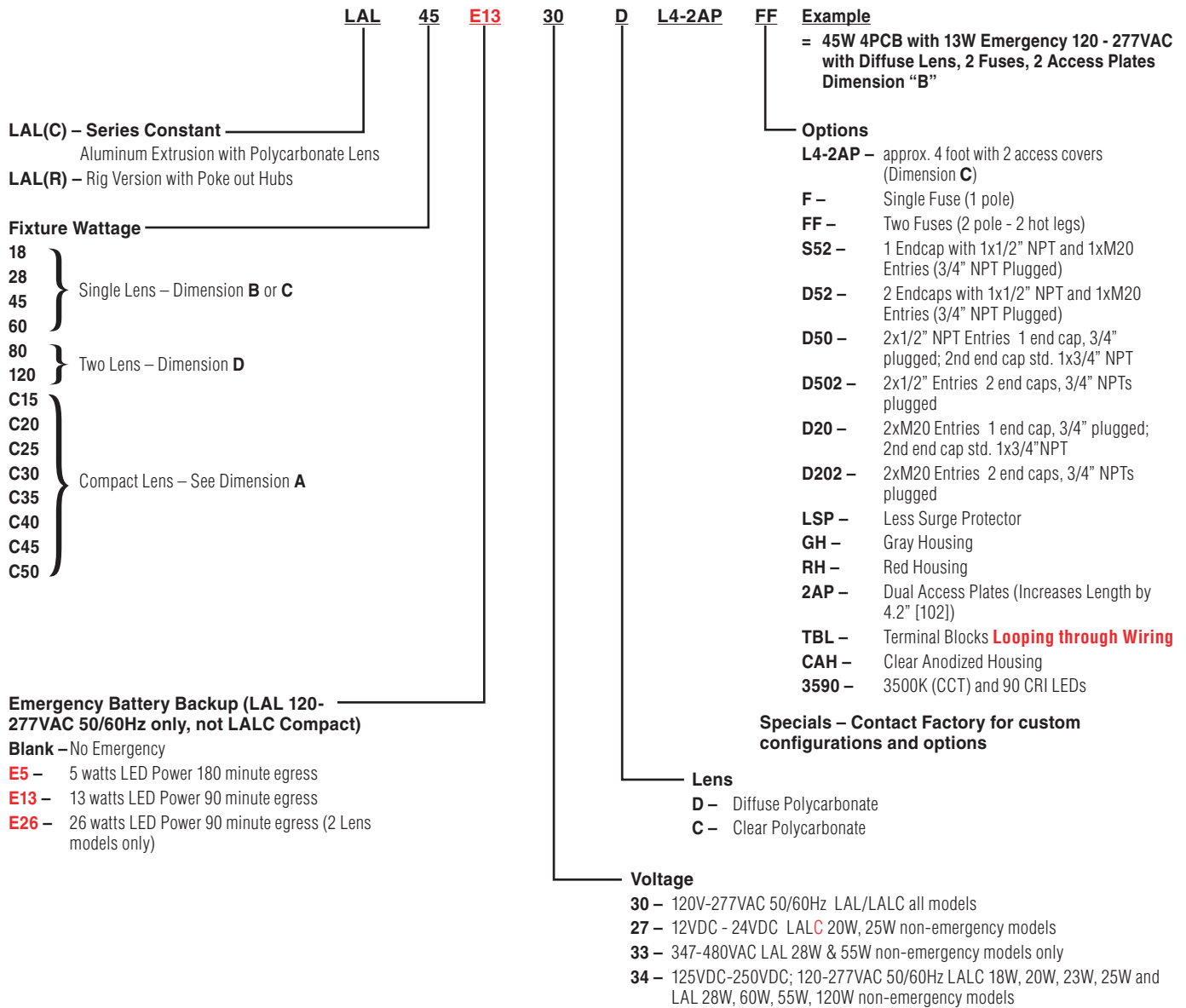
- Standard unit End Caps each have single a 3/4” NPT hub, and fixture is furnished with one 3/4” close-up plug and two 3/4” to 1/2” reducers – provides out of the box 1/2” dead-end to 3/4” feed-through flexibility. Metric openings are available.
- Standard LALs have one wiring Access Plate for easy access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

LED Features and Standards

- Many Midpower LEDs blend light to simulate fluorescent tubes
- Chromaticity outputs: standard – 5000K 70 CRI
3590 option – 3550K 90 CRI
- Energy Savings – High lumens per watt
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -40°C to 65°C (see tables). **-20°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



CATALOG LOGIC



Energy Savings

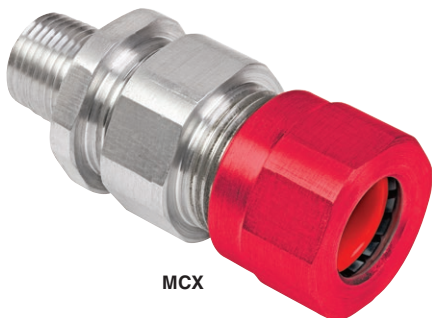
LED VS FLUORESCENT WATTAGE & DELIVERED LUMENS						
CATALOG NUMBER	LUMENS	L/W	FLUORESCENT		LUMENS	L/W
LAL1830C	2479	138	40W	1x40W BX	2471	63
LAL2830C	3624	129	55W	1x55W BX	3766	65
LAL4530C	5515	122	56W	2x28T5	4676	71
			64W	2x32T8	4772	80
LAL6030C	7709	128	108W	2x54T5HO	8088	67
			120W	2x60T12HO	6965	56
LAL8030C	11032	138	162W	3x54T5HO	11619	65



ORDERING INFORMATION

ORDERING INFORMATION AND AMBIENT SUITABILITY							C1D2 ABCD/ ZONE 2 IIC, IIB, IIA			C1D2 GRPS. EFG SIMULTANEOUS			C2D1 GRPS. EFG			IEC ZONE 2			IEC ZONE 21					
CATALOG NUMBER W/ DIFFUSE LENS	WEIGHT LBS./KG	WATTS STD. POWER	LENGTH STYLE - INCHES (MM)	VOLTAGE	AMPS	DELIVERED LUMENS Diffuse/ Clear	40°C	55°C	65°C	40°C	55°C	65°C	40°C	55°C	65°C	40°C	55°C	65°C	40°C	55°C	65°C			
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	T5	-	T4A	T4A	T4A	T4A	T4A	T4A	T6	T5	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	-	T6	T5	-	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	-
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																
LALC1534D						120-250VDC		0.2-0.1																
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																	
LALC2034D						120-250VDC	0.2-0.1																	
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																		
LALC2534D				120-250VDC		0.2-0.1																		
LALC3030D		30	A-18.73 (476)	0.26-0.11	2726 / 2974	T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-				
LALC3530D		35	A-18.73 (476)	0.30-0.13	3261 / 3558	T5	T4A	-	T4A	T4A	-	T4A	T4A	-	T5	T4	-	T4	T4	-				
LALC4030D		40	A-18.73 (476)	0.34-0.15	4152 / 4530	T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-				
LALC4530D	45	A-18.73 (476)	0.38-0.17	5136 / 5604	T5	T5	-	T4A	T4A	-	T4A	T4A	-	T5	T5	-	T4	T4	-					
LALC5030D	50	A-18.73 (476)	0.42-0.18	6039 / 6590	T5	-	-	T4A	-	-	T4A	-	-	T5	-	-	T4	-	-					

CABLE GLAND ORDERING OPTIONS

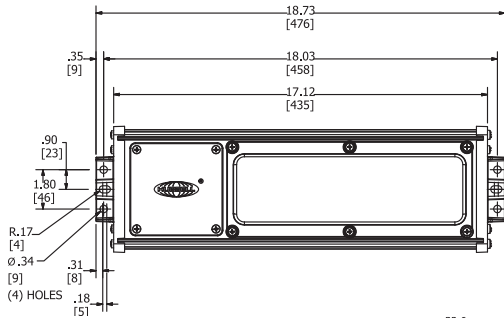


CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	CABLE ACCEPTANCE DETAILS	
		DIAMETER 'C'	
		MIN.	MAX.
MCX1B	1/2"	0.51" (13.0)	0.63" (16.0)
MCX1C	1/2"	0.60" (15.2)	0.82" (20.8)
MCX2	3/4"	0.73" (18.5)	1.03" (26.2)

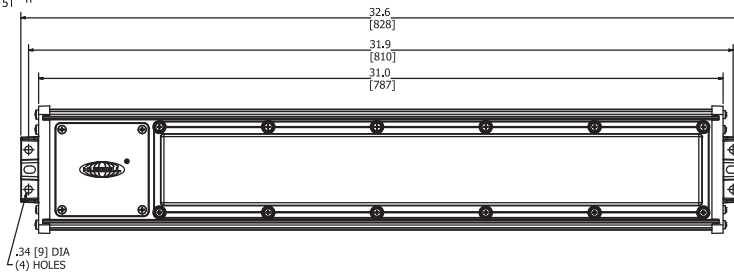
For entire series, please see www.hubbell-killark.com.



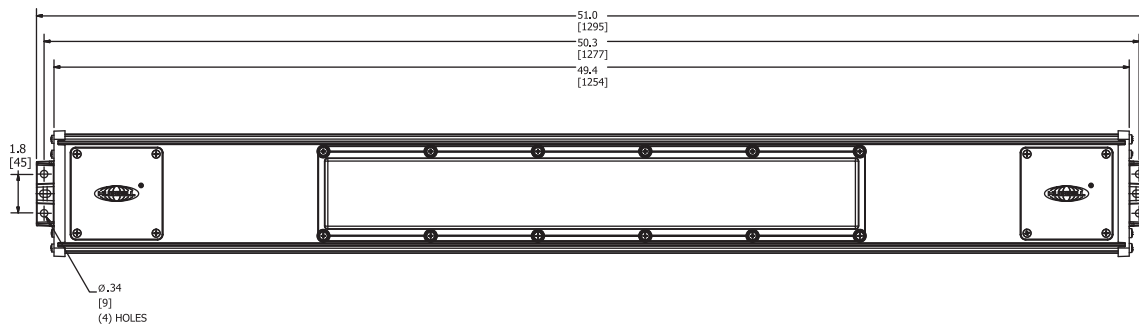
DIMENSIONS AND ACCESSORIES



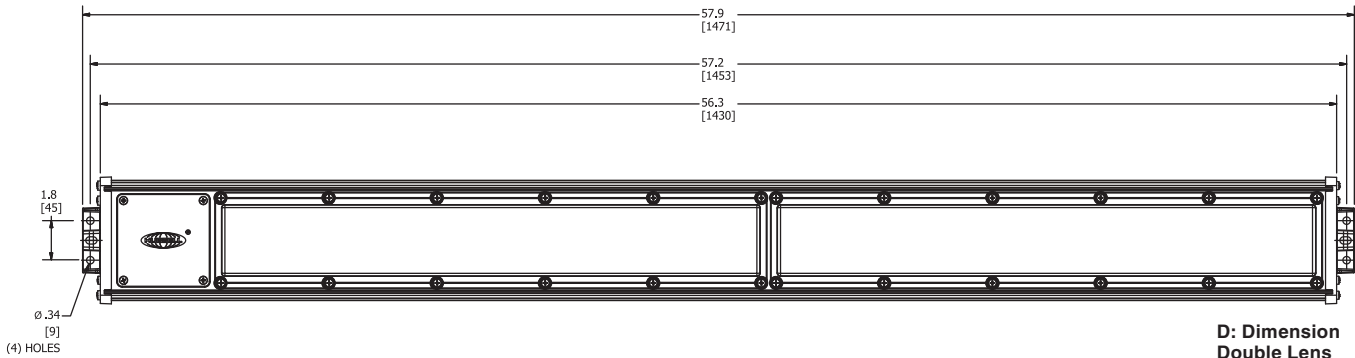
A: Dimensions for LALC



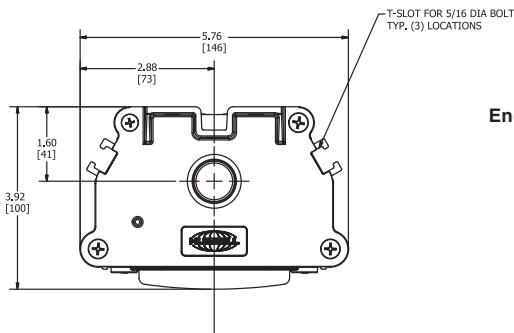
B: Dimension for Single Lens



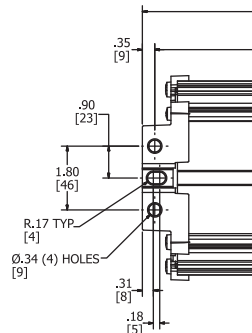
C: Dimension Single Lens with approx. 4 foot length and 2 access covers



D: Dimension Double Lens



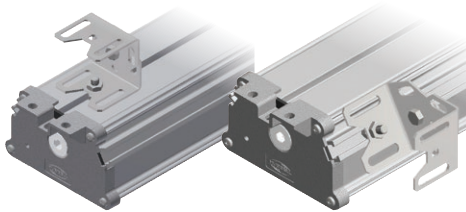
End Views





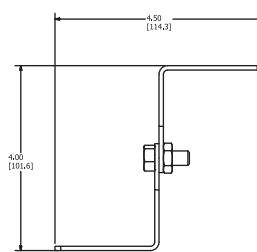
ACCESSORIES AND REPLACEMENT PARTS

ACCESSORIES AND REPLACEMENT PARTS	
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

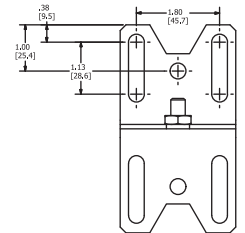
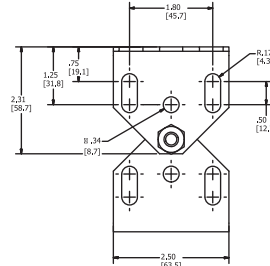


LAL-SB on Center Slot

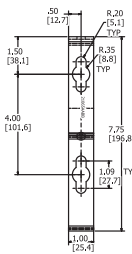
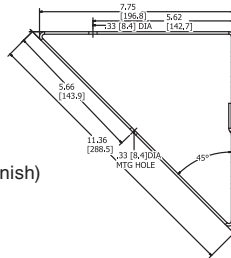
LAL-SB on 45° Slot



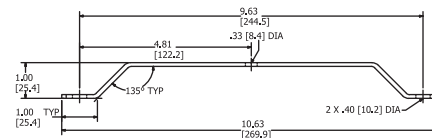
LAL-SB Dimensions – extended shown



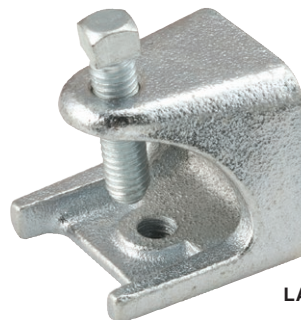
Wall Bracket Set
Part Number LZWB
Stainless Steel (natural finish)



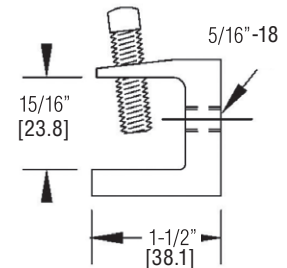
Ceiling Bracket Set
Part Number LZCB
Stainless Steel (natural finish)



VMSC10 Safety Cable



LAL-BC Beam Clamp





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

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Harsh & Hazardous