LALFP Series
LINEAR LED TECHNOLOGY
for Harsh and Hazardous Environments
LALFP Series

LALFP Linear LED Food Processing Fixture

- Extremely durable copper-free aluminum mounting feet & access plate with anodized aluminum housing
- 90 or 180 minute emergency with Self-diagnostics in accordance with NFPA 101® Life Safety Code
- NSF Certified with Impact Resistant polycarbonate lens
- All exterior stainless steel hardware
- Large wiring access for ease of installation
- Maintenance free long-lasting LEDs
- Large wiring access for ease of installation
LINEAR LED TECHNOLOGY

FEATURES-SPECIFICATIONS

Applications
Linear LED Luminaires are designed for food processing installations where moisture, corrosion and vibration may be present, and Type 3, 4X, IP66/IP67. 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.

Typical applications include non-food zones, splash zones, hazardous food processing areas, high and low ambient areas, and hose-down zones.

NSF (National Sanitation Foundation) approved for “Food Handling” areas, typically requiring non-glass lighting.

ABS (American Bureau of Shipping) type approval for use on decks, vessels, platforms, barges, ships and boats. Also approved for “Food Handling” areas, high and low ambient areas, and splash zones, hazardous food processing installations where moisture, dusts as defined by the NEC/CEC.

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
- Type approval for use on decks, vessels, platforms, barges, ships and boats. Also suitable for docks and marinas.

Materials
- Housing – one piece clear anodized < 1% copper-free aluminum extrusion
- Endcaps & wiring – Access covers are copper-free (< 4%) aluminum with natural finish.
- External screws are 316 stainless steel
- Lens – Impact resistant polycarbonate lens available in diffuse or clear

LALFP & LALFPxE Product Features
- LALFPxE models have “built-in” battery backup for 90 or 180 minute battery backup
- Shallow design minimizes profile in work areas with low ceiling heights
- Diffuse Lens Standard to minimize glare; Clear Lens available
- Polycarbonate Single Lens L1 & L3; Double Lens model L5
- 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 ¾” NPT hub, and fixture is furnished with one ¾” close-up plug and two ⅝” reducers – provides out of the box ¾” dead-end to ¼” feed-through flexibility. Metric openings are available.
- Standard LALFPs have one wiring Access Plate for easy access to terminal block.

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

INTELLIGENT EMERGENCY SERVICE CODES

<table>
<thead>
<tr>
<th>INDICATOR STATUS SIGNAL</th>
<th>DESCRIPTION OF STATUS SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5s ON and 0.5s OFF</td>
<td>Battery disconnected.</td>
</tr>
<tr>
<td>2.5s ON and 2.5s OFF</td>
<td>LED load disconnected.</td>
</tr>
<tr>
<td>4.5s ON and 0.5s OFF</td>
<td>Driver in self-diagnostic mode.</td>
</tr>
<tr>
<td>1.5s ON and 3.5s OFF</td>
<td>Battery needs to be replaced.</td>
</tr>
<tr>
<td>0.5s ON and 4.5s OFF</td>
<td>Damaged driver. Replace</td>
</tr>
<tr>
<td>ON</td>
<td>Normal/Charging.</td>
</tr>
<tr>
<td>OFF (LED Load ON)</td>
<td>Discharging / Emergency Operation</td>
</tr>
</tbody>
</table>

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 2, Groups IIIC, IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
AEx nAll, Ex nAll
Wet Locations
Type 4X
IP66/IP67
Marine Rated (US only)
ABS Type Approval
NSF Food Handling

IECEx Certificate
QPS 15.0010
ATEX Certificate
CML 15ATEX4081X (nA)
&
CML15ATEX3082X (tb)

LED Features and Standards
- Many Midpower LEDs blend light to simulate fluorescent tubes
- Chromaticity outputs: standard – 5000K 70 CRI 3590 option – 3550K 90 CRI
- 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

INTELLIGENT EMERGENCY SERVICE CODES
LALFP SERIES

CATALOG LOGIC

Weather Rated

W – Weather only
Blank – Hazardous Location and Weather rated

LALFP – Series Constant

Aluminum Extrusion with Polycarbonate Lens

Fixture Lumen Output

2 – 2000 Lumen Range
4 – 4000 Lumen Range
6 – 6000 Lumen Range
8 – 8000 Lumen Range
11 – 11,000 Lumen Range
16 – 16,000 Lumen Range

Emergency Battery Backup

Blank – No Emergency
IE05 – 500 Lumen Range during 180 minute emergency
IE1 – 1000 Lumen Range during 90 minute emergency
IE3 – 3000 Lumen Range during 90 minute emergency
(only available on L5)

Voltage

30 – 120V-277VAC 50/60Hz all models
27 – 12VDC - 24VDC models only L1 Length and 2 & 3 Lumen Range
non-emergency models
33 – 347-480VAC LAL 28W & 55W non-emergency models only
34 – 125VDC-250VDC; 120-277VAC 50/60Hz Lumen Range 2, 4, 8, & 16
non-emergency models

Energy Savings

LED VS FLUORESCENT WATTAGE & DELIVERED LUMENS

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>LUMENS</th>
<th>L/W</th>
<th>FLUORESCENT</th>
<th>LUMENS</th>
<th>L/W</th>
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<tbody>
<tr>
<td>LALFP230L3C</td>
<td>2479</td>
<td>138</td>
<td>40W 1x40W BK</td>
<td>2471</td>
<td>63</td>
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<tr>
<td>LALFP430L3C</td>
<td>3624</td>
<td>129</td>
<td>55W 1x55W BK</td>
<td>3766</td>
<td>65</td>
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<tr>
<td>LALFP630L1C</td>
<td>5515</td>
<td>122</td>
<td>64W 2x32T8</td>
<td>4772</td>
<td>80</td>
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<tr>
<td>LALFP830L3C</td>
<td>7709</td>
<td>128</td>
<td>120W 2x60T12HO</td>
<td>6965</td>
<td>56</td>
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<tr>
<td>LALFP1130L5C</td>
<td>11032</td>
<td>138</td>
<td>162W 3x54T5H0</td>
<td>11619</td>
<td>65</td>
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</tbody>
</table>

Example

= Weather only rated, 16,000 Lumen output with 3,000 Lumen output during
90 minute emergency operation, 120-277VAC, approximately 5 foot length
Diffuse Lens, 2 fuses

Options

F – Single Fuse (1 pole)
FF – Two Fuses (2 pole - 2 hot legs)
S52 – 1 Endcap with 1x1/2” NPT and 1xM20 Entries (3/4” NPT Plugged)
D52 – 2 Endcaps with 1x1/2” NPT and 1xM20 Entries (3/4” NPT Plugged)
D50 – 2x1/2” NPT Entries 1 end cap, 3/4” plugged; 2nd end cap std. 1x3/4” NPT
D502 – 2x1/2” Entries 2 end caps, 3/4” NPTs plugged
D20 – 2xM20 Entries 1 end cap, 3/4” plugged; 2nd end cap std. 1x3/4” NPT
D202 – 2xM20 Entries 2 end caps, 3/4” NPTs plugged
LSP – Less Surge Protector
GH – Gray Housing
RH – Red Housing
TBL – Terminal Blocks Looping through Wiring
NAP – No Access Plate (only available on L1)

Specials – Contact Factory for custom configurations and options

Lens

D – Diffuse Polycarbonate
C – Clear Polycarbonate

Length

L1 – Approximately 1 foot (2, 4, 6 Lumen Outputs)
L3 – Approximately 3 feet (2, 4, 6, 8 Lumen Outputs)
L5 – Approximately 5 feet (11, 16 Lumen Outputs)
### LALFP SERIES

#### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>CATALOG NUMBER</th>
<th>WEIGHT LBS./KG</th>
<th>WATTS</th>
<th>LENGTH IN / MM</th>
<th>VOLTAGE</th>
<th>AMPS</th>
<th>LUMENS DIFFUSE/CLEAR</th>
<th>40°C</th>
<th>55°C</th>
<th>65°C</th>
<th>40°C</th>
<th>55°C</th>
<th>65°C</th>
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<tr>
<td>LALFP230L1D</td>
<td>12.03 / 4.49</td>
<td>15</td>
<td>18.73 / 476</td>
<td>120/277 VAC 50/60 Hz</td>
<td>0.15 - 0.06</td>
<td>1503 / 1640</td>
<td>T4A</td>
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<td>18</td>
<td>32.6 / 828</td>
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<td>0.15 - 0.06</td>
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<td>T4</td>
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<td>12.90 / 9.9</td>
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<td>18.73 / 476</td>
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<td>0.30 - 0.13</td>
<td>3261 / 3558</td>
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<td>T4A</td>
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<tr>
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<td>32.6 / 828</td>
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<td>0.23 - 0.10</td>
<td>3321 / 3624</td>
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<td>T6</td>
<td>T5</td>
<td>T4A</td>
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<td>T4A</td>
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<td>0.38 - 0.16</td>
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<tr>
<td>LALFP830L3D</td>
<td>36.50 / 16.6</td>
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<td>57.9 / 1471</td>
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<td>0.67 - 0.29</td>
<td>10110 / 11032</td>
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<td>T5</td>
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<tr>
<td>LALFP830L5D</td>
<td>36.50 / 16.6</td>
<td>120</td>
<td>57.9 / 1471</td>
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<td>1.00 - 0.43</td>
<td>15090 / 16467</td>
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<td>T5</td>
<td>T4A</td>
<td>T4A</td>
<td>T4A</td>
<td>T4A</td>
<td>T4</td>
<td>T6</td>
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| WLALFP230L1D  | 12.03 / 4.49  | 15    | 18.73 / 476   | 120/277 VAC 50/60 Hz | 0.15 - 0.06 | 1503 / 1640 | T4A | T4A | T4A | T4A | T4A | T4A | T4 | T4 | T5 | T4 | T5 | T4 |
| WLALFP230L3D  | 17.90 / 8.1   | 18    | 32.6 / 828    |         | 0.15 - 0.06 | 2272 / 2479 | T6 | T6 | T6 | T4A | T4A | T4A | T4 | T4 | T5 | T4 | T5 | T4 |
| WLALFP430L1D  | 12.90 / 9.9   | 35    | 18.73 / 476   |         | 0.30 - 0.13 | 3261 / 3558 | T5 | T4A | T4A | T4A | T4A | T4A | T4 | T5 | T4 | T5 | T4 | T5 |
| WLALFP430L3D  | 17.90 / 8.1   | 28    | 32.6 / 828    |         | 0.23 - 0.10 | 3321 / 3624 | T6 | T6 | T5 | T4A | T4A | T4A | T4 | T4 | T6 | T5 | T4 | T4 |
| WLALFP630L1D  | 12.03 / 4.49  | 45    | 18.73 / 476   |         | 0.38 - 0.17 | 5136 / 5604 | T5 | T4A | T4A | T4A | T4A | T4A | T4 | T5 | T5 | T4 | T5 | T4 |
| WLALFP630L3D  | 17.90 / 8.1   | 45    | 32.6 / 828    |         | 0.38 - 0.16 | 5054 / 5515 | T6 | T5 | T4A | T4A | T4A | T4A | T4 | T6 | T5 | T5 | T4 | T4 |
| WLALFP630L4D  | 12.90 / 9.9   | 60    | 32.6 / 828    |         | 0.50 - 0.22 | 7064 / 7709 | T6 | T5 | T4A | T4A | T4A | T4A | T4 | T6 | T5 | T5 | T4 | T4 |
| WLALFP830L3D  | 36.50 / 16.6  | 80    | 57.9 / 1471   |         | 0.67 - 0.29 | 10110 / 11032 | T6 | T5 | T4A | T4A | T4A | T4A | T4 | T6 | T5 | T5 | T4 | T4 |
| WLALFP830L5D  | 36.50 / 16.6  | 120   | 57.9 / 1471   |         | 1.00 - 0.43 | 15090 / 16467 | T6 | T5 | T4A | T4A | T4A | T4A | T4 | T6 | T5 | T5 | T4 | T4 |

| WLALFP1130L5D | 36.50 / 16.6  | 80    | 57.9 / 1471   |         | 0.67 - 0.29 | 10110 / 11032 | T6 | T5 | T4A | T4A | T4A | T4A | T4 | T6 | T5 | T5 | T4 | T4 |
| WLALFP1630L5D | 36.50 / 16.6  | 120   | 57.9 / 1471   |         | 1.00 - 0.43 | 15090 / 16467 | T6 | T5 | T4A | T4A | T4A | T4A | T4 | T6 | T5 | T5 | T4 | T4 |

SEE WWW.HUBBELL-KILLARK.COM LIGHTING SOFTWARE FOR LATEST LED PHOTOMETRY
LALFP SERIES

DIMENSIONS

LALFP-L1 Single Access Panel

LALFP-L3 Single Access Panel

LALFP-L5 Single Access Panel

End View
ACCESSORIES AND REPLACEMENT PARTS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAL-SB</td>
<td>Swivel Bracket Set w/ Adjustable Height; includes 5/16&quot; bolts/nuts/lock-washers for attachment to LAL(C) “slots; can also be attached to end cap mounting feet with FBO bolts.</td>
</tr>
<tr>
<td>LZCB</td>
<td>Ceiling Bracket Set with Stainless Steel Bolts</td>
</tr>
<tr>
<td>LZWB</td>
<td>Wall Bracket Set with Stainless Steel Bolts</td>
</tr>
<tr>
<td>LAL-BC</td>
<td>Steel/malleable Iron with Zinc electroplate for corrosion resistance; includes Stainless Steel Bolts to attach to LAL(C) “slots”</td>
</tr>
<tr>
<td>LAL-EB</td>
<td>Eyebolt Set with Stainless Steel Bolts</td>
</tr>
<tr>
<td>VMSC10</td>
<td>10' Stainless Steel Safety Cable with loop grip</td>
</tr>
<tr>
<td>LALG</td>
<td>Stainless Guard for 1 LAL Lens, order two for 2 lens models</td>
</tr>
<tr>
<td>LALCG</td>
<td>LALC Stainless Guard</td>
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<tr>
<td>LAL-LENSCLR</td>
<td>Single Clear Lens with Gasket for L3 &amp; L5 Lengths</td>
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<tr>
<td>LAL-LENSDIF</td>
<td>Single Diffuse Lens with Gasket for L3 &amp; L5 Lengths</td>
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<tr>
<td>LALC-LENSCLR</td>
<td>Single Clear Lens with Gasket for L1 Length</td>
</tr>
<tr>
<td>LALC-LENSDIF</td>
<td>Single Diffuse Lens with Gasket for L1 Length</td>
</tr>
</tbody>
</table>

LAL-SB Dimensions – extended shown

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

VMSC10 Safety Cable

LAL-BC Beam Clamp
• 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