

# ESSENTIALS SERIES 4.0

## LED High Bay Fixtures

Essentials Series 4.0 provides the highest quality, reliability and performance with extraordinary lumen maintenance and efficacy, delivering superior ROI for your application.

Designed with best-in-class thermal management to perform at ambient temperatures up to 65°C.

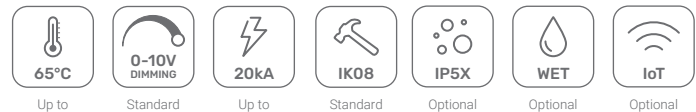
**APPLICATIONS:** Industrial and Commercial Facilities, Warehouses, Manufacturing, Parking Garages, Distribution Centers, Hangars, and Indoor Sports.



### FEATURES & SPECIFICATIONS

- **Environment:** Dry/Damp, for interior applications. Dust-resistant (IP5X) option available (LED modules only). Wet Location available. Impact protection (IK08).<sup>17</sup>
- **Ambient Range Operation:** -40°C up to 65°C (-40°F up to 149°F), depending on product line<sup>1</sup>.
- **Heat Sinks:** Extruded aluminum heat sinks provide optimal thermal management, decreasing LED junction temperature and ensuring long life and high efficacy. In addition, we attach the LED boards to the heat sink using a high quality thermally conductive adhesive instead of screws. This promotes long life even at high ambient temperatures.
- **High-Quality Materials:** FR4 PCB is used to limit stress on solder joints by matching coefficient of thermal expansion between the LED and the PCB more closely.
- **Power Supply Access:** Wireway cover is captured and hinged, opening over 120° for hands-free, easy access and quick wiring. Center hole accepting 3/4" stem and also 1/2" KO near top end of wire way.
- **Mounting:** Fixture is cable ready (CRM) and has a center opening to accept a 3/4" stem mount, cable (CRM), HOOK or surface mount options with optional MBR. Minimum 4" distance from fixture to ceiling required to allow air flow for cooling. MBR reduces ambient range by 5°C when mounted flush to junction box.
- **Lenses:** UV stable polycarbonate clear and aisle or acrylic (PMMA) frosted available.
- **CCT:** 3500K, 4000K and 5000K standard, other CCT available (extended lead time).<sup>2</sup>
- **Wire Guards:** Optional factory-installed wire guards for the fixture and OCC occupancy sensors are available.
- **10 Year Performance Warranty:** Fixture is guaranteed for 10 years, including lumen maintenance (L70), color temperature, and driver.

|              |  |
|--------------|--|
| Project Name |  |
| Date         |  |
| Cat. Number  |  |
| Type         |  |



MULTIPLE PATENTS PENDING

- **Rotatable LED Modules:** Field adjustable rotating modules. Easily adjusted outer modules with stops at 45°, 90° and 135°. Factory set at 0°. Allows for customizing light pattern to suit individual situations.<sup>3,14</sup>
- **Bulk Packaging:** All fixtures come in eco-friendly bulk packaging. Individual boxes are also available.

### POWER & CONTROL

- **Power Input:** 120-277V or 347-480 (50/60Hz), typical.
- **Power Factor:** Greater than 0.9 (0.96-0.99 typical).
- **Total Harmonic Distortion:** Less than 20%, 10% typical.
- **Networked Lighting Controls:** UltraLink Wireless Controls with Bluetooth® NLC Mesh technology. Available as factory installed and as EZ-Connect™ Twist Lock System for field installation, (requires adding an EZ-Connect™ Receptacle, see Controls).
- **Occupancy Sensors:**<sup>27</sup> PIR and Microwave occupancy sensors, On/Off/Dim. Available options: Factory installed and EZ-Connect™ Twist Lock System for field installation, (requires adding an EZ-Connect™ Receptacle, see Controls).
- **Emergency Battery Backup (EMB and EMB2):** EMB produces ~2000 lumens for a minimum of 90 minutes. EMB2 produces ~2200 lumens for a minimum of 90 minutes. EMB has 16 watts output, EMB2 has 20 watts output. EMB factory installation only, not able to be field installed. Available in LV and HV (EMB, M fixtures only)<sup>1,8,10,14,15,16,22</sup>
- **Surge Protection:** Standard is 6kV for drivers. Additional surge protection is available. All HV orders will have 10kV SRG automatically added.
- **Driver Quick Disconnect:** A Driver Quick Disconnect feature is available as an additional option.

## TECHNICAL SPECIFICATIONS

**PERFORMANCE LINE:** Highest efficacy and longest life. Up to 65°C [149°F]

| Lumen Output <sup>5</sup> | Efficacy | Watts | Frame <sup>6</sup> | Part Number             |
|---------------------------|----------|-------|--------------------|-------------------------|
| 8,291                     | 165      | 50    | 2MS                | ES40P-A1-08K-2MS        |
| 13,438                    | 167      | 81    | 4MS or 2M          | ES40P-A1-13K-4MS or -2M |
| 15,544                    | 165      | 94    | 4MS or 2M          | ES40P-A1-15K-4MS or -2M |
| 17,818                    | 164      | 109   | 4MS or 2M          | ES40P-A1-17K-4MS or -2M |
| 21,743                    | 168      | 129   | 6MS                | ES40P-A1-21K-6MS        |
| 24,874                    | 167      | 149   | 6MS                | ES40P-A1-24K-6MS        |
| 31,088                    | 167      | 186   | 4M                 | ES40P-A1-31K-4M         |
| 36,044                    | 166      | 217   | 4M                 | ES40P-A1-36K-4M         |
| 43,486                    | 168      | 258   | 6M                 | ES40P-A1-43K-6M         |
| 49,749                    | 167      | 298   | 6M                 | ES40P-A1-49K-6M         |
| 58,933                    | 165      | 358   | 6M                 | ES40P-A1-58K-6M         |

**STANDARD LINE:** High efficacy and long life. Up to 55°C [131°F]

| Lumen Output <sup>5</sup> | Efficacy | Watts | Frame <sup>6</sup> | Part Number             |
|---------------------------|----------|-------|--------------------|-------------------------|
| 6,453                     | 159      | 41    | 2MS                | ES40S-A1-06K-2MS        |
| 9,822                     | 158      | 62    | 2MS                | ES40S-A1-09K-2MS        |
| 12,280                    | 152      | 81    | 2MS                | ES40S-A1-12K-2MS        |
| 17,295                    | 142      | 122   | 4MS or 2M          | ES40S-A1-17K-4MS or -2M |
| 20,646                    | 161      | 128   | 4MS or 2M          | ES40S-A1-20K-4MS or -2M |
| 23,789                    | 157      | 151   | 4MS or 2M          | ES40S-A1-23K-4MS or -2M |
| 30,969                    | 163      | 190   | 6MS                | ES40S-A1-30K-6MS        |
| 35,394                    | 157      | 227   | 6MS                | ES40S-A1-36K-6MS        |
| 43,277                    | 160      | 271   | 4M                 | ES40S-A1-43K-4M         |
| 49,121                    | 156      | 315   | 4M                 | ES40S-A1-49K-4M         |
| 73,681                    | 159      | 465   | 6M                 | ES40S-A1-73K-6M         |

**VALUE LINE:** Lowest cost per lumen. Up to 45°C [113°F]

| Lumen Output <sup>5</sup> | Efficacy | Watts | Frame <sup>6</sup> | Part Number                    |
|---------------------------|----------|-------|--------------------|--------------------------------|
| 6,135                     | 151      | 41    | 2MS                | ES40V-A1-06K-2MS <sup>21</sup> |
| 13,699                    | 150      | 92    | 2MS                | ES40V-A1-13K-2MS               |
| 15,378                    | 147      | 105   | 4MS or 2M          | ES40V-A1-15K-4MS or -2M        |
| 27,398                    | 151      | 181   | 4MS or 2M          | ES40V-A1-27K-4MS or -2M        |
| 41,097                    | 151      | 271   | 6MS                | ES40V-A1-41K-6MS               |
| 54,796                    | 154      | 356   | 4M                 | ES40V-A1-54K-4M                |
| 70,787                    | 157      | 455   | 6M                 | ES40V-A1-70K-6M                |

**2M model available as a variation of 4MS.** Consult factory.

<sup>4</sup>LM-79, LM 80 tests and reports are performed in accordance to IESNA standards, per TM-21. Lumen maintenance in hours (L70 via TM-21) based on 24/7 operation. <sup>5</sup>Typical (±10%) at 277V (LV), 25°C, 4000K/5000K, Clear Lens, CRI 80+. Lumen Multipliers: 3500K = 0.97; Frosted Lens = 0.98; Aisle Lens = 0.96

## LUMEN MAINTENANCE<sup>4</sup>

**PROJECTED L70 VIA TM-21 (24/7 OPERATION)**

| 25°C Ambient Temp.   | 65°C Ambient Temp. <sup>1</sup> |
|----------------------|---------------------------------|
| <b>309,000 hours</b> | <b>194,000 hours</b>            |

| Ambient     | Year 1 | Year 5 | Year 10 |
|-------------|--------|--------|---------|
| <b>25°C</b> | 99.66% | 95.60% | 90.76%  |
| <b>45°C</b> | 99.51% | 94.55% | 88.68%  |
| <b>55°C</b> | 99.34% | 93.81% | 87.34%  |
| <b>65°C</b> | 99.12% | 93.00% | 85.88%  |

| Ambient          | 25°C | 35°C | 45°C              | 55°C | 65°C |
|------------------|------|------|-------------------|------|------|
| Lumen Multiplier | 1.00 | 0.99 | 0.98 <sup>4</sup> | 0.98 | 0.97 |

**PROJECTED L70 VIA TM-21 (24/7 OPERATION)**

| 25°C Ambient Temp.   | 55°C Ambient Temp. <sup>1</sup> |
|----------------------|---------------------------------|
| <b>256,000 hours</b> | <b>184,000 hours</b>            |

| Ambient     | Year 1 | Year 5 | Year 10 |
|-------------|--------|--------|---------|
| <b>25°C</b> | 99.60% | 94.99% | 89.53%  |
| <b>45°C</b> | 99.29% | 93.63% | 87.01%  |
| <b>55°C</b> | 99.09% | 92.82% | 85.55%  |

| Ambient          | 25°C | 35°C | 45°C | 55°C | 65°C |
|------------------|------|------|------|------|------|
| Lumen Multiplier | 1.00 | 0.98 | 0.97 | 0.97 | X    |

**PROJECTED L70 VIA TM-21 (24/7 OPERATION)**

| 25°C Ambient Temp.   | 45°C Ambient Temp. <sup>1</sup> |
|----------------------|---------------------------------|
| <b>238,000 hours</b> | <b>191,000 hours</b>            |

| Ambient     | Year 1 | Year 5 | Year 10 |
|-------------|--------|--------|---------|
| <b>25°C</b> | 99.52% | 94.66% | 88.92%  |
| <b>45°C</b> | 99.19% | 93.22% | 86.27%  |

| Ambient          | 25°C | 35°C | 45°C | 55°C | 65°C |
|------------------|------|------|------|------|------|
| Lumen Multiplier | 1.00 | 0.98 | 0.97 | X    | X    |

# ORDERING

When submitting for utility incentives and rebates, please use catalog numbers. When ordering OPTIONS, separate each option with a "-". Catalog number always ends with dimming selection "10V"

| Series-Compliance-Lumens-Frame     |                                   | Color Temp      | CRI                              | Lens                            | Voltage          | Mounting  |
|------------------------------------|-----------------------------------|-----------------|----------------------------------|---------------------------------|------------------|---|
| ES40S-A1-06K-2MS <sup>2,7</sup>    | ES40V-A1-27K-4MS <sup>5,7</sup>   | 35 <sup>2</sup> | 80+                              | CL                              | LV               | CRM <sup>9</sup>  |
| ES40V-A1-06K-2MS <sup>2,7,21</sup> | ES40S-A1-30K-6MS <sup>7</sup>     | 3500K           | (Standard)                       | Clear Lens, Wide Distribution   | 120-277V         | Cable-ready (standard) for suspension mounting or 3/4" stem mount   |
| ES40P-A1-08K-2MS <sup>2,7</sup>    | ES40P-A1-31K-4M <sup>7</sup>      | 40              |                                  | FR                              | HV <sup>23</sup> | MBR <sup>110</sup>  |
| ES40S-A1-09K-2MS <sup>2,7</sup>    | ES40P-A1-36K-4M                   | 4000K           | Other CRI available upon request | Frosted Lens, Wide Distribution | 347-480V         | Factory installed mounting box and bracket for surface mount applications - adds 1 1/8" to fixture height |
| ES40S-A1-12K-2MS <sup>2,7</sup>    | ES40S-A1-36K-6MS                  | 50              |                                  | AL                              |                  | HOOK <sup>10</sup>  |
| ES40P-A1-13K-4MS <sup>2,6,7</sup>  | ES40V-A1-41K-6MS <sup>18,19</sup> | 5000K           | Other CCT available upon request | Aisle Distribution              |                  | Field installed mounting kit, includes hook and one leveling Y-cable.                                     |
| ES40V-A1-13K-2MS <sup>2,7</sup>    | ES40P-A1-43K-6M                   |                 |                                  |                                 |                  | Plate and Hanger mount also available, sold and packaged separately, see Accessories, order as CRM.       |
| ES40P-A1-15K-4MS <sup>2,6,7</sup>  | ES40S-A1-43K-4M                   |                 |                                  |                                 |                  | Other mounting options available, contact factory   |
| ES40V-A1-15K-4MS <sup>2,6,7</sup>  | ES40P-A1-49K-6M                   |                 |                                  |                                 |                  |   |
| ES40P-A1-17K-4MS <sup>5,7</sup>    | ES40S-A1-49K-4M                   |                 |                                  |                                 |                  |   |
| ES40S-A1-17K-4MS <sup>5,7</sup>    | ES40V-A1-54K-4M <sup>7,19</sup>   |                 |                                  |                                 |                  |   |
| ES40S-A1-20K-4MS <sup>6,7</sup>    | ES40P-A1-58K-6M <sup>19</sup>     |                 |                                  |                                 |                  |   |
| ES40S-A1-23K-4MS <sup>6,7</sup>    | ES40V-A1-70K-6M <sup>19</sup>     |                 |                                  |                                 |                  |   |
| ES40P-A1-24K-6MS <sup>7</sup>      | ES40S-A1-73K-6M <sup>7,19</sup>   |                 |                                  |                                 |                  |   |

| Controls <sup>14,30</sup>  |  | Cord & Plug - No cord/plug (Standard) <sup>10,13</sup>   |   | Option <sup>10</sup>  | Dimming   |
|--|--|--|---|---|---|
| <b>EZ-CONNECT RECEPTACLE (for field installed controls)</b>  |  |  |   |   |   |
| <b>EZ10</b><br>EZ-Connect™ Receptacle with Twist Lock system, for use with 0-10V control protocols (standard)                  |  | <b>6' 18AWG CORD, WHITE WITH THE FOLLOWING-</b>  | <b>10' 18AWG CORD, WHITE WITH THE FOLLOWING-</b>  | <b>EMB<sup>1,8,10,14,15,16,22</sup></b><br>Emergency battery back-up. Adds 1.25" to fixture height  | <b>WG<sup>3,10</sup></b><br>Fixture Wire Guard  |
| <b>EZ18</b><br>EZ-Connect™ Receptacle with Twist Lock system and Zhaga Book 18 interface, for use with 0-10V control protocols |  | <b>CW<sup>10,13</sup></b><br>Cord, 15A, 3-wire, no plug  | <b>10CW<sup>10,13</sup></b><br>Cord, 15A, 3-wire, no plug   | <b>EMB2<sup>1,8,10,14,15,16,22</sup></b><br>High lumen emergency battery back-up. LV only. Adds 1.25" to fixture height                                   | <b>CTOPEND<sup>1,8,10</sup></b><br>Cord mounted on top edge of wireway                                      |
| Sensors not included, must be ordered as a separate line item  |  | <b>DW<sup>10,13</sup></b><br>Dimming cord, 15A, 5-wire, no plug  | <b>15' 18AWG CORD, WHITE WITH THE FOLLOWING-</b>  | <b>QDC<sup>10,14</sup></b><br>Driver Quick Disconnect   | <b>WET<sup>3,10,14,15</sup></b><br>Wet location rated. Only available with no cord or CW or DW cord option. |
| <b>FACTORY INSTALLED</b>   |  | <b>CS15<sup>10,13</sup></b><br>Cord, 15A, straight plug 120V (5-15P)   | <b>15CW<sup>10,13</sup></b><br>Cord, 15A, 3-wire, no plug   | <b>SRG<sup>10,14,15,16,23</sup></b><br>Surge Protection Device, Fails to OFF  | <b>DUST<sup>3,10</sup></b><br>Dust-resistant (IP5X) - LED modules only                                      |
| <b>BASIC CONTROLS</b>  |  | <b>CL515<sup>10,13</sup></b><br>Cord, 15A, locking plug 120V (L5-15P)  | <b>15DW<sup>10,13</sup></b><br>Dimming cord, 15A, 5-wire, no plug                                 | <b>SRG<sup>10,14,23</sup></b><br>Surge Protector fails to ON  | <b>INDR<sup>1,3,10,14</sup></b><br>LED modules factory inverted for indirect lighting                       |
| LINMORE LED  | WATTSTOPPER  | <b>ULTRALINK WIRELESS CONTROLS</b>   | <b>15C515<sup>10,13</sup></b><br>Cord, 15A, straight plug 120V (5-15P)                            | <b>BOX<sup>10</sup></b><br>Individual box packaging available   | <b>GTD<sup>10,15,19</sup></b><br>Generator transfer device  |
| <b>LOCCDIM12 (LV)</b><br>PIR Occupancy and Daylight Sensor, On/Off/Dim, 12' Max Mounting Height, IP66. LV only.                | <b>OCC8 (HV)</b><br>OCC sensor, on/off, w/ photocell, 8' mounting height                                     | <b>ULTRA</b><br>UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller   | <b>15CL515<sup>10,13</sup></b><br>Cord, 15A, locking plug 120V (L5-15P)                           | <b>CTRWT<sup>7,10</sup></b><br>Counter Balance Weight for MBR and stem mounting (certain fixtures only, see notes for applicable models, contact factory) | <b>R45<sup>25</sup></b><br>Both outer LED modules rotated 45°   |
| <b>LOCCDIM40 (LV)</b><br>PIR Occupancy and Daylight Sensor, On/Off/Dim, 20' to 40' Mounting Height, IP66. LV only.             | <b>OCC20 (HV)</b><br>OCC sensor, on/off, w/ photocell, up to 20' mounting height                             | <b>ULTRAHGA</b><br>UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller with Long Range Antenna                    | <b>15CL715<sup>10,13</sup></b><br>Cord, 15A, locking plug 277V (L7-15P)                           |   | <b>R90<sup>25</sup></b><br>Both outer LED modules rotated 90°   |
|  | <b>OCC40 (HV)</b><br>OCC sensor, on/off, w/ photocell, up to 40' mounting height                             | <b>ULTRAPIR20</b><br>UltraLink Bluetooth NLC Wireless Fixture Controller with PIR Occupancy Sensor, 8' to 20' Mounting Height  | <b>15CL715<sup>10,13</sup></b><br>Cord, 15A, locking plug 277V (L7-15P)                           |   | <b>R135<sup>1,25</sup></b><br>Both outer LED modules rotated 135°   |
|  | <b>OCCDIM8 (LV/HV)?</b><br>OCC sensor, dimmable, w/ photocell, 8' mounting height, programmable via remote   | <b>ULTRAPIR40</b><br>UltraLink Bluetooth NLC Wireless Fixture Controller with PIR Occupancy Sensor, 20' to 40' Mounting Height | <b>CL720<sup>10,13</sup></b><br>Cord, 20A, locking plug 277V (L7-20P)                             |   |   |
|  | <b>OCCDIM20 (LV/HV)?</b><br>OCC sensor, dimmable, w/ photocell, 20' mounting height, programmable via remote |  | <b>CL2420<sup>10,13</sup></b><br>Cord, 20A, locking plug 347V (L24-20P)                           |   |   |
|  | <b>OCCDIM40 (LV/HV)?</b><br>OCC sensor, dimmable, w/ photocell, 40' mounting height, programmable via remote |  | <b>CL820<sup>10,13</sup></b><br>Cord, 20A, locking plug 480V (L8-20P)                             |   |   |
|  |  |  | <b>CACS<sup>10,15,20</sup></b><br>6' SO Cord whip, ACS Locking System, 277/480V, 2-wire w/ ground |   |   |
|  |  |  | <b>CACSMC<sup>10,15,20</sup></b><br>6' MC Cable, ACS Locking System, 277/480V, 2-wire w/ ground   |   |   |
|  |  |  | <b>Other cord options available, contact factory</b>  |   |   |

## ACCESSORIES

Must be ordered separately. Packaged separately.

### FIXTURE ACCESSORIES

| Part Number                     | Description  |
|---------------------------------|--|
| <b>SAFETYCABLE</b>              | Kit includes (one) 5 ft. aircraft cable with single snap hook, L-bracket, screw and nut. For use with HOOK, MBR, PLATE MOUNT or stem mounting options. |
| <b>CABLEKIT</b>                 | Kit includes (two) 10 ft. aircraft "Y" cables and snap hooks (one pair).   |
| <b>HANGER</b>                   | Kit includes two wire V hangers. Order fixture with CRM mounting option.   |
| <b>PLATE</b>                    | Kit includes hanging plate with mounting hole for 3/4" conduit and (four) each 5 ft. aircraft cables and snap hooks. Order fixture with CRM option.    |
| <b>OWG</b>                      | Wire guard for occupancy sensors, field install. Shipped in separate box.  |
| <b>REPLACEMENT POWER SUPPLY</b> | Available upon request. Contact factory for details.   |

### BASIC CONTROLS

|                   |   |
|-------------------|---|
| <b>OCCDIMPROG</b> | Handheld wireless programmer for setup OCCDIMXX dimmable occupancy sensors. Required with OCCDIM8, OCCDIM20 and OCCDIM40 selection. |
|-------------------|---|

The performance of sensors and lenses is influenced by various factors beyond Linmore LED's control, including but not limited to environmental conditions, user settings, and proper maintenance. While we provide detailed specifications and guidelines to help optimize performance, we cannot guarantee or be held liable for the performance of sensors or lenses under any particular circumstance(s). Customers are advised to test the products in their specific application environments to ensure suitability for their intended use and are responsible for all sensor and lens selections.





## LISTINGS & CERTIFICATIONS

- ETL listed (UL 1598) - RoHS Compliant
- DesignLights™ Consortium Listed
- EMI: Title 47 CFR 15 Class A and ICES-005 - CSA 22.2

## EZ-CONNECT™ BASIC CONTROLS

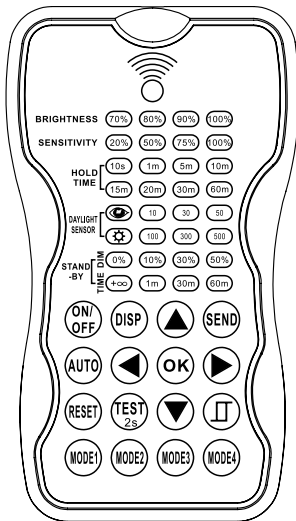
Controls are field installed, must be ordered as a new line item and will ship in a separate box.

### BASIC SENSORS<sup>30</sup>

| Part Number  | Description  |
|--|--|
|  <b>PC-WH-EZ10</b>  | Photocell, White Color, EZ-Connect Twist Lock System, Plug & Play, Field installed.  |
|  <b>PIR-WH-EZ10</b> | PIR Occupancy and Daylight Sensor, White or Color, EZ-Connect Twist Lock System, Plug & Play, On/Off/Dim, 40' Max Mounting Height, IP65. Field installed.        |
|  <b>MW-WH-EZ10</b>  | Microwave Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, Plug & Play, On/Off/Dim, 40' Max Mounting Height, IP65. Field installed.     |
|  <b>SEN-PROG</b>    | Infrared Remote Programmer for Occupancy Sensors. Required to change default settings, modes of operation, and detection sensitivity for all EZ10 basic sensors. |



### DEFAULT SETTINGS

For PIR and MW Sensors: Sensitivity=100%, Hold time=5min, Daylight sensor=disabled, Stand-by dim level=30%, Stand-by time=60min.



### INFRARED REMOTE PROGRAMMER

Required to change default settings, modes of operation, and sensitivity.

|                        |   |   |   |
|------------------------|---|---|---|
| <b>Brightness</b>      | Light output during occupancy (70%, 80%, 90%, 100%).                          |  | <b>Daylight harvesting function.</b> Selects the current surrounding lux value as the daylight threshold.           |
| <b>Sensitivity</b>     | Detection area of the sensor (20%, 50%, 75%, 100%).                           |  | <b>Daylight sensor disabled.</b> All motion detected turns on the light, no matter how bright the natural light is. |
| <b>Hold Time</b>       | Time the sensor waits to turn off or dim the light after the area is vacated. |   | <b>Stand-by Dim</b> Light output during vacancy (0%, 10%, 30%, 50%).  |
| <b>Daylight Sensor</b> | Daylight sensor status and daylight threshold values in lux.                  |   | <b>Stand-by Time</b> Time the sensor keeps the light at stand-by dim level after the hold time has elapsed.         |

### Scene Modes






The remote comes with four pre-programmed modes. These can be used as is, or adjusted with different parameters and saved over an existing mode.

| Scene         | Application | Brightness | Sensitivity | Hold Time | Stand-by Dim | Stand-by Time | Daylight Sensor |
|---------------|-------------|------------|-------------|-----------|--------------|---------------|-----------------|
| <b>MODE 1</b> | Indoor      | 100%       | 75%         | 5min      | 30%          | 30min         | Disabled        |
| <b>MODE 2</b> | Indoor      | 100%       | 75%         | 1min      | 30%          | +∞            | Disabled        |
| <b>MODE 3</b> | Indoor      | 100%       | 75%         | 5min      | 30%          | 30min         | 30lux           |
| <b>MODE 4</b> | Outdoor     | 100%       | 75%         | 1min      | 30%          | +∞            | 30lux/300lux    |


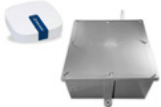


## EZ-CONNECT™ ULTRALINK BLUETOOTH CONTROLS

Controls are field installed, must be ordered as a new line item and will ship in a separate box.

### ULTRALINK CONTROLLERS / SENSORS<sup>30</sup>

|  | Part Number             | Description  |
|--|-------------------------|--|
|   | <b>ULTRA-WH-EZ10</b>    | UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller, White Color, EZ-Connect Twist Lock System, IP65, Silvair Firmware. Field installed.  |
|   | <b>ULTRAHGA-CL-EZ10</b> | UltraLink Bluetooth NLC Wireless Receiver and Fixture Controller with Long Range Antenna, Clear Color, EZ-Connect Twist Lock System, IP65, Silvair Firmware. Field installed.                                  |
|   | <b>ULTRAPIR-WH-EZ10</b> | UltraLink Bluetooth NLC Wireless Fixture Controller with PIR Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, 40' Max Mounting Height, IP65, Silvair Firmware. Field installed.       |
|   | <b>ULTRAMW-WH-EZ10</b>  | UltraLink Bluetooth NLC Wireless Fixture Controller with Microwave Occupancy and Daylight Sensor, White Color, EZ-Connect Twist Lock System, 40' Max Mounting Height, IP65, Silvair Firmware. Field installed. |
|  | <b>SEN-PROG</b>         | Infrared Remote Programmer for Occupancy Sensors. Only required for EZ10 UltraLink sensors to change detection sensitivity.  |

### ULTRALINK ACCESSORIES

|   | Part Number             | Description  |
|---|-------------------------|--|
|  | <b>ULTRAGATEWAY</b>     | UltraLink Bluetooth NLC Wireless Gateway, required for Advanced Features and Time-Based Events. One gateway can control up to 200 fixtures, allowing for energy monitoring, people tracking, and scheduling. Interior installation only. |
|  | <b>ULTRAGATEWAY-EXT</b> | UltraLink Bluetooth NLC Wireless Exterior Rated Gateway Box with Long Range Antenna, includes ULTRAGATEWAY. 120-277V Power Supply required.  |
|  | <b>ULTRATIME-BAT</b>    | UltraLink Bluetooth NLC Time-Keeping Battery Backup includes an Outdoor Rated Enclosure, a Long Range Antenna and a Backup Battery. For use to keep time during a power outage and for in-node scheduling.                               |
|  | <b>ULTRADASH</b>        | UltraLink Dashboards for Energy, Occupancy Heat Mapping, and Energy Heat Mapping. Gateway (ULTRAGATEWAY) required, sold separately.  |



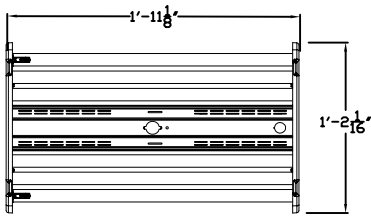
Technology Partner **SILVAIR**

## DIMENSIONS & DRAWINGS

See End Note #16

| Model      | Length (in) | Width (in) | Height (in) | Weight (lb) |
|------------|-------------|------------|-------------|-------------|
| <b>2MS</b> | 23.1        | 8.28       | 2.1         | ~8          |
| <b>4MS</b> | 23.1        | 11.2       | 2.1         | ~10         |
| <b>6MS</b> | 23.1        | 14.1       | 2.1         | ~14         |
| <b>2M*</b> | 43.72       | 8.28       | 2.1         | ~16         |
| <b>4M</b>  | 43.72       | 11.2       | 2.1         | ~18         |
| <b>6M</b>  | 43.72       | 14.1       | 2.1         | ~20.6       |

**Bottom View**



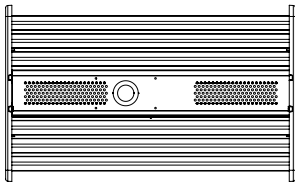
**\*2M available as a variation of 4MS.** Consult factory.

MBR and EMB mounting options adds 1 1/8" to fixture height.

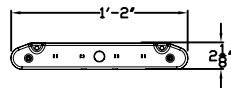
MBR on MS (short) fixtures with EMB adds 1 1/4" to fixture height.

Weights are approximate and vary by model, if weight is a concern, please contact factory.

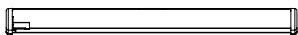
**Cable Ready Mount (CRM)**



**TOP VIEW**

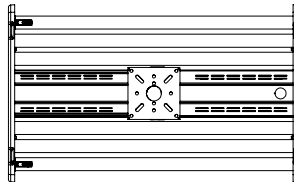


**END VIEW**

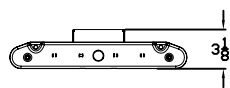


**SIDE VIEW**

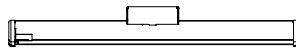
**Fixture Mounting Box (MBR)**



**TOP VIEW**

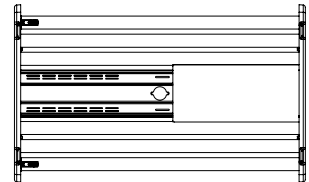


**END VIEW**

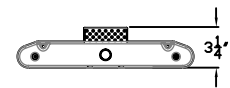


**SIDE VIEW**

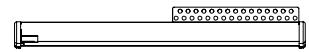
**Fixture Mounting Box (EMB)**



**TOP VIEW**

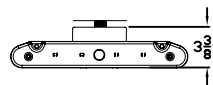


**END VIEW**

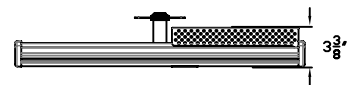


**SIDE VIEW**

**Surface Mount Option**  
(when ordering EMB with MBR)



**END VIEW**

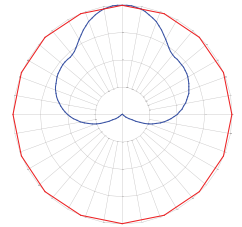
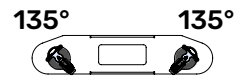
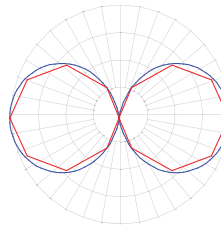
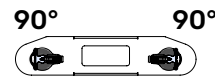
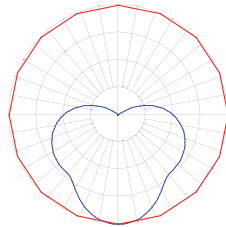
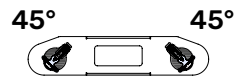
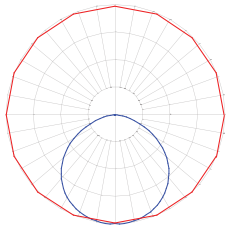
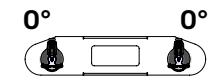


**SIDE VIEW**

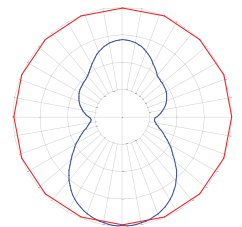
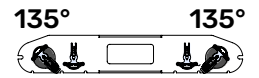
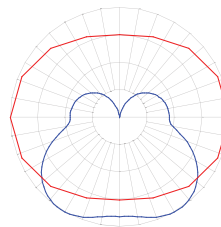
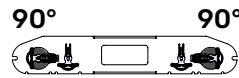
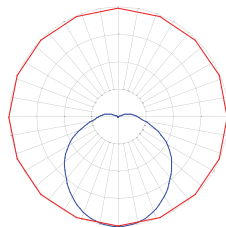
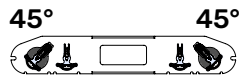
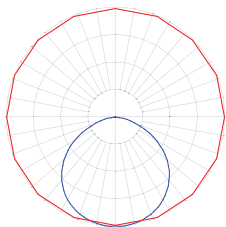
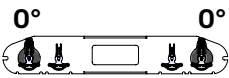
## LIGHT DISTRIBUTION

At Different Module Angles with Clear Lens

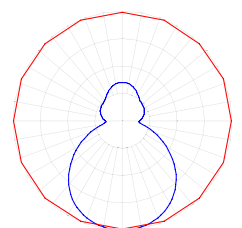
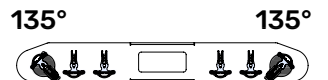
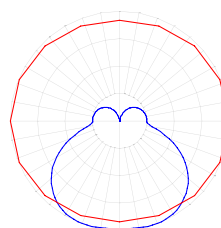
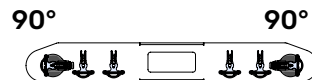
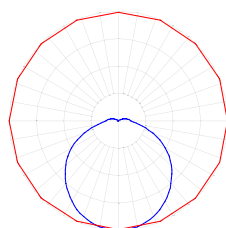
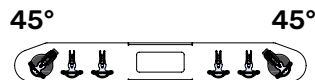
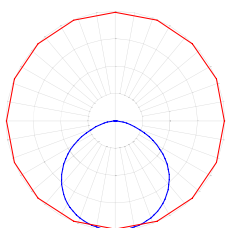
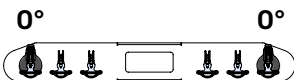
### 2M and 2MS



### 4M and 4MS

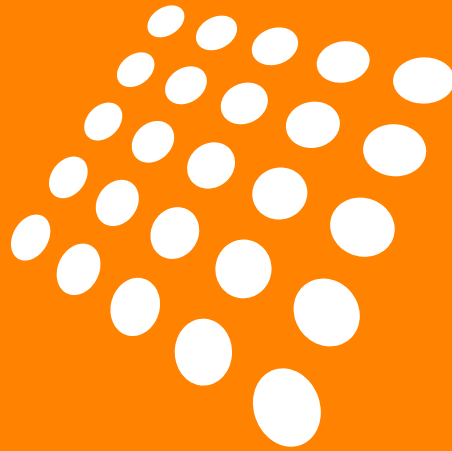


### 6M and 6MS



## END NOTES

1. MBR, 135° module setting and INDR fixtures max. temp 5°C less, typical. EMB fixtures 32°F to 113°F (0°C to 45°C). EMB for ES40V-A1- 41K-6MS fixtures 32°F to 95°F (0°C to 30°C) and not available with EMB and Occupancy sensor. HV EMB not available on Short Module (MS) fixtures. HV EMB Max ambient 35°C. HV EMB includes step-down transformer. Temperatures below -20° have limited switch cycles, consult factory. Generator Transfer Device ambient range 0°C to 50°C (32°F to 122°F). EMB and EMB2 not available with CTOPEND. EMB factory installation only, not able to be field installed.
2. Fixtures not DLC listed: All 3500K CCT models and fixtures below.  
ES40S-A1-06K-2MS-40-80-CL, ES40S-A1-06K-2MS-50-80-CL, ES40S-A1-06K-2MS-40-80-FR, ES40S-A1-06K-2MS-50-80-FR, ES40S-A1-06K-2MS-40-80-AL, ES40V-A1-06K-2MS-40-80-CL, ES40V-A1-06K-2MS-50-80-CL, ES40V-A1-06K-2MS-40-80-FR, ES40V-A1-06K-2MS-50-80-FR, ES40V-A1-06K-2MS-40-80-AL, ES40P-A1-08K-2MS-40-80-CL, ES40P-A1-08K-2MS-50-80-CL, ES40P-A1-08K-2MS-40-80-FR, ES40P-A1-08K-2MS-50-80-FR, ES40P-A1-08K-2MS-40-80-AL, ES40S-A1-09K-2MS-40-80-CL, ES40S-A1-09K-2MS-50-80-CL, ES40S-A1-09K-2MS-40-80-FR, ES40S-A1-09K-2MS-50-80-FR, ES40S-A1-09K-2MS-40-80-AL, ES40S-A1-12K (all models), ES40P-A1-13K (all models), ES40V-A1-13K (all models), ES40P-A1-15K-4MS-40-80-FR, ES40P-A1-15K-4MS-50-80-FR, ES40V-A1-15K-4MS-40-80-FR, ES40V-A1-15K-4MS-50-80-FR, ES40V-A1-15K-4MS-40-80-AL, ES40V-A1-15K-4MS-50-80-AL. 2M variations of the 4MS fixtures listed above are also not DLC listed.
3. Rotatable Modules will rotate when wire guards are installed. Rotatable Modules will function in INDR mode on 4M, 4MS, 6M and 6MS only. With WET and DUST options, the Rotatable Modules are not able to be set in the field; if custom settings are required, please consult factory.
4. LM-79, LM 80 tests and reports are performed in accordance to IESNA standards, per TM-21. Lumen maintenance in hours (L70 via TM-21) based on 24/7 operation.
5. Typical ( $\pm 10\%$ ) at 277V (LV), 25°C, 4000K/5000K, Clear Lens, CRI 80+. Lumen Multipliers: 3500K = 0.93 ; Frosted Lens = 0.98 ; Aisle Lens = 0.96.
6. All 4MS units can be configured in the 2M (longer) size for additional cost, please contact factory.
7. Counterweight is available for fixtures with odd number of power supplies which may not hang level from a non-rigid, single point mount. Models affected are:  
ES40S-A1-06K-2MS, ES40V-A1-06K-2MS, ES40P-A1-08K-2MS, ES40S-A1-09K-2MS, ES40S-A1-12K-2MS, ES40P-A1-13K-4MS, ES40V-A1-13K-2MS, ES40P-A1-15K-4MS, ES40P-A1-17K-4MS, ES40S-A1-17K-4MS, ES40S-A1-20K-4MS, ES40P-A1-21K-6MS, ES40S-A1-23K-4MS, ES40V-A1-27K-4MS, ES40P-A1-24K-6MS, ES40S-A1-30K-6MS, ES40P-A1-31K-4M, ES40V-A1-54K-4M and ES40S-A1-73K-6M, ES40S-A1-36K-6MS.
8. ES40V-A1-41K-6MS not available with CTOPEND. HV EMB not available on ES40V-A1-41K-6MS. When ordered with EMB it MUST have a cord selected. When ordered with any OCC sensor this unit will have the MBR mounting option only. This unit is not available with EMB and OCC sensor together. Even with the MBR mounting option these may be cable mounted.
9. Optional CABLEKIT ordered separately. See ACCESSORIES.
10. Optional add-on. See price list for pricing.
11. Wireless programmer required for final field setup. See ACCESSORIES.
12. 120-277V only.
13. All cords are 18/3 AWG, 600V and white. DW and 15DW are 18/5, 600V and white.
14. WET rating covers the fixture and OCCDIM20/40 only (if ordered as an option). It does NOT include the following sensors or controls: ULTRAHGA, ULTRAPIR20 or ULTRAPIR40. QDC and EMB/EMB2 not available with WET option. Not compatible with INDR. SRG and SRGOFF are IP66 and will work with WET option when used with approved, WET LOCATION connectors (supplied by other).
15. Consult factory for orders requiring EMB, EMB2, and WET. GTD, SRGOFF, CACS and CACSMC may have extended lead times.
16. Dimensions listed are for the fixture only. See dimensional drawings for measurements with mounting hardware. Weights are approximate and vary by model, if weight is a concern, please contact factory. Weight changes when battery backup is added.
17. Clear and Aisle lens only and all fixtures including a wire guard.
18. 20kA Surge suppression device in which, when triggered, the fixture will fail in the "Off" mode (fixture will not illuminate). Not available with ES40-A1-41K-6MS.
19. Generator Transfer Device. Ambient range is 0°C to +50°C (32°F to 122°F). Provides full fixture output on generator power for all fixtures except ES40V-A1-54K-4M, ES40P-A1-58K-6M, ES40V-A1-70K-6M, which will have 50% output and ES40S-A1-73K-6M, which will have 60% output. The GTD is not available on the ES40V-A1-41K-6MS. GTD is available on LV only; not available on HV fixtures. Voltage must be specified as either 120V or 277V. Requires separate line for GTD to function. Available cord options DW and 15DW only.
20. American Cable Systems connector for modular wiring. The connector is 277/480V, 2-wire with Ground. If a different connector is required, please contact factory with details of the installation.
21. ES40V-A1-06K-2MS Max ambient is 55°C.
22. When using EMB or EMB2, ES40V-A1-06K-2MS, ES40V-A1-15K-4MS (2M) and ES40S-A1-17K-4MS (2M) have ~74% of rated output in battery powered mode.
23. SRG (10kA protection) is standard option on all HV fixtures. Controls and sensors should have optional SRG or SRGOFF added. They are not protected by the internal surge suppression provided by the driver.
24. With WET option only.
25. Can only select one rotation angle per fixture. Both outer LED modules are rotated at the same angle. Not compatible with INDR option.
26. ULTRA requires separate commissioning and ACCESSORIES, contact factory.
27. The performance of sensors and lenses is influenced by various factors beyond Linmore LED's control, including but not limited to environmental conditions, user settings, and proper maintenance. While we provide detailed specifications and guidelines to help optimize performance, we cannot guarantee or be held liable for the performance of sensors or lenses under any particular circumstance(s). Customers are advised to test the products in their specific application environments to ensure suitability for their intended use and are responsible for all sensor and lens selections.



# LinmoreLED<sup>®</sup>

ULTRA PERFORMANCE LIGHTING

## Linmore LED Labs, Inc.

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