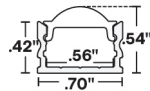
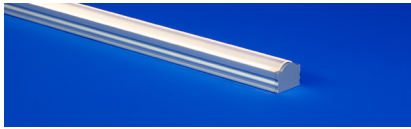




# ESSENTIALS LALO-OPTICS (02)

## WD APPLICATIONS

### 24VDC Linear Fixtures - Surface & Recessed



- Shallow, low-profile linear fixture for surface or recessed installations
- Produces a 17° beam angle
- Mounting options include stainless steel clips, magnets, and low-profile magnet mounts
- Features painted end caps to match extrusion finish
- 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
- Can be suitable for exterior use when specified as wet, contact factory for more information
- Used in applications to provide warmer CCTs as the light is dimmed
- 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  |
|         |           |     |       | STD        | 17DEG |

#### ADDITIONAL INFORMATION REQUIRED TO ORDER

| 7                  | 8                  | 9                   | 10         | 11        | 12       | 13     | 14          | 15             |
|--------------------|--------------------|---------------------|------------|-----------|----------|--------|-------------|----------------|
| WIRE INPUT/ OUTPUT | CONNECTOR/ WIRE IN | CONNECTOR/ WIRE OUT | WIRE COLOR | WIRE TYPE | MOUNTING | FINISH | LENGTH (IN) | EXACT/ OPTIMAL |
|                    |                    |                     |            |           |          |        |             |                |

Sample Part Number: LL2WD-6.0-19/30-DRY-STD-17-P1-BW-BW-BK-CL2-SST-BK-48"-E

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>1</div> <div>PRODUCT</div> <div>LL2WD</div> <div>LED engine is built with 2 wires suitable for phase dimming control. See following pages for compatible power supplies.</div> <div>LL2DW</div> <div>LL2DW-USA</div> <div>Select USA option for BAA and BABA projects. Only DRY or WET ratings apply.</div> <div>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 s</div> | <div>2</div> <div>WATTS/FT</div> <div>6.0</div> <div>6.0W/ft</div> <div>1.5HE</div> <div>1.5W/ft HE</div> <div>2.5HE</div> <div>2.5W/ft HE</div> <div>1.5HE</div> <div>1.5W/ft HE</div> <div>2.5HE</div> <div>2.5W/ft HE</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <div>3</div> <div>CCT</div> <div>19/27</div> <div>1900K/2700K</div> <div>19/30</div> <div>1900K/3000K</div> <div>20/27</div> <div>2000K/2700K</div> <div>20/30</div> <div>2000K/3000K</div> <div>27/40</div> <div>2700K/4000K</div> <div>27/55</div> <div>2700K/5500K</div> <div>24/30</div> <div>2400K/3000K</div> <div>27/40</div> <div>2700K/4000K</div>                                                                                   | <div>4</div> <div>RATED</div> <div>DRY</div> <div>IP20</div> <div>WET</div> <div>IP67</div> <div>Can be suitable for exterior use, contact factory for more information</div> <div>DRY</div> <div>IP20</div> <div>WET</div> <div>IP67</div> <div>Can be suitable for exterior use, contact factory for more information</div> <div>DMP</div> <div>IP54</div> | <div>5</div> <div>EFFICIENCY</div> <div>STD</div> <div>Standard</div>                                                                                                                                                                                                                                                                                                                              | <div>6</div> <div>LENS</div> <div>17DEG</div> <div>Optical 17°</div> <div>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</div> |
| <div>7</div> <div>WIRE INPUT/OUTPUT</div> <div>SINGLE (Input only)</div> <div>S1</div> <div>End Feed</div> <div>S2</div> <div>Bottom Feed</div> <div>For continuous mounting, consider bottom feed.</div> <div>PASS THROUGH (Input/output)</div> <div>P1</div> <div>End Feed</div> <div>P2</div> <div>Bottom Feed</div> <div>For continuous mounting, consider bottom feed.</div>                                                                                                                             | <div>8</div> <div>CONNECTOR/WIRE IN</div> <div>BW</div> <div>Bare Wire (Standard 24")</div> <div>BRL</div> <div>Barrel</div> <div>CON6</div> <div>Connector 6"</div> <div>CON24</div> <div>Connector 24"</div> <div>BRL only available with LL2WD</div> <div>BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div> <div>BW</div> <div>Bare Wire (Standard 24")</div> <div>BRL</div> <div>Barrel</div> <div>CON6</div> <div>Connector 6"</div> <div>CON24</div> <div>Connector 24"</div> <div>BRL only available with LL2WD</div> <div>BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div> | <div>9</div> <div>CONNECTOR/WIRE OUT</div> <div>CLS</div> <div>Closed End (No feed)</div> <div>BW</div> <div>Bare Wire (Standard 24")</div> <div>BRL</div> <div>Barrel</div> <div>CON6</div> <div>Connector 6"</div> <div>CON24</div> <div>Connector 24"</div> <div>BRL only available with LL2WD</div> <div>BW: Standard length is 24", Max length is 120". Request custom length by writing in part number next to BW (example: BW48)</div> | <div>10</div> <div>WIRE COLOR</div> <div>WH</div> <div>White</div> <div>BK</div> <div>Black</div> <div>N/A</div> <div>For Barrel</div> <div>wet barrel only available in black</div>                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                |
| <div>11</div> <div>WIRE TYPE</div> <div>CL2</div> <div>Class 2</div> <div>CL2P</div> <div>Plenum Rated</div> <div>N/A</div> <div>For Barrel</div> <div>CL2P only available with bare wire leads (BW)</div>                                                                                                                                                                                                                                                                                                    | <div>12</div> <div>MOUNTING</div> <div>SST</div> <div>Stainless Steel</div> <div>M4</div> <div>Low Profile Magnet</div> <div>MG</div> <div>Magnet</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <div>13</div> <div>FINISH</div> <div>ST</div> <div>Satin</div> <div>BK</div> <div>Black</div> <div>CU</div> <div>Custom</div> <div>Custom finishes require a longer lead time, consult factory</div>                                                                                                                                                                                                                                          | <div>14</div> <div>LENGTH (IN)</div> <div>Minimum length is 12", maximum length is 98" not including end caps. Contact us for lengths under 12".</div>                                                                                                                                                                                                       | <div>15</div> <div>EXACT/OPTIMAL</div> <div>O</div> <div>Optimal Illumination</div> <div>E</div> <div>Exact Specified Length</div> <div>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.</div> |                                                                                                                                                                                                                                                                                                                                                |

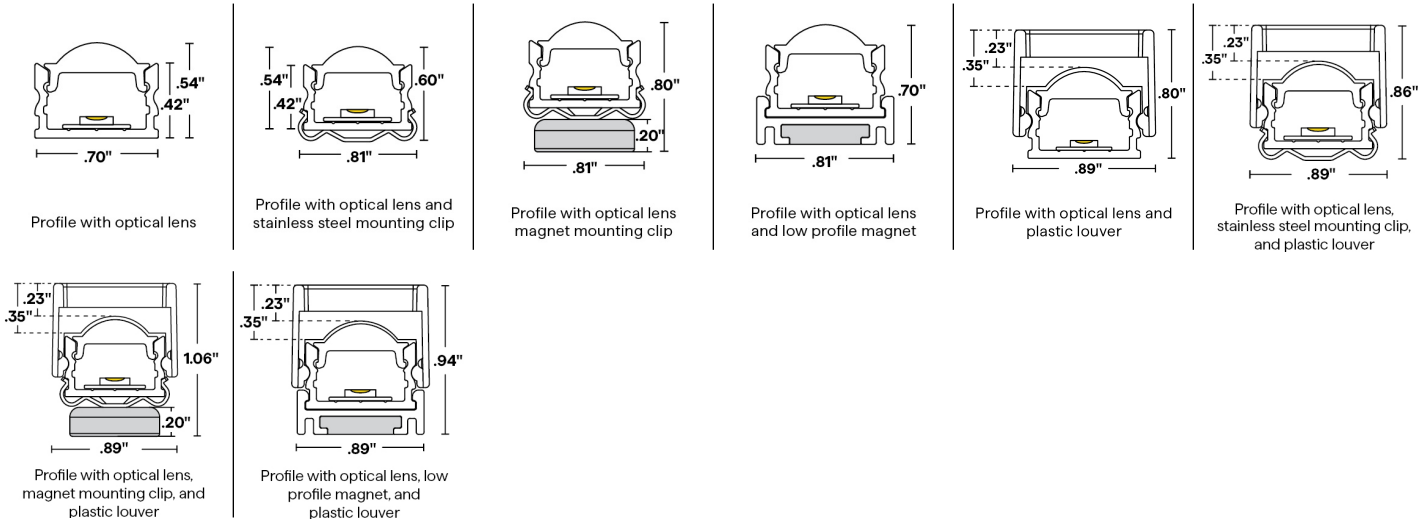
5 year warranty | Warranty only valid with QTL power supplies | Field modifications void warranty | Data subject to change, all data has +/- 5% tolerance



# ESSENTIALS LALO-OPTICS (02) WD APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

## 1 PRODUCT - DIMENSIONS



## 2 DELIVERED LUMENS

[Calculated L70 = 70000 hrs]  
Tested with LL2WD-6.0-30-DRY-STD

|    | 3000K |     |
|----|-------|-----|
|    | LM/FT | CRI |
| 17 | 454   | 98  |

[Calculated L70 = 70000 hrs]  
Tested with LL2DW-\*\*-30-DRY-STD

|    | 1.5HE W/FT |     | 2.5HE W/FT |     |
|----|------------|-----|------------|-----|
|    | LM/FT      | CRI | LM/FT      | CRI |
| 17 | 153        | 98  | 242        | 98  |

## 6 DIODE VISIBILITY

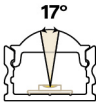


Optical lens

## PHOTOMETRIC PERFORMANCE

Nominal beam spread shown, beam spread varies based on light engine. For more detailed information, see photometric data.

17DEG



Optical 17°



# ESSENTIALS LALO-OPTICS (02) WD APPLICATIONS

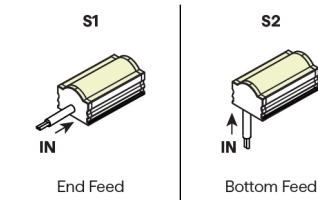
## 24VDC Linear Fixtures - Surface & Recessed

### TEMPERATURE RATINGS

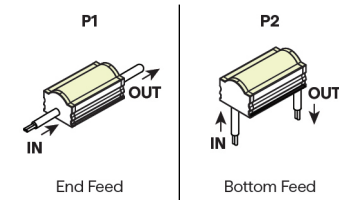
|     |                                  | WD 6.0 W/FT |       | DW 1.5 HE W/FT                        |       | DW 3.0 HE W/FT                     |       | DW 2.5 HE W/FT                        |       | DW 5.0 HE W/FT                     |       |
|-----|----------------------------------|-------------|-------|---------------------------------------|-------|------------------------------------|-------|---------------------------------------|-------|------------------------------------|-------|
|     |                                  |             |       | 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   | Min                                | Max   |
| DRY | Ambient Operating Temp - Surface | -4°F        | 115°F | -13°F                                 | 105°F | -4°F                               | 120°F | -4°F                                  | 135°F | -4°F                               | 120°F |
| DMP | Ambient Operating Temp - Surface | **          | **    | -4°F                                  | 140°F | -4°F                               | 130°F | -4°F                                  | 130°F | -4°F                               | 115°F |
| WET | Ambient Operating Temp - Surface | -4°F        | 110°F | -4°F                                  | 140°F | -4°F                               | 130°F | -4°F                                  | 130°F | -4°F                               | 115°F |

### 7 WIRE INPUT/OUTPUT

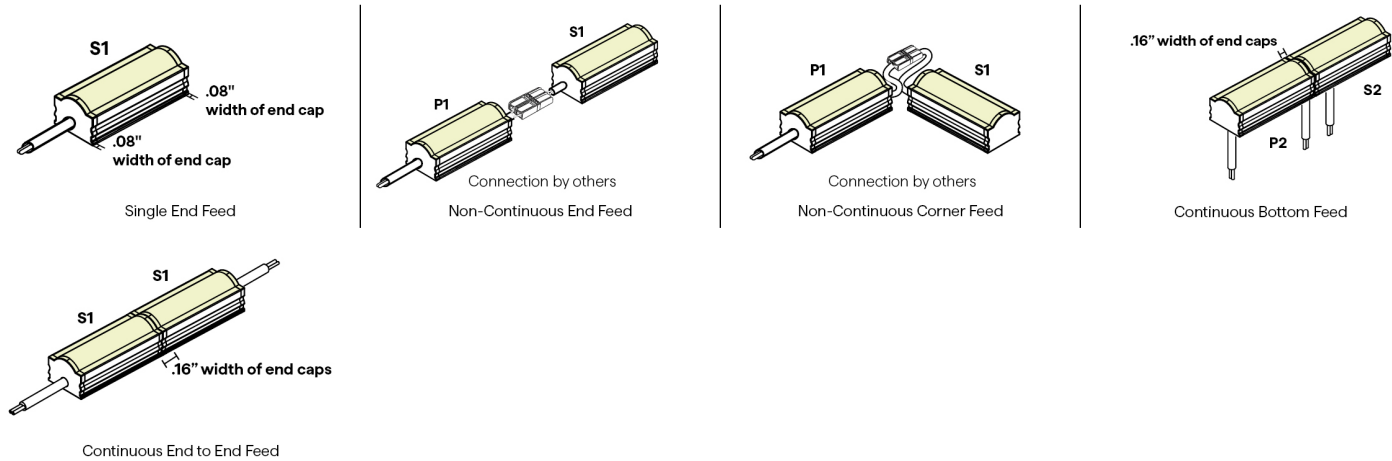
SINGLE (Input only)



PASS THROUGH (Input/Output)

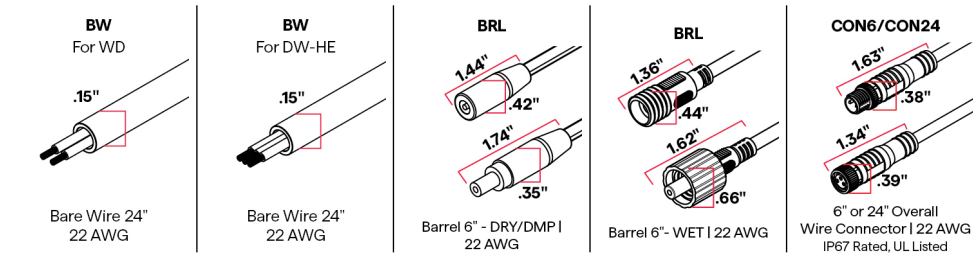


### CONFIGURATION OPTIONS



### 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



### 10 WIRE COLOR



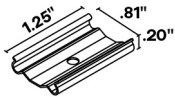


# ESSENTIALS LALO-OPTICS (02) WD APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

## 12 MOUNTING

### SST



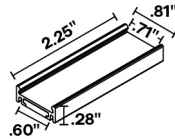
Stainless Steel Clip

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 SS

### M4

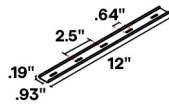


Low Profile Magnet

One M4 provided per foot.

To order separately use MG-04

### MMA-04



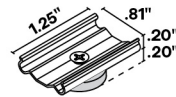
Magnet Mount Accessory for M4

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

## 13 FINISH

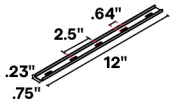


Satin

Black

Custom finishes require a longer lead time, consult factory

### 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

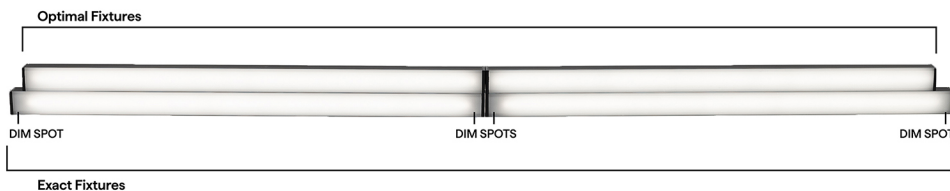
Required when mounting to a non-magnetic surface

## 15 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.





# ESSENTIALS LALO-OPTICS (02) WD APPLICATIONS

## 24VDC Linear Fixtures - Surface & Recessed

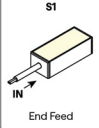
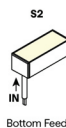
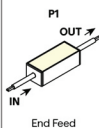
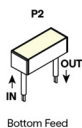
### WD DRY, DMP LENGTHS BY INCH

Available in any length in between 12" and 98.43", chart below shows example lengths. Exact fixtures are the length specified. Optimal fixtures' length is rounded down with illumination end to end. All fixtures' tolerance is +0 - 1/8". Consult factory for lengths under 12".

#### EXACT LENGTH

| Requested Length | Potential dim spot on either end of 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: highlighted rows are closest to requested nominal length

| Requested Nominal Length | S1 & S2                                                                                          |                                                                                                     | P1 & P2                                                                                          |                                                                                                     |
|--------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|                          |  S1<br>End Feed |  S2<br>Bottom Feed |  P1<br>End Feed |  P2<br>Bottom Feed |
| 12"                      |                                                                                                  | 10.41"                                                                                              |                                                                                                  | 10.66"                                                                                              |
| 13"                      |                                                                                                  | 12.41"                                                                                              |                                                                                                  | 12.66"                                                                                              |
| 14"                      |                                                                                                  | 12.41"                                                                                              |                                                                                                  | 12.66"                                                                                              |
| 15"                      |                                                                                                  | 14.41"                                                                                              |                                                                                                  | 14.66"                                                                                              |
| 16"                      |                                                                                                  | 14.41"                                                                                              |                                                                                                  | 14.66"                                                                                              |
| 17"                      |                                                                                                  | 16.41"                                                                                              |                                                                                                  | 16.66"                                                                                              |
| 18"                      |                                                                                                  | 16.41"                                                                                              |                                                                                                  | 16.66"                                                                                              |
| 19"                      |                                                                                                  | 18.41"                                                                                              |                                                                                                  | 18.66"                                                                                              |
| 20"                      |                                                                                                  | 18.41"                                                                                              |                                                                                                  | 18.66"                                                                                              |
| 21"                      |                                                                                                  | 20.41"                                                                                              |                                                                                                  | 20.66"                                                                                              |
| 22"                      |                                                                                                  | 20.41"                                                                                              |                                                                                                  | 20.66"                                                                                              |
| 23"                      |                                                                                                  | 22.41"                                                                                              |                                                                                                  | 22.66"                                                                                              |
| 24"                      |                                                                                                  | 22.41"                                                                                              |                                                                                                  | 22.66"                                                                                              |
| 36"                      |                                                                                                  | 34.41"                                                                                              |                                                                                                  | 34.66"                                                                                              |
| 48"                      |                                                                                                  | 46.41"                                                                                              |                                                                                                  | 46.66"                                                                                              |
| 60"                      |                                                                                                  | 58.41"                                                                                              |                                                                                                  | 58.66"                                                                                              |
| 72"                      |                                                                                                  | 70.41"                                                                                              |                                                                                                  | 70.66"                                                                                              |
| 84"                      |                                                                                                  | 82.41"                                                                                              |                                                                                                  | 82.66"                                                                                              |
| 96"                      |                                                                                                  | 94.41"                                                                                              |                                                                                                  | 94.66"                                                                                              |

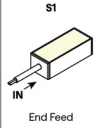
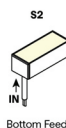
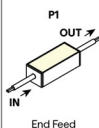
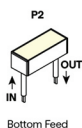
### WD WET LENGTHS BY INCH

Available in any length in between 12" and 98.43", chart below shows example lengths. Exact fixtures are the length specified. Optimal fixtures' length is rounded down with illumination end to end. All fixtures' tolerance is +0 - 1/8". Consult factory for lengths under 12".

#### EXACT LENGTH

| Requested Length | Potential dim spot on either end of 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: highlighted rows are closest to requested nominal length

| Requested Nominal Length | S1 & S2                                                                                            |                                                                                                       | P1 & P2                                                                                            |                                                                                                       |
|--------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|                          |  S1<br>End Feed |  S2<br>Bottom Feed |  P1<br>End Feed |  P2<br>Bottom Feed |
| 12"                      |                                                                                                    | 10.61"                                                                                                |                                                                                                    | 10.76"                                                                                                |
| 13"                      |                                                                                                    | 12.61"                                                                                                |                                                                                                    | 12.76"                                                                                                |
| 14"                      |                                                                                                    | 12.61"                                                                                                |                                                                                                    | 12.76"                                                                                                |
| 15"                      |                                                                                                    | 14.61"                                                                                                |                                                                                                    | 14.76"                                                                                                |
| 16"                      |                                                                                                    | 14.61"                                                                                                |                                                                                                    | 14.76"                                                                                                |
| 17"                      |                                                                                                    | 16.61"                                                                                                |                                                                                                    | 16.76"                                                                                                |
| 18"                      |                                                                                                    | 16.61"                                                                                                |                                                                                                    | 16.76"                                                                                                |
| 19"                      |                                                                                                    | 18.61"                                                                                                |                                                                                                    | 18.76"                                                                                                |
| 20"                      |                                                                                                    | 18.61"                                                                                                |                                                                                                    | 18.76"                                                                                                |
| 21"                      |                                                                                                    | 20.61"                                                                                                |                                                                                                    | 20.76"                                                                                                |
| 22"                      |                                                                                                    | 20.61"                                                                                                |                                                                                                    | 20.76"                                                                                                |
| 23"                      |                                                                                                    | 22.61"                                                                                                |                                                                                                    | 22.76"                                                                                                |
| 24"                      |                                                                                                    | 22.61"                                                                                                |                                                                                                    | 22.76"                                                                                                |
| 36"                      |                                                                                                    | 34.61"                                                                                                |                                                                                                    | 34.76"                                                                                                |
| 48"                      |                                                                                                    | 46.61"                                                                                                |                                                                                                    | 46.76"                                                                                                |
| 60"                      |                                                                                                    | 58.61"                                                                                                |                                                                                                    | 58.76"                                                                                                |
| 72"                      |                                                                                                    | 70.61"                                                                                                |                                                                                                    | 70.76"                                                                                                |
| 84"                      |                                                                                                    | 82.61"                                                                                                |                                                                                                    | 82.76"                                                                                                |
| 96"                      |                                                                                                    | 94.61"                                                                                                |                                                                                                    | 94.76"                                                                                                |



# ESSENTIALS LALO-OPTICS (02) WD APPLICATIONS

## 24VDC Linear Fixtures - Surface & Recessed

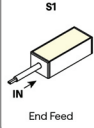
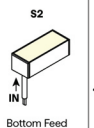
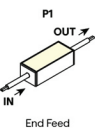
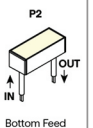
### DW-HE DRY, DMP LENGTHS BY INCH

Available in any length in between 12" and 98.43", chart below shows example lengths. Exact fixtures are the length specified. Optimal fixtures' length is rounded down with illumination end to end. All fixtures' tolerance is +0 - 1/8". Consult factory for lengths under 12".

#### EXACT LENGTH

| Requested Length | Potential dim spot on either end of 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: highlighted rows are closest to requested nominal 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"                                                                            |

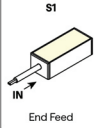
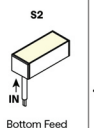
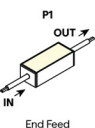
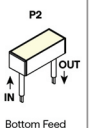
### DW-HE WET LENGTHS BY INCH

Available in any length in between 12" and 98.43", chart below shows example lengths. Exact fixtures are the length specified. Optimal fixtures' length is rounded down with illumination end to end. All fixtures' tolerance is +0 - 1/8". Consult factory for lengths under 12".

#### EXACT LENGTH

| Requested Length | Potential dim spot on either end of 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: highlighted rows are closest to requested nominal length

| Requested Nominal Length | S1 & S2                                                                             |                                                                                     | P1 & P2                                                                             |                                                                                     |
|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                          |  |  |  |  |
| 12"                      |                                                                                     | 10.66"                                                                              |                                                                                     | 11.06"                                                                              |
| 13"                      |                                                                                     | 12.66"                                                                              |                                                                                     | 11.06"                                                                              |
| 14"                      |                                                                                     | 12.66"                                                                              |                                                                                     | 13.06"                                                                              |
| 15"                      |                                                                                     | 14.66"                                                                              |                                                                                     | 13.06"                                                                              |
| 16"                      |                                                                                     | 14.66"                                                                              |                                                                                     | 15.06"                                                                              |
| 17"                      |                                                                                     | 16.66"                                                                              |                                                                                     | 15.06"                                                                              |
| 18"                      |                                                                                     | 16.66"                                                                              |                                                                                     | 17.06"                                                                              |
| 19"                      |                                                                                     | 18.66"                                                                              |                                                                                     | 17.06"                                                                              |
| 20"                      |                                                                                     | 18.66"                                                                              |                                                                                     | 19.06"                                                                              |
| 21"                      |                                                                                     | 20.66"                                                                              |                                                                                     | 19.06"                                                                              |
| 22"                      |                                                                                     | 20.66"                                                                              |                                                                                     | 21.06"                                                                              |
| 23"                      |                                                                                     | 22.66"                                                                              |                                                                                     | 21.06"                                                                              |
| 24"                      |                                                                                     | 22.66"                                                                              |                                                                                     | 23.06"                                                                              |
| 36"                      |                                                                                     | 34.66"                                                                              |                                                                                     | 35.06"                                                                              |
| 48"                      |                                                                                     | 46.66"                                                                              |                                                                                     | 47.06"                                                                              |
| 60"                      |                                                                                     | 58.66"                                                                              |                                                                                     | 59.06"                                                                              |
| 72"                      |                                                                                     | 70.66"                                                                              |                                                                                     | 71.06"                                                                              |
| 84"                      |                                                                                     | 82.66"                                                                              |                                                                                     | 83.06"                                                                              |
| 96"                      |                                                                                     | 94.66"                                                                              |                                                                                     | 95.06"                                                                              |



# ESSENTIALS LALO-OPTICS (02) WD 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                                                                                                                                                                                                                         |                                                                                                                                                                                                                                       |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | DW-HE Warm Dim Applications                                                                                                                                                                                                    | WD                                                                                                                                                                                                                                    |
| 0.1%         | QT-CAB-eLED+DALI-DT6<br>QT-CAB-eLED+DALI-DT8<br>QT-CAB-eLED+DALI-DT8-AWN<br>QT-CAB-eLED+WD<br>QT-CAB-eLED+WD-AWN<br>QTM-eLED+DALI-DT6<br>QTM-eLED+DALI-DT8<br>QTM-eLED+DALI-DT8-AWN<br>QTM-eLED+WD<br>QTM-eLED+WD-AWN<br>QZ-DW | QT-CAB-QZ-PH/0-10V<br>QT-CAB-eLED+0-10V<br>QT-CAB-eLED+DALI-DT6<br>QT-CAB-eLED+DALI-DT6-AWN<br>QTM-eLED+0-10V<br>QTM-eLED+DALI-DT6<br>QTM-eLED+DALI-DT6-AWN<br>QZ-BOWTIE+DIMMER<br>QZ-DMX<br>QZ-PH/0-10V<br>QZ-STICK-PH/0-10V<br>QZLP |
| 1%           | QZ-DALI-DT8                                                                                                                                                                                                                    | QTM-eLED(E)<br>QZ-DALI-DT6                                                                                                                                                                                                            |
| 10%          | Non-Dim Power Supply with WD App Dongle                                                                                                                                                                                        | Non-Dim Power Supply with SW App Dongle                                                                                                                                                                                               |

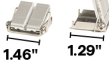
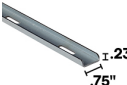
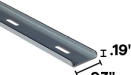
| DIMMING PROTOCOL                                                                | INDOOR                                                                                                        |                                                                                                               |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
|                                                                                 | DW-HE Warm Dim Applications                                                                                   | WD                                                                                                            |
| Phase                                                                           | QZ-DW                                                                                                         | QT-CAB-QZ-PH/0-10V<br>QTM-eLED(E)<br>QZ-BOWTIE+DIMMER<br>QZ-PH/0-10V<br>QZ-STICK-PH/0-10V<br>QZLP             |
| 0-10V                                                                           | QT-CAB-eLED+WD<br>QT-CAB-eLED+WD-AWN<br>QTM-eLED+WD<br>QTM-eLED+WD-AWN<br>QZ-DW                               | QT-CAB-QZ-PH/0-10V<br>QT-CAB-eLED+0-10V<br>QTM-eLED+0-10V<br>QZ-PH/0-10V<br>QZ-STICK-PH/0-10V<br>QZLP         |
| Lutron Athena                                                                   | QT-CAB-eLED+DALI-DT8-AWN<br>QT-CAB-eLED+WD-AWN<br>QTM-eLED+DALI-DT8-AWN<br>QTM-eLED+WD-AWN                    | QT-CAB-eLED+DALI-DT6-AWN<br>QTM-eLED+DALI-DT6-AWN                                                             |
| ECO System                                                                      |                                                                                                               | QTM-eLED(E)                                                                                                   |
| DMX<br>If using DW LED,<br>wattage must be<br>doubled                           |                                                                                                               | QZ-DMX                                                                                                        |
| DALI-2: DT6<br>If using DW LED,<br>wattage must be<br>doubled except for<br>AWN | QT-CAB-eLED+DALI-DT6<br>QTM-eLED+DALI-DT6                                                                     | QT-CAB-eLED+DALI-DT6<br>QT-CAB-eLED+DALI-DT6-AWN<br>QTM-eLED+DALI-DT6<br>QTM-eLED+DALI-DT6-AWN<br>QZ-DALI-DT6 |
| DALI-2: DT8<br>If using DW LED,<br>wattage must be<br>doubled except for<br>AWN | QT-CAB-eLED+DALI-DT8<br>QT-CAB-eLED+DALI-DT8-AWN<br>QTM-eLED+DALI-DT8<br>QTM-eLED+DALI-DT8-AWN<br>QZ-DALI-DT8 |                                                                                                               |
| SCENE App Dimmed                                                                | Non-Dim Power Supply with WD App Dongle                                                                       | Non-Dim Power Supply with SW App Dongle                                                                       |



# ESSENTIALS LALO-OPTICS (02) WD APPLICATIONS

24VDC Linear Fixtures - Surface & Recessed

## COMPATIBLE MOUNTING ACCESSORIES

|                                                                                                                                                                    |                                                                                                                                                                    |                                                                                                                                                                   |                                                                                                                                                  |                                                                                                                                                        |                                                                                                                               |                                                                                                                              |                                                                                                                               |                                                                                                                                         |                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HINGE - HMB-M</b><br><br>1.41"<br>.71"<br>Adjustable mounting bracket - Medium | <b>HINGE - HMB-L</b><br><br>1.46"<br>1.29"<br>Adjustable mounting bracket - Large | <b>HINGE - HMB-XL</b><br><br>4"<br>1.46"<br>Adjustable mounting bracket - XLarge | <b>Q-PIVOT</b><br><br>.75"<br>1.03"<br>Small mounting accessory | <b>Q-ANGLE</b><br><br>2.23"<br>1.38"<br>Adjustable mounting accessory | <b>VHB</b><br><br>Double sided mounting tape | <b>NU-GRAZER</b><br><br>U Mounting Bracket | <b>NI-GRAZER</b><br><br>J Mounting Bracket | <b>BL-GRAZER</b><br><br>Backwards L Mounting Bracket | <b>MMA-01</b><br><br>.23"<br>.75"<br>Magnet Mount Accessory of MG-01 |
| <b>MMA-04</b><br><br>.19"<br>.93"<br>Magnet Mount Accessory of MG-04               |                                                                                                                                                                    |                                                                                                                                                                   |                                                                                                                                                  |                                                                                                                                                        |                                                                                                                               |                                                                                                                              |                                                                                                                               |                                                                                                                                         |                                                                                                                                                         |