

Catalog # :	Project :	Type :
Prenared By ·		Date :

## Mirada Large (MRL)

## Outdoor LED Area Light













OVERVIEW						
Lumen Package	40,000 - 78,000					
Wattage Range	286 - 648					
Efficacy Range (LPW)	115 - 154					
Weight lbs(kg)	60 (27.2)					
Control Options	IMSBT, ALB, ALS, 7-Pin					



#### **QUICK LINKS**

Ordering Guide Performance Photometrics Dimensions

#### **FEATURES & SPECIFICATIONS**

#### Construction

- Rugged die-cast aluminum housing, optical frame, and driver access cover.
- Fixtures are finished with LSI's DuraGrip<sup>\*</sup> polyester powder coat finishing process.
   The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available.
   Consult factory.
- Shipping weight: 68 lbs in carton.

#### **Optical System**

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT, FTA and AM.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- · Zero uplight.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.
- Integral louver (IL) and integral half louver (IH) options available for enhanced backlight control.

#### **Electrical**

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% 100%) standard.

- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L90 Calculated Life: >100k Hours (See Lumen Maintenance chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 65L and 78L lumen packages rated to +40°C.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

#### **Controls**

- Optional integral passive infrared Bluetooth™ motion and photocell sensor (see page 5 for more details). Fixtures operate independently and can be commissioned via iOS or Android configuration app.
- LSI's AirLink™ wireless control system options reduce energy and maintenance costs while optimizing light quality 24/7. (see controls section for more details).

#### Installation

- Designed to mount to square or round poles.
- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment for installing/servicing.
- Included terminal block accepts up to 12 ga. wire.
- Utilizes both B3 and B5 drill patterns for easy fastening of LSI products.

#### Warranty

 LSI luminaires carry a 5-year limited warranty. Refer to <a href="https://www.lsicorp.com/resources/terms-conditions-warranty/">https://www.lsicorp.com/resources/terms-conditions-warranty/</a> for more information.

#### Listings

- Listed to UL 1598 and UL 8750.
- State of California Title 24 Compliant; with IMSBT, ALSC, or ALSCH Options.
- DesignLights Consortium\* (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at <a href="https://www.designlights.org/QPL">www.designlights.org/QPL</a> to confirm which versions are qualified.
- Meets Buy American Act requirements.
- Dark Sky compliant; with 3000K color temperature selection.
- Suitable for wet locations.
- IP66 rated Luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications are qualified.
- IK08 rated luminiare per IEC 66262 mechanical impact code



Custom Lumen Packages<sup>1</sup>



Back to Quick Links **ORDERING GUIDE** 

#### TYPICAL ORDER EXAMPLE: MRL LED 40L SIL FTA L UNV DIM 50 70CRI ALSCS04 BRZ IL Lumen Package Lens Distribution Orientation<sup>2</sup> **Light Source** Prefix **Voltage** LED **UNV** - Universal Voltage (120-277V) MRL - Mirada Large **40L** - 40,000 lms SIL - Silicone 2 - Type 2 (blank) - Standard **HV** - High Voltage (347-480V) **50L** - 50,000 lms **3** - Type 3 L - Optics rotated left 90° 65L - 65,000 lms 5W - Type 5 Wide R - Optics rotated right 90° 78L - 78,000 lms FT - Forward Throw FTA - Forward Throw Automotive

AM - Automotive Merchandise

Dali	Calan Tanan anahuna	Calan Dandarina	Controlle	Finish	A
Driver	Color Temperature	Color Rendering	Controls	Finish	Options
<b>DIM</b> - 0-10v Dimming (10-100%)	50 - 5,000 CCT 40 - 4,000 CCT 30 - 3,000 CCT AMB - Phosphor Converted Amber <sup>8</sup>	<b>70CRI</b> - 70 CRI	(Blank) - None  Wireless Controls System  ALSDC - AirLink Synapse Control System  ALSC02 - AirLink Synapse Control System with 12-20' Motion Sensor  ALSC04 - AirLink Synapse Control System with 20-40' Motion Sensor  ALSDC DB - Airlink Synapse Integral Controller and Dynamic Behaviors Drivers  ALBMR1LR - AirLink Blue Long Range Wireless Motion & Photo Sensor Controller (8-15' mounting height) <sup>3</sup> ALBMR2LR - AirLink Blue Long Range Wireless Motion & Photo Sensor Controller (16-40' mounting height) <sup>3</sup>	BLK - Black BRZ - Dark Bronze GMG - Gun Metal Gray GPT - Graphite MSV - Metallic Silver PLP - Platinum Plus SVG - Satin Verde Green WHT - White	(Blank) - None IH - Integral Half Louver (Moderate Spill Light Cutoff) <sup>2</sup> IL - Integral Louver (Sharp Spill Light Cutoff) <sup>2</sup>
	CR7P - 7 Pin Control Receptar IMSBT1L - Integral Bluetooth' IMSBT2L - Integral Bluetooth' Button Type Photocells PC1120 - 120V PC1208-277 - 208 -277V	EXT - 0-10V Dimming leads extended to housing exterior  CR7P - 7 Pin Control Receptacle ANSI C1 36.41⁴  IMSBT1L - Integral Bluetooth™ Motion and Photocell Sensor (8-24′ MH)³  IMSBT2L - Integral Bluetooth™ Motion and Photocell Sensor (25-40′ MH)³  Button Type Photocells PCI120 - 120V			



### **Need more information?**

Click here for our glossary

# Have additional questions?



#### Accessory Ordering Information<sup>5</sup>

CONTROLS ACCESSORIES	
Description	Order Number
Twist Lock Photocell (120V) for use with CR7P <sup>6</sup>	122514
Twist Lock Photocell (208-277) for use with CR7P <sup>6</sup>	122515
Twist Lock Photocell (347V) for use with CR7P <sup>6</sup>	122516
Twist Lock Photocell (480V) for use with CR7P <sup>6</sup>	1225180
AirLink 5 Pin Twist Lock Controller <sup>6</sup>	661409
AirLink 7 Pin Twist Lock Controller <sup>6</sup>	661410
AirLink Synapse Central Base Station	TBD
AirLink Synapse Remote Access 12 month subscription	TBD
AirLink Synapse Dynamic Behavior Software	TBD
Shorting Cap for use with CR7P <sup>6</sup>	149328

FUSING OPTIONS <sup>7</sup>	
Single Fusing (120V)	
Single Fusing (277V)	
Double Fusing (208V, 240V)	See Fusing Accessory Guide
Double Fusing (480V)	
Double Fusing (347V)	

EXTERNAL SHIELDING OPTIONS					
3" External Shield	See Shielding				
6" External Shield	<u>Guide</u>				

Type: \_\_

<sup>1.</sup> Custom lumen and wattage packages available, consult factory. Values are within industry standard tolerances but not DLC listed.

<sup>2.</sup> Not available with 5W distribution

Motion sensors are field configurable via an app that can be downloaded from your smartphone's native app store.

<sup>4.</sup> Control device or shorting cap must be ordered separately. See Accessory Ordering Information.

<sup>5.</sup> Accessories are shipped separately and field installed.

<sup>6.</sup> Factory installed CR7P option required. See Options.

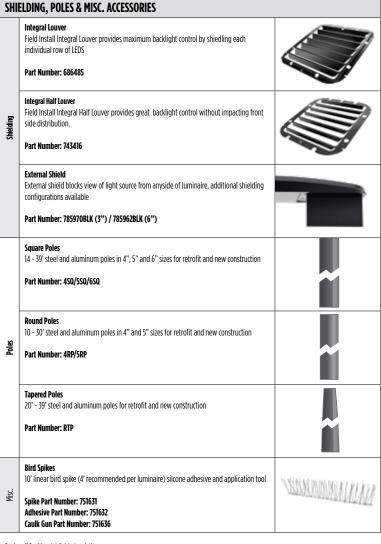
Fusing must be located in hand hole of pole. See Fusing Accessory Guide for compatability.

<sup>8.</sup> Only available in 40L Lumen Package. Consult factory for lead time and availability.

**Have questions?** Call us at (800) 436-7800

#### **ACCESSORIES**

MO	UNTING ACCESSORIES	
	Universal Mounting Bracket  Mounts to ≥ 3" square or round (tapered/straight) poles with (2) mounting hole spaces between 3.5" to 5"  Part Number: BKA UMB CLR	
Side Arm	Quick Mount Plate True one person installation to existing/new contruction poles with hole spaces beteen 2.4 to 4.6"  Part Number: BKS PQM B3B5 XX CLR	
	15° Tilt Quick Mount Plate True one person installation to existing/new contruction poles with hole spaces beteen 2.4 to 4.6"  Part Number: BKS PQ15 B3B5 XX CLR	
Tenon / Slipfitter	Adjustable Slipfitter  Mounts onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon and provides 180° of tilt (max 45° above horizontal)  Part Number: BKA ASF CLR	
	Square Tenon Top  Mounts onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon and allows for mounting up to 4 luminaires  Part Number: BKA XNM *	
	Square Internal Slipfitter  Mounts inside 4" or 5" square pole and allows for mounting up to 4 lumianires  Part Number: BKA X_ISF * CLR	
Wall Mount/ Wood Pole	Wall Mount Bracket Mounts onto vertical wall surface ( hardware/anchors not included) Part Number: BKS XBO WM CLR	
Wall Mount/	Wood Pole Bracket Mounts onto wooden poles (6" minimum OD, hardware/anchors not inlcuded) Part Number: BKS XBO WP CLR	



Type: \_\_\_\_

Replace CLR with paint finish description

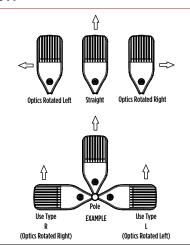
Repleace XX with SQ for square pole or RD for round pole ( $\geq\!\!3"$  OD)

Replace \* with S (Single), D180 (Double @180°), D90 (Double @90°), T90 (Triple), Q90 (Quad)

Replace \_ with 4 (4" square pole) or 5 (5" square pole)

#### **OPTICS ROTATION**

Top View



#### **ACCESSORIES/OPTIONS**

#### Integral Louver (IL) and House-Side Shield (IH)

Integral louver (IL) and half louver (IH) accessory shields available for improved backlight control without sacrificing street side performance. LSI's Integral Louver (IL) and Integral House-Side Shield (IH) options deliver backlight control that significantly reduces spill light behind the poles for applications with pole locations close to adjacent properties. The design maximizes forward reflected light while reducing glare, maintaining the optical distribution selected, and most importantly eliminating light trespass. Both options rotate

Luminaire Shown with Integral Louver (IL)



## Luminaire Shown with IMSBT Option



#### 7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).





**!** Have questions? Call us at (800) 436-7800

PERFORMANCE Back to Quick Links

			3(	OOK CCT		4	DOOK CCT		5	000K CCT		
Lumen Package	Distribution CRI	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Wattage	
	2		39770	139	B5-U0-G4	41255	144	B5-U0-G4	42864	150	B5-U0-G4	
	3		40747	142	B5-U0-G4	42269	148	B4-U0-G4	43917	154	B4-U0-G4	
	5W		40392	141	B5-U0-G4	41901	147	B5-U0-G4	43535	152	B5-U0-G4	
40L	FT	70	40342	141	B4-U0-G4	41848	146	B4-U0-G5	43480	152	B4-U0-G5	286
	FTA		40673	142	B4-U0-G4	42192	148	B4-U0-G4	43838	153	B4-U0-G4	
	AM		40823	143	B4-U0-G3	42347	148	B4-U0-G3	43998	154	B4-U0-G3	
	2		49372	132	B5-U0-G4	51216	137	B5-U0-G4	53213	142	B5-U0-G4	
	3		50586	135	B4-U0-G5	52475	140	B4-U0-G5	54521	145	B4-U0-G5	
	5W	1	50145	134	B5-U0-G4	52018	139	B5-U0-G4	54047	144	B5-U0-G4	375
50L	FT	- 70	50082	134	B4-U0-G5	51952	139	B4-U0-G5	53978	144	B4-U0-G5	
	FTA		50493	135	B5-U0-G4	52379	140	B5-U0-G4	54422	145	B5-U0-G4	
	AM		50680	135	B4-U0-G3	52572	140	B4-U0-G3	54622	146	B4-U0-G3	
	2	_	63328	122	B5-U0-G4	65692	127	B5-U0-G5	68255	132	B5-U0-G5	
	3		64884	125	B5-U0-G5	67307	130	B5-U0-G5	69932	135	B5-U0-G5	<u></u> 55
651	5W	70	64320	124	B5-U0-G5	66722	129	B5-U0-G5	69324	134	B5-U0-G5	
65L	FT	70	64239	124	B5-U0-G5	66638	129	B5-U0-G5	69237	134	B5-U0-G5	518
	FTA	1	64766	125	B5-U0-G5	67185	130	B5-U0-G5	69805	135	B5-U0-G5	
	AM	]	65005	125	B4-U0-G3	67432	130	B5-U0-G3	70062	135	B5-U0-G3	
	2		74667	115	B5-U0-G5	77456	120	B5-U0-G5	80476	124	B5-U0-G5	
	3		74667	115	B5-U0-G5	77455	120	B5-U0-G5	80476	124	B5-U0-G5	
78L	5W	70	74018	114	B5-U0-G5	76782	118	B5-U0-G5	79777	123	B5-U0-G5	648
/OL	FT	/0	73925	114	B5-U0-G5	76685	118	B5-U0-G5	79676	123	B5-U0-G5	048
	FTA		74532	115	B5-U0-G5	77315	119	B5-U0-G5	80330	124	B5-U0-G5	
	AM		74805	115	B5-U0-G3	77599	120	B5-U0-G3	80625	124	B5-U0-G3	

<sup>\*</sup>LEDs are frequently updated therefore values are nominal.

DELIVERED LUMENS*							
Luman Daekana	Nistribution	Phosphor Converted Amber (Peak 610mm)					
Lumen Package	Distribution	Delivered Lumens	Efficacy	BUG Rating			
	2	18519	60	B3-U0-G3			
	3	18895	61	B3-U0-G3			
401	5W	18512	60	B5-U0-G3			
40L	FT	19035	62	B2-U0-G2			
	FTA	18366	59	B3-U0-G3			
	AM	18695	61	B3-U0-G3			

Electrical Data (Amps)*								
Lumens	120V	208V	240V	277V	347V	480V		
40L	2.38	1.38	1.19	1.03	0.82	0.60		
50L	3.13	1.80	1.56	1.35	1.08	0.78		
65L	4.32	2.49	2.16	1.87	1.49	1.08		
78L	5.40	3.12	2.70	2.34	1.87	1.35		

<sup>\*</sup>Electrical data at 25°C (77°F). Actual wattage may differ by +/-10%

RECOMMENDED LUMEN MAINTENANCE:							
Ambient	Intial <sup>2</sup>	25h²	50hr²	75hr²	100hr <sup>2</sup>		
0 C - 40C	100%	100%	97%	94%	92%		

<sup>3.</sup> In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.



Type: \_\_\_\_\_

 $<sup>1. \ \</sup> Lumen\ maintenance\ values\ at\ 25C\ are\ calculated\ per\ TM-21\ based\ on\ LM-80\ data\ and\ in-situ\ testing.$ 

<sup>2.</sup> In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.



PHOTOMETRICS Back to Quick Links

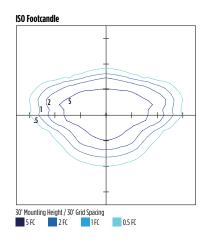
Luminaire photometry has been conducted by an accredited laboratory in accordance with IESNA LM-79. As specified by IESNA LM-79 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

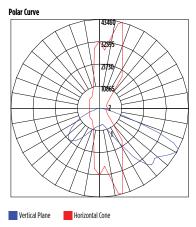
See <a href="https://www.lsicorp.com/product/mirada-large/">https://www.lsicorp.com/product/mirada-large/</a> for detailed photometric data.

#### MRL-LED-65L-SIL-2-40-70CRI

Luminaire Data				
Type 2 Distribution				
Description	4000 Kelvin, 70 CRI			
Delivered Lumens	65,693			
Watts	518			
Efficacy	127			
IES Type	Type II - Short			
BUG Rating	B5-U0-G5			

Zonal Lumen Summary						
Zone Lumens % Luminaire						
Low (0-30°)	10825	16%				
Medium (30-60°)	41026	62%				
High (60-80°)	13243	20%				
Very High (80-90°)	598	1%				
Uplight (90-180°)	0	0%				
Total Flux	65693	100%				

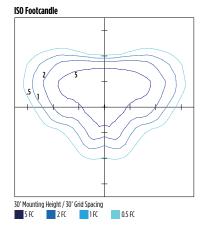


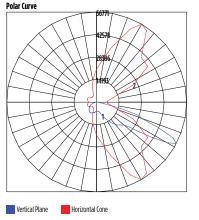


#### MRL-LED-65L-SIL-3-40-70CRI

Luminaire Data	
Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	67,307
Watts	518
Efficacy	130
IES Type	Type III - Short
BUG Rating	B5-U0-G5

Zonal Lumen Summary						
Zone Lumens % Luminaire						
Low (0-30°)	6980	10%				
Medium (30-60°)	37817	56%				
High (60-80°)	21783	32%				
Very High (80-90°)	727	1%				
Uplight (90-180°)	0	0%				
Total Flux	67307	100%				

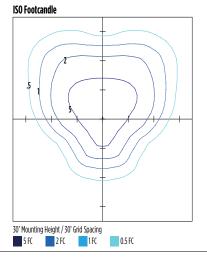


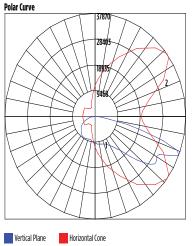


#### MRL-LED-65L-SIL-FT-40-70CRI

Luminaire Data	
Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	66,638
Watts	518
Efficacy	129
IES Type	Type IV - Short
BUG Rating	B5-U0-G5

Zonal Lumen Summary						
Zone Lumens % Luminaire						
Low (0-30°)	8542	13%				
Medium (30-60°)	33055	50%				
High (60-80°)	23973	36%				
Very High (80-90°)	1069	2%				
Uplight (90-180°)	0	0%				
Total Flux	66638	100%				





Type: \_\_\_\_

PHOTOMETRICS (CONT)

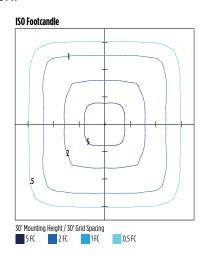
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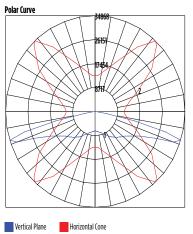
**Back to Quick Links** 

### MRL-LED-65L-SIL-5W-40-70CRI

Luminaire Data	
Type 5W Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	66,722
Watts	518
Efficacy	129
IES Type	Type VS - Short
BUG Rating	B5-U0-G5

Zonal Lumen Summary						
Zone Lumens % Luminair						
Low (0-30°)	6379	10%				
Medium (30-60°)	33102	50%				
High (60-80°)	26808	40%				
Very High (80-90°)	433	1%				
Uplight (90-180°)	0	0%				
Total Flux	66722	100%				

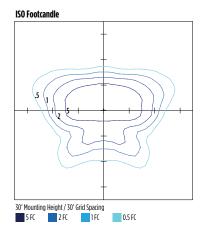


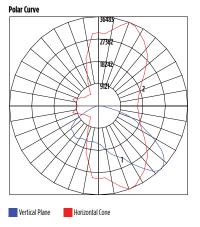


#### MRL-LED-65L-SIL-FTA-40-70CRI

Luminaire Data	
Type FTA Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	67,185
Watts	518
Efficacy	130
IES Type	Type I - Very Short
BUG Rating	B5-U0-G5

Zonal Lumen Summary						
Zone Lumens % Luminaire						
Low (0-30°)	14876	22%				
Medium (30-60°)	39340	59%				
High (60-80°)	12095	18%				
Very High (80-90°)	874	1%				
Uplight (90-180°)	0	0%				
Total Flux	67185	100%				

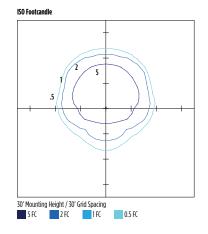


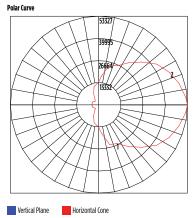


#### MRL-LED-65L-SIL-AM-40-70CRI

Luminaire Data	
Type AM Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	67,432
Watts	518
Efficacy	130
IES Type	Type III - Very Short
BUG Rating	B5-U0-G3

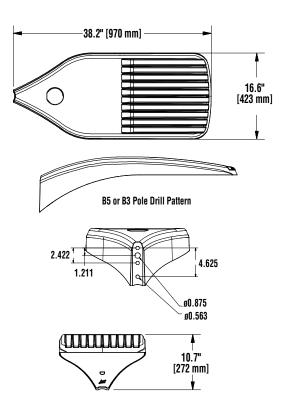
Zonal Lumen Summary						
Zone Lumens % Luminaire						
Low (0-30°)	13837	9%				
Medium (30-60°)	44654	43%				
High (60-80°)	8162	48%				
Very High (80-90°)	779	1%				
Uplight (90-180°)	0	0%				
Total Flux	67432	100%				





PRODUCT DIMENSIONS

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Luminaire EPA Chart					
Tilt Degree 0° 15° 30° 45°					45°
-	Single	0.8	1.5	2.2	2.9
	D180°	1.6	2.3	2.2	2.9
٠	D90°	1.2	2.5	3.0	3.7
.J.,	T90°	2.0	2.3	3.8	4.5
*	TN120°	2.0	3.0	5.0	6.0
	Q90°	2.0	2.3	3.8	4.5

Type: \_\_\_



CONTROLS Back to Quick Links

#### Integral Bluetooth™ Motion and Photocell Sensor (IMSBTxL)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is IP66 rated for cold and wet locations (-40°F to 167°F). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBT







LEVITON App

elaaA

Android

### (ALBMRxLR, ALBCSx)

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more details about AirLink Blue





AirLink Blue App

Annle

#### **Sensor Sequence of Operations**

Standard Programming	On Event	Off Event	On Light Level	Dim Light Level	Daylight Harvesting	Delay To Off	Sensitivity
OMSBTxL/IMSBTxL	Motion	No Motion	100%	N/A	On; Auto Calibration	20 minutes	High
OMS	Motion	No Motion	N/A	N/A	N/A	30 seconds	Auto

Operation	Description				
On Event	Trigger that activates lights to turn on; either automatic via motion detected or manually activated via push of button.				
Off Event	Trigger that activates lights to turn off; either automatic via no motion detected or manually activated via push of button.				
On Light Level	The light level that the fixtures will turn on to when ON EVENT occurs.				
Dim Light Level	The light level that the fixtures will dim down to when no motion is detected.				
Delay to Dim	The amount of time after which no motion is detected that the fixtures will be triggered to dim down. This sequence is optional, and sensor can be programmed to only trigger the fixture to turn off by entering 100% in this field.				
Delay to Off	The amount of time after which no motion is detected that the fixtures will be triggered to turn off. If delay to dim is part of the programmed functionality, this is the amount of time after which no motion is detected after the fixture have already dimmed down.				
Sensitivity	The sensitivity can be set to high, medium, low, or auto where applicable. High will detect smaller, simple motions. Low will only detect larger more complex motions. Auto temperate calibration adjusts the PIR sensitivity as ambient temperature rises to increase detection of heat movement through the field of view.				

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