

## FEATURES & SPECIFICATIONS

**INTENDED USE** — Ideal one-for-one replacement of conventional HID and fluorescent high bay systems. Applications include warehousing, manufacturing, gymnasiums, and other large indoor spaces with mounting heights up to 60'. **Certain airborne contaminants can diminish integrity of acrylic.** [Click here for Acrylic Environmental Compatibility table for suitable uses.](#)

**CONSTRUCTION** — Lightweight aluminum heat sink designed to perform in ambient temperatures up to 55 °C with lumen droop less than fluorescent due to precision thermal engineering for maximum naturally convective cooling. Structural elements such as the channel and end caps are fabricated from steel for maximum rigidity. Hard-tooled reflectors, utilizing reflective Alanod® MIRO-5® aluminum, for precise and repeatable photometry. Semi-diffuse lens optional to provide glare control – may be inverted for gloss or matte side down. Wireguard attachment points provided.

**OPTICS** — Narrow and wide distributions available to meet both horizontal and vertical light level requirements. Reflectors feature precision-formed optics utilizing reflective Alanod® MIRO-5® aluminum to achieve narrow distribution and white polyester powder coat to achieve wide distribution. Semi-diffuse lens optional to provide glare control and LED protection.

**ELECTRICAL** — L95 at 60,000 hours (only 5% loss) with a predicted life of more than 100,000 hours. Utilizes a 90°C case temperature driver for maximum life at high temperatures. 0.90 power factor and 10KA/10kV level of surge protection is standard. Available as 120-277V or 347-480V input.

0-10V dimming standard for a dimming range of 100% to 10%; dimming source current is 150 microA.

**WIRELESS NETWORKING** — XPoint™ Wireless technology creates a mesh network to ensure communication between fixtures, sensors and wall stations facility-wide. This option provides superior lighting management capabilities including granular control, configuration and custom grouping for increased energy savings.

**INSTALLATION** — Suitable for suspension by chain, cable, surface-mounting bracket, hook monopoint or single (pendant) monopoint. Surface mounting not recommended without optional surface mounting bracket. To maintain high ambient listing, fixture should be mounted at a minimum plenum height of 24".

**LISTINGS** — CSA certified to US and Canadian safety standards. Damp location listed. Suitable for ambient temperatures from -40°F (-40°C) to 131°F (55°C) when suspended 24" from ceiling. Patent pending. DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.

**WARRANTY** — 5-year limited warranty. Complete warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



LED High Bay

IBL

Patent Pending



Unlensed (standard)  
9-24L pictured



Lensed (optional)  
36-48L pictured



### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: IBL 18L WD LP740 DLC

IBL Series	Lumens		Distribution		Lens		Voltage		Color temperature			
IBL	9L	9,000 lumens	24L	24,000 lumens	WD	Wide	(blank)	No shielding	(blank)	MVOLT; 120-277V	LP735	70 CRI, 3500K CCT
	12L	12,000 lumens	36L	36,000 lumens <sup>1</sup>	ND	Narrow	SD125	Semi-diffuse acrylic	HVOLT	347V-480V	LP740 DLC	70 CRI, 4000K CCT
	18L	18,000 lumens	48L	48,000 lumens <sup>1</sup>					120	120V	LP750 DLC	70 CRI, 5000K CCT
								277	277V	LP835	80 CRI, 3500K CCT	
										LP840	80 CRI, 4000K CCT	
										LP850	80 CRI, 5000K CCT	
Options											Finish	
GLR	Internal fast-blow fuse <sup>2,3</sup>		<u>Cord sets:</u> <sup>9</sup>		<u>Controls:</u>						(blank)	Gloss white with textured dark gray accents
OUTCTR	Wiring leads pulled through back center of fixture		CS1W	Straight plug, 120V <sup>10</sup>	LCOZU	Aisle motion sensor, pre-wired <sup>2,11,12</sup>					DWH	Gloss white
			CS3W	Twist-lock, 120V <sup>10</sup>	LCHOSZU	Aisle motion sensor, pre-wired; programmable dimming <sup>2,11,12</sup>						
OCS	RELOC® OnePass® 5' installed <sup>2</sup>		CS7W	Straight plug, 277V <sup>10</sup>	LCPZU	Aisle motion sensor with photocell; pre-wired <sup>2,11,12</sup>						
IMP	Integrated modular plug <sup>4,5</sup>		CS11W	Twist-lock, 277V <sup>10</sup>	LAOZU	360° motion sensor, pre-wired <sup>2,11,12</sup>						
			CS25W	Twist-lock, 347V <sup>10</sup>	LAHOSZU	360° motion sensor, pre-wired; programmable dimming <sup>2,11,12</sup>						
RRL	RELOC®-ready luminaire. See page 5 for ordering information <sup>6</sup>		CS97W	Twist-lock, 480V <sup>10</sup>	LAPZU	360° motion sensor with photocell, pre-wired <sup>2,11,12</sup>						
			CS93W	600 SO white cord, no plug (no voltage required)	MSE360	360° motion sensor, embedded, high bay <sup>2,12,13</sup>						
I2412	IOTA emergency LED battery pack for 32°F to 104°F (0°C to 40°C) ambient <sup>2,7</sup>				MSE360LB	360° motion sensor, embedded, low bay <sup>2,12,13</sup>						
					MSI6XADL DSCXADL	360° Xpoint wireless motion sensor with photocell <sup>2,11,12</sup>						
					LAMOSZU	360 motion sensor, dimming and switching photocell, pre-wired (T24 compliant) <sup>2,11,12</sup>						
					LAMOSZU	Aisle motion sensor, dimming and switching photocell, pre-wired (T24 compliant) <sup>2,11,12</sup>						
					nPP16D	nLight® switching/dimming module <sup>2,12,14</sup>						
					nMSI	nLight®, aisle motion sensor, pre-wired <sup>2,12,15</sup>						
					nMSI360	nLight®, 360° motion sensor, pre-wired <sup>2,12,16</sup>						
					nMSID	nLight®, aisle motion sensor w/dimming, pre-wired <sup>2,12,17</sup>						
					nMSI360D	nLight®, 360° motion sensor w/dimming, pre-wired <sup>2,11,18</sup>						
WGX	Standard wire guard, installed <sup>8</sup>				XPW	XPoint™ wireless 0-10V relay <sup>2,19</sup>						

See footnotes on page 2.

# IBL LED High Bay

**Accessories:** Order as separate catalog number.

**Mounting:**

IBAC120 M20	Aircraft cable 10' with hook (one pair)
IBAC240 M20	Aircraft cable 20' with hook (one pair)
IBHMP	Hook monopoint
ZACVH	Aircraft 10' V hanger (one pair) <sup>20</sup>
IBLPMP	Pendant monopoint splice box, includes side covers for use with 9L-24L
IBLPMPHB	Pendant monopoint splice box, includes side covers (3/4" hub) for use with 9L-24L
IBLPMP48	Pendant monopoint splice box, includes side covers for use with 36L and 48L
IBLPMPHB48	Pendant monopoint splice box, includes side covers (3/4" hub) for use with 36L and 48L
HC36	Hanger chain, 36" (one pair) <sup>20</sup>
THUN	Tong hanger bracket (order 2 per fixture) <sup>20,21</sup>

**Cord sets and sensors for IMP option:**

CS1WIMP	Straight plug, 120V <sup>8,9,22</sup>
CS3WIMP	Twist-lock, 120V <sup>8,9,22</sup>
CS7WIMP	Straight plug, 277V <sup>8,9,22</sup>
CS11WIMP	Twist-lock, 277V <sup>8,9,22</sup>
CS25WIMP	Twist-lock 347V <sup>8,9,22</sup>
CS93WIMP	600V 50 white cord, no plug (no voltage required) <sup>8,22</sup>
CS97WIMP	Twist-lock 480V <sup>8,9,22</sup>
MSIIMP	Aisle sensor <sup>5,22</sup>
MSI360IMP	360° sensor <sup>5,22</sup>

**Field-installable door and lens assemblies:**

DLIBL SD125	Semi-diffuse acrylic lens for use 9L - 24L
DLIBL48 SD125	Semi-diffuse acrylic lens for use with 36L and 48L

**Wire guards:**

WGIBL	Wire guard for use with 9L - 24L <sup>8</sup>
WGIBL48	Wire guard for use with 36L and 48L <sup>8</sup>

**Notes**

- Fixtures more than 24" wide can interfere with the operation of some fire sprinkler systems. Verify specific installation requirements with local fire official and insurance carrier. Emergency battery packs are not available with 36L or 48L.
- Specify voltage.
- Not available with 347 voltage.
- Must be factory-installed.
- Must have "IMP" power cord to power fixture.
- Requires Reloc RRL compatible cable to power fixture.
- Must specify voltage. 120V or 277V only. Not available with cordset w/plug or OUTCTR option. Not available with 36L or 48L lumen packages.
- SD125 lens option recommended when wire guard is used.
- All cord sets are 18/3, 6', white.
- Cord sets are voltage specific. Specify voltage. Other configurations available. Consult factory.
- Other configurations available, see page four for additional options.
- Sensors are rated for 14°F(-10°C) to 122°F(50°C) operation.
- Not available with battery pack. Not field installable.
- Available 120 or 277V only.
- nMSI option utilizes a nPP16 and a nCMB 50, CAT5e cable also included. Available 120 or 277V only.
- nMSI360 option utilizes a nPP16 and a nCMB 6, CAT5e cable also included. Available 120 or 277V only.
- nMSID option utilizes a nPP16D and a nCMB 50, CAT5e cable also included. Available 120 or 277V only.
- nMSI360D option utilizes a nPP16D and a nCMB 6, CAT5e cable also included. Available 120 or 277V only.
- XPW option utilizes XPA CMRBO.
- Not for use with 36L or 48L.
- 95°F (35°C) maximum ambient temperature when using the THUN.
- Must have IMP option on fixture.



9L, 18L, and 36L lumen packages

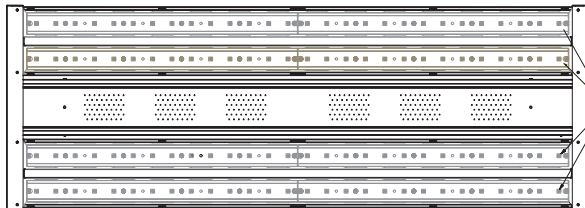


12L, 24L, and 48L lumen packages

To create the 9L, 18L, and 36L lumen packages, the PCBA (LED board) is depopulated from the endcaps inward. The first LED is 5-1/2" from the end cap on those units, compared to 1-1/8" on the 12L, 24L, and 48L product.

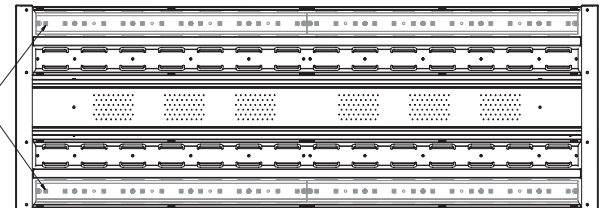
## DIMENSIONS

Dimensions may vary with options or accessories.



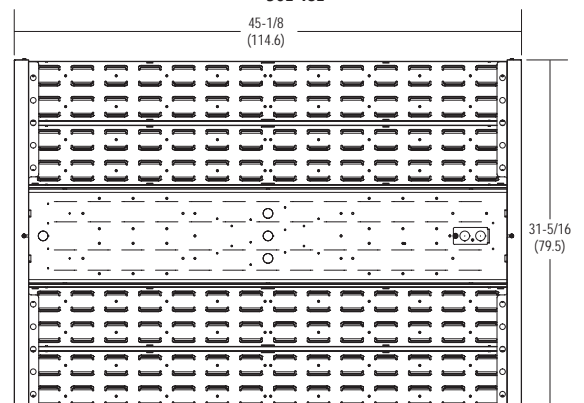
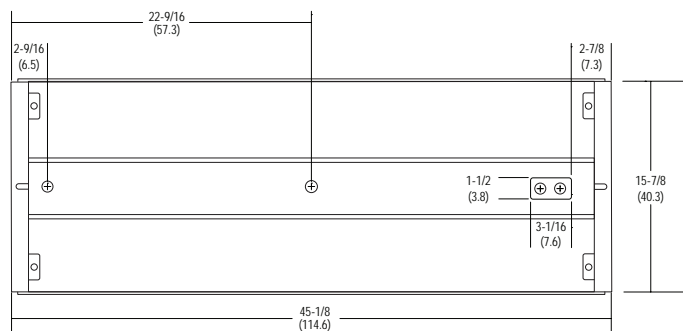
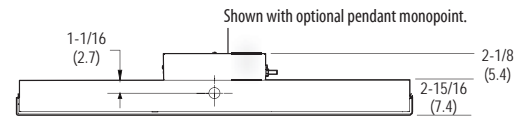
12L & 9L HAS 2 ROWS OF LEDES

36L AND 48L (NOT SHOWN) HAVE 8 ROWS OF LEDES



18L, and 24L utilize two drivers wired inboard/outboard  
36L and 48L (not shown) utilize four drivers wired inboard/outboard

9L and 12L utilize one driver



## OPERATIONAL DATA

Lumen package	Ambient rating (120V - 277V)	Ambient rating (347V / 480V)	Distribution	Delivered lumens 5000K CCT @ 77°F (25°C) ambient temperature	Delivered lumens 4000K CCT @ 77°F (25°C) ambient temperature	Lumen multiplier @ 104°F (40°C) ambient temperature	Lumen multiplier @ 104°F (40°C) ambient w/ SD125 lens kit
9L	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F (-40°C to 40°C)	WD	10,308	10,263	0.98	0.846
			ND	10,070	10,027	0.98	0.924
12L	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F (-40°C to 40°C)	WD	12,906	12,850	0.98	0.846
			ND	12,609	12,554	0.98	0.924
18L	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F (-40°C to 40°C)	WD	20,355	20,267	0.98	0.846
			ND	19,886	19,800	0.98	0.924
24L	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F (-40°C to 40°C)	WD	25,328	25,218	0.98	0.846
			ND	24,744	24,637	0.98	0.924
36L	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F (-40°C to 40°C)	WD	40,368	40,193	0.98	0.846
			ND	43,084	42,898	0.98	0.924
48L	-40°F to 131°F (-40°C to 55°C)	-40°F to 104°F (-40°C to 40°C)	WD	50,134	49,916	0.98	0.846
			ND	53,508	53,276	0.98	0.924

## CHARACTERISTICS

Lumen package	Wattage				Length	Width	Depth	Weight without Lens (Lens kit adds approx. 7 lbs.)	Comparable light source
	120V	277V	347V	480V					
					Dimensions are shown in inches (centimeters) unless otherwise noted.				
9L	100	95	98	97	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	12.5 lbs. (5.7 kg)	2-lamp T5HO
12L	125	122	126	125	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	12.5 lbs. (5.7 kg)	4-lamp T8, 250W HID
18L	197	192	198	197	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	17.5 lbs. (7.9 kg)	4-lamp T5HO, 6-lamp T8, 400W HID
24L	245	241	248	246	45 (114.3)	15-3/4 (40.0)	3-1/4 (8.3)	17.5 lbs. (7.9 kg)	6-lamp T5HO, 8-lamp T8
36L	394	388	400	396	45 (114.3)	31-1/3 (79.5)	3-1/4 (8.3)	35 lbs. (15.9 kg)	8-lamp T5HO, 750 HID
48L	489	471	485	480	45 (114.3)	31-1/3 (79.5)	3-1/4 (8.3)	35 lbs. (15.9 kg)	10-lamp T5HO, 1000W HID

## PROJECTED LUMEN MAINTENANCE

Operating hours	0	10,000	20,000	25,000	35,000	50,000	60,000	75,000	100,000
Lumen maintenance factor	1	0.98	0.98	0.97	0.96	0.96	0.95	0.94	0.93

## LUMENS VS. AMBIENT TEMPERATURE

Ambient °C	Ambient °F	Lumen multiplier
0	32	1.02
5	41	1.015
10	50	1.01
15	59	1.008
20	68	1.005
25	77	1
30	86	0.995
35	95	0.985
40	104	0.98
45	113	0.97
50	122	0.965
55	131	0.96

## PHOTOMETRICS

See [www.lithonia.com](http://www.lithonia.com).

## LSXR - Fixture Mount Sensor (see [www.sensorswitch.com](http://www.sensorswitch.com) for additional information)

- Four interchangeable lenses.
- Integrated mounting bracket drops lens down 3" from chase nipple.
- Single or dual relay versions — designed with robust protection from the harsh switching requirements of T5 and LED loads.
- Photocell and 0-10VDC dimming options.
- No PIR field calibration or sensitivity adjustments required.



LSXR configuration	Comparable CMRB sensor	Old style sensor nomenclature
<b>For shortest lead times use one of the following LSXR configurations</b>		
LCOZU	CMRB 50	MSI
LCHOSZU	CMRB 50 D	MSID
LCPZU	CMRB 50 P	MSIPED
LAOZU	CMRB 6	MSI360
LAHOSZU	CMRB 6 D	MSI360D
LAPZU	CMRB 6 P	MSI360PED

## SELECTIONS BELOW WILL EXTEND ORDER LEAD TIME. CONSULT YOUR SALES REPRESENTATIVE FOR DETAILS.

### SINGLE RELAY

#### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** LAHOSZU

Series	Lens option	Dimming/Photocell	Max. dim Level	Min. dim level	Temp/Humidity	Default time delay
L LSXR passive infrared indoor occupancy sensor	A High mount, 360°	O None <sup>1</sup>	0 10 VDC	5 Minimum dimming level of ballast	Z None	I 30 seconds
	B Low mount, 360°	H High/low occupancy operation	9 9VDC	1 1 VDC	T Low temperature	D 2.5 minutes
	C High mount aisleway	P Switching photocell(on/off)	8 8VDC	2 2 VDC		X 5 minutes
		M Dimming and switching photocell	7 7VDC	3 3 VDC		R 7.5 minutes
	G Dimming and switching photocell with high/low occupancy operation			4 4 VDC		U 10 minutes (with minimum 15 minutes on time)
				5 5 VDC		V 15 minutes
				6 6 VDC		W 20 minutes
					Y 30 minutes	

### DUAL RELAY (Available with 120, 277, and 347V only)

#### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example:** LA2KZU

Series	Lens option	Poles	Operating mode	Temp/Humidity	Default time delay
L LSXR passive infrared indoor occupancy sensor	A High mount, 360°	2 Dual relay	J None	Z None	I 30 seconds
	B Low mount, 360°		K Alternating off relays (promotes even lamp wear)	T Low temperature	D 2.5 minutes
	C High mount aisleway		O Alternating off relays w/photocell		X 5 minutes
			P Switching photocell(on/off)		R 7.5 minutes
	E Photocell on/off (pole 1 only)			U 10 minutes (with minimum 15 minutes on time)	
	F Photocell on/off - both poles (dual set-point)			V 15 minutes	
				W 20 minutes	
		Y 30 minutes			

#### Example: LENS 50 J100

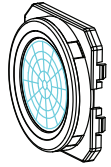
Replacement lenses: Order as separate catalog number.		
Series	Lens type	Package quantity
Lens	6 High mount 360°	U Unit
	10 Low mount 360°	J10 10-pack
	50 High mount aisleway	J100 100-pack

#### Notes

- 1 Dimming level fields not required when this option is chosen.

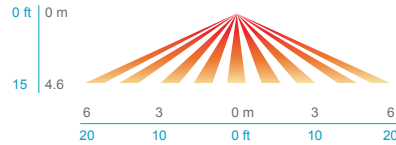
## LSXR COVERAGE PATTERNS

### HIGH MOUNT 360° LENS (#6)

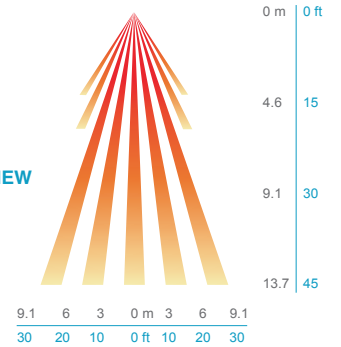


- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g. walking) up to a 35 ft (10.76 m) mounting height
- Excellent detection of extra large motion (e.g. forklifts) up to a 45 ft (13.72 m) mounting height

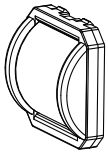
LOW VIEW



HIGH VIEW

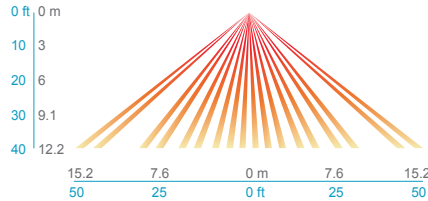


### HIGH MOUNT AISLEWAY LENS (#50)

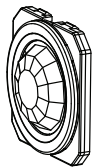


- Provides a bi-directional coverage pattern ideal for warehouse racking
- 1.2x mounting height equals approximate detection range in either direction
- Typical 40 ft (12.19 m) mounting detects 50 ft (15.24 m) in either direction
- Superior aisleway coverage compared to a masked 360° lens

SIDE VIEW

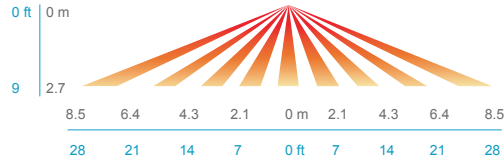


### LOW MOUNT 360° LENS (#10)

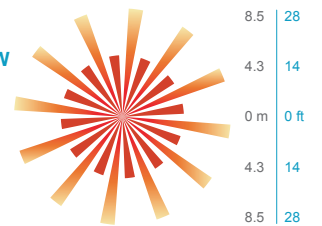


- Best choice for large motion detection (e.g. walking)
- 360° conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft<sup>2</sup>) when mounted at 9 ft (2.74 m)
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Detection range improves when walking across beams compared to into beams

SIDE VIEW



TOP VIEW



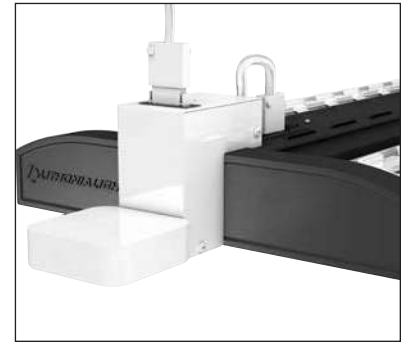
# IBL LED High Bay

## IMP - Integrated Modular Plug

- The integrated modular plug (IMP) option allows the installer to plug and play a multitude of accessories.
- Cord sets connect quickly to any fixture with IMP option.
- IMP accessories include occupancy sensors, photocells, X-point relays.

IMP compatible sensors <sup>1</sup>	
CS1WIMP	Straight plug, 120V
CS3WIMP	Twist-lock, 120V
CS7WIMP	Straight plug, 277V
CS11WIMP	Twist-lock, 277V
CS25WIMP	Twist-lock, 347V
CS93WIMP	600V SE00W white cord, no plug
CS97WIMP	Twist-lock, 480V

IMP compatible sensors	
MSIIMP	Aisle sensor
MSI360IMP	360° sensor



### Notes

- 1 Cord set required for fixture operation. All cord sets are 18/3, 6' white..

## RRL - RELOC®-Ready Luminaire

- RRL connectors can be used with Quick-Flex®, System 820 and OnePass® systems.
- Load side of connector factory installed to luminaire.
- 4-pole mating connector with push-in terminations allows for simple installation.
- Touch-safe design on both halves meets UL/CSA requirement.
- Wiping contact design allows safe disconnect under load.



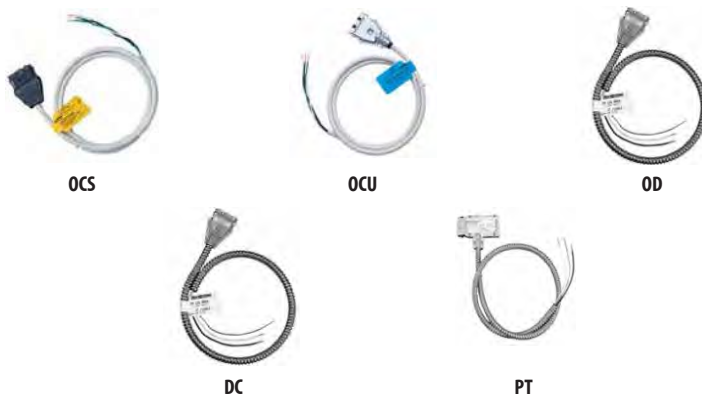
### ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

**Example: RRLA**

Series	Wiring instructions			
RRL RELOC®-ready luminaire	A	Hot conductor wired to position #1 (phase A)	AE	Hot conductor wired to position #1 (phase A), hot conductor #2 wired to position #2 (phase B) <sup>2</sup>
	B	Hot conductor wired to position #2 (phase B)	ABE	Hot conductor wired to position #1 (phase A), hot conductor #2 wired to position #2 (phase B), inverter conductor wired to position #3 (phase C) <sup>1,2</sup>
	C	Hot conductor wired to position #3 (phase C) <sup>1</sup>	C12S	Hot conductor in position #1 (phase A), low voltage conductor #1 in position #2, low voltage conductor #2 in position #3 <sup>1,3</sup>
	AB	Outboard hot conductor wired to position #1 (phase A), inboard hot conductor wired to position #2 (phase B)		

## Compatible RELOC® Cables for Industrial Luminaires (shipped and ordered separately)

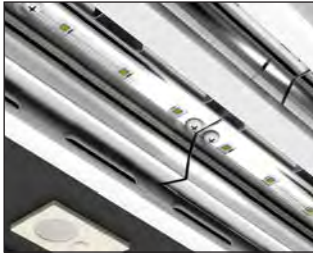


### Notes

- 1 C, ABE, and C12S options are not used with Quick-Flex QFC, QSFC, QPT, and QD.
- 2 AE and ABE commercial fixtures should disconnect the TSPL before unplugging the RRL so it does not go into discharge mode.
- 3 C12S option is used with the OnePass OD and 820 SSC, PT, and DC for 0-10V/DALI applications.

## OPTIONS AND ACCESSORIES

The I-BEAM LED fixture offers numerous options for almost every electrical and optical component, including a long list of field-installable accessories.



### REFLECTORS

Wide distribution is formed with 93% reflective white paint. Narrow distribution is formed with Alanod® MIRO®.



### INTEGRATED ELECTRICAL OPTIONS

Channel sized to accept emergency components, surge protector, fusing and embedded sensors.

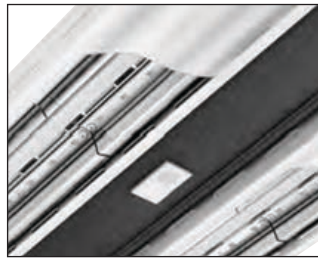


### WIRE GUARD (external)

Field- or factory-installed. Protects light engine from impact. Mounting hardware included.

Factory-installed option:  
WGX

Field-installed options:  
WGIBL  
WGIBL48



### DIFFUSER

Field- or factory-installed. Available in semi-diffuse acrylic. Mounting hardware included.

Factory-installed option:  
SD125

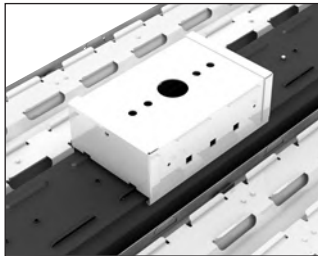
Field-installed option:  
DLIBL SD125  
DLIBL48 SD125



### EMBEDDED OCCUPANCY SENSOR

Factory installed Sensor Switch® SFR30 (MSE360) or SFR7 (MSE360LB) placed in the channel cover which reduces the risk of sensor damage compared to non-embedded sensors. Recommended mounting height for MSE360 is over 15' and MSE360LB under 15'.

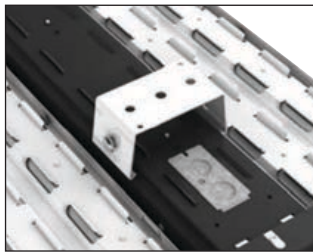
Factory-installed option:  
MSE360  
MSE360LB



### PENDANT MONOPOINT BRACKET

Accepts 3/4" rigid conduit for single-point mounting. The bracket can be adjusted to help counterbalance fixture to offset weight variance from end to end.

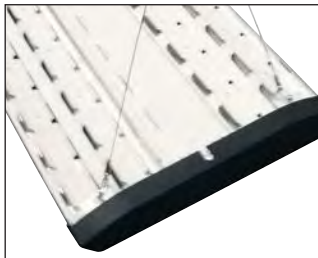
Order as:  
IBLPMP  
IBLPMPHB  
IBLPMP48  
IBLPMPHB48



### SURFACE MOUNT BRACKET

Rigidly attach I-BEAM LED to a hard ceiling. Can be placed anywhere along fixture.

Order as:  
THUN (not for use in ambient temperatures exceeding 95°F (35°C), or on the 36L or 48L)



### HANGERS

Several lengths of aircraft cables and chains available; with or without V-hooks.

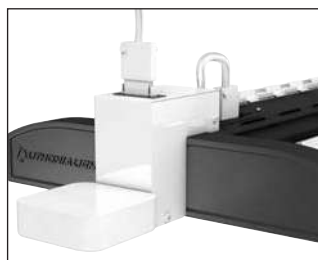
Order as:  
IBAC120 M20  
IBHMP  
For others, see accessories on page 1.



### CORD SETS

Available in several lengths with or without molded plug. White is standard.

For available options, see ordering information on page 1.



### INTEGRATED MODULAR PLUG (IMP)

Must be factory-installed and allows for field installation of various modular accessories including cordsets, motion sensors, photocells and LC&D X-point™ relays. Fixture must be ordered with IMP option. Requires IMP power cord to operate fixtures.