Project:		Catalog #:		Type:	
Preparer:		Notes:		Date:	

ETI SOLID STATE® LIGHTING INC.

HBL Series

EZ Install Integral OC Sensor Linear High Bay
18,529 Lumens | 175-400W HID Equivalent

Project Applications
Retrofit, New Construction, Commercial, Industrial, Warehouse, Manufacturing, Big Box Retail, General Open Spaces

*surface, chain & pendant mount kit included
(1/2" conduit or 7mm threaded pipe by others)

DLC QPL LISTED PREMIUM | c ETL us LISTED Intertek | FC | RoHS Compliant | DAMP LOCATION | 5 YEAR WARRANTY

PRODUCT OVERVIEW

ETi SSL's HBL EZ Install Integral OC Sensor Linear High Bay Series with its shallow low-profile, center driver access design and excellent performance (18,529 lumens @ 134.2 LPW) makes for a great design solution for many new construction or retrofit commercial and industrial applications. Each fixture includes mounting hardware for direct surface mount, chain suspension mount and pendant mount (pendant stem by others) for maximum installation flexibility. Our products are engineered using the latest innovative LED technologies to provide the perfect mix of modern design, performance, world class quality and reliability. All at a superior value to the designer, specifier, contractor and end-user.

The HBL series combines an array of LEDs with a diffuse optical lens system that delivers a universal light distribution optimized for most general open space applications. At the same time, the frosted diffusing lens significantly reduces direct view visual glare, brightness and LED pixelation for superior visual comfort within the space without sacrificing performance. Optional tandem mount bracket allows you to quickly and easily connect two fixtures together to double the lumen output to 37,058 lumens.

ETi's innovation design teams specially engineered the center driver housing and thermal management to help maximize the total system life of the HBL series of luminaires. An internal microwave OC sensor is included to allow for maximum energy savings, code compliance and can help qualify for maximum energy rebates. Help save time and installation costs vs. field installed external sensors. We take great pride in our world class manufacturing and overall dedication to product reliability and quality that you can depend on. Even in demanding high ambient applications thanks to a standard 50° C (122° F) high ambient temperature rating.

In-stock base HBL with integral OC sensor SKU typically ships in 2-3 days.

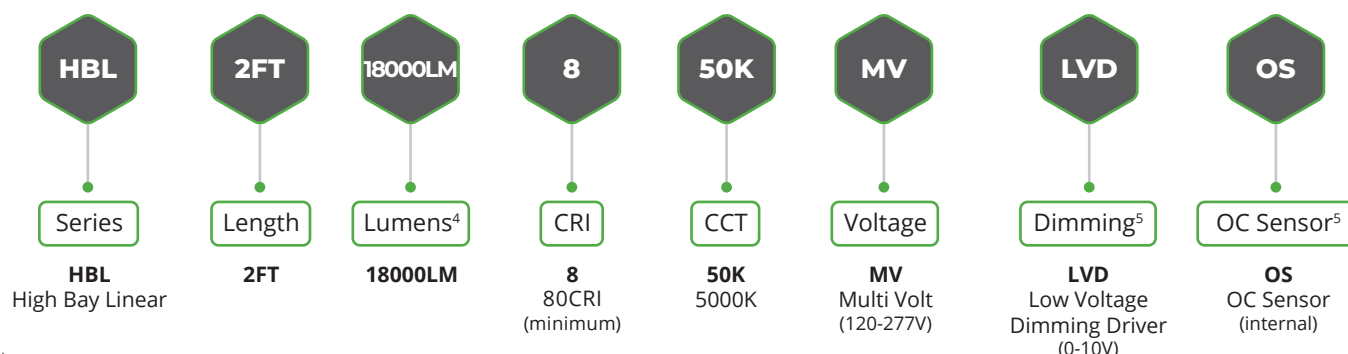## KEY PRODUCT FEATURES, DETAILS & SPECS

- DLC Premium qualified with controls for maximum energy savings & rebates
- Integral microwave OC sensor for maximum energy savings & code compliance
- 138W @ 18,529 LM (134 LPW), 60+% in energy savings vs. HID, T5 & T8 luminaires
- 80+ CRI standard for true accurate color rendering & visual performance
- Formed steel housing w/ frosted diffuse lens for reduced glare & visual comfort
- Center driver housing for max thermal protection & ease of installation
- 120-277V drivers (compatible w/ included integral step dimming OC sensor)
- Standard 50° C (122° F) high ambient temperature rating is standard

- Robust 4kV LED driver surge protection is standard for added protection
- Reported L91/54,000, Projected L70 @ 202,100 hours (min shown per IES TM21)
- Low-profile (2.1") & light weight design (6.1 lbs) = quick & easy installation
- Includes 28" chain mount hardware for easy suspension mount installation
- Surface mount & pendant mount hardware also included = added flexibility
- Optional tandem mount bracket quickly & easily links two fixtures together
- EM battery backup options for safety & code compliance (CA Title 20 MAEDBS)
- Ideal for commercial & industrial applications (retrofit, remodel, new construction)

STOCK ORDERING INFORMATION (typical 2-3 day shipment lead time) [1,2,3,4]

Catalog Logic/PT#	Model #	UPC	Size	Lumens	Wattage	LPW	CCT	CRI	Voltage	Dimming[3]	DLC[4]
HBL-2FT-18000LM-80-50K-MV-LVD-OS	50242162	849489066004	2'	18,529	138.1	134.2	5000K	80 (min)	120-277	0-10V	Premium

Notes:
1. See next page for additional available rapid ship product configurations and stock accessories.
2. Stock SKUs typically ship in 24-48 hours upon receipt of an approved released order.
3. The standard 0-10V dimming driver is pre-wired to the integral step dimming occupancy sensor (no other 0-10V control connection required).
4. Search first 6-digits of the model # followed by '##' on the DLC QPL...Ex. '502421##') to view DLC qualified SKUs.

CATALOG LOGIC | PART # DECODER[1,2,3,4,5]

Example SKU: HBL-2FT-18000LM-8-50K-MV-LVD-OS
(Model # 50242162)

HBL	**2FT**	**18000LM**	**8**	**50K**	**MV**	**LVD**	**OS**
Series	Length	Lumens[4]	CRI	CCT	Voltage	Dimming[5]	OC Sensor[5]
HBL High Bay Linear	**2FT**	**18000LM**	**8** 80CRI (minimum)	**50K** 5000K	**MV** Multi Volt (120-277V)	**LVD** Low Voltage Dimming Driver (0-10V)	**OS** OC Sensor (internal)

Notes:
1. This product is not configurable, only designated 'Stock' SKUs are available.
2. Decoder is to help clarify Catalog Logic|Part # configurations only (see Stock Ordering Information for available SKUs).
3. Additional configurations may be available for special order (contact factory for details, extended lead times may apply).
4. Lumen values shown are nominal (see Stock Ordering Information or Photometric Details sections for additional performance details).
5. The standard 0-10V dimming driver is pre-wired to the integral step dimming occupancy sensor (no other 0-10V control connection required).

AVAILABLE STOCK ACCESSORIES (must be ordered separately)

95024016102   95457326101

Occupancy Sensor Remote Programmer[1,2]

Catalog Logic/PT#	Model #	Description
HD03R	70206101	OC sensor handheld remote programmer

Notes:
1. Factory OC sensor settings can be changed w/ (70206101) handheld remote programmer accessory.
2. Max handheld remote programmer operating distance of 59' (18m).
   (see Instruction Manual for settings & details)

Additional Mounting Accessories[1,2] (field installed)

Model #	Description
95024016102	Tandem fixture mounting bracket (connect (2) HBL's together)
95457326101	Set of (2) 10' long air craft cables

Notes:
1. All additional mounting accessories requires field installation.
2. Each fixture includes surface mount bracket, chain suspension mount &pendant mount hardware (1/2" conduit or 7mm threaded pipe pendant stem by others).

Emergency LED Driver/BBU[1,2] (BBU field installed w/ OC sensor or dimming)

Catalog Logic/PT#		Model #	Description
EMA40FY-170[3]	(G3)	70114402-2	Square, 40W, IP rated, 90 minutes
EMUFO-40170-YY[3]	(G3)	70114401-2	Round, 40W, IP rated, 90 minutes
EM-R-TEST-REMOTE[4]		70203101	Round BBU handheld test remote

Notes:
1. BBUs are certified in CA Title 20 MAEDBS. (search by standalone BBU catalog logic/PT#, Ex. 'EMA40FY-170')
2. Multiply the LPW of specified SKU by BBU wattage for the approximate delivered lumens. (Ex. 134 LPW x 40-watts = approximately 5,360 lumens)
3. Round BBU's are ideal for pendant/suspension installations & Square BBU's are ideal for surface and on-fixture installations.
4. BBU handheld test remote compatible w/ Round BBU only (70114401-2) & max handheld test remote operating distance of 98' (29.9m).
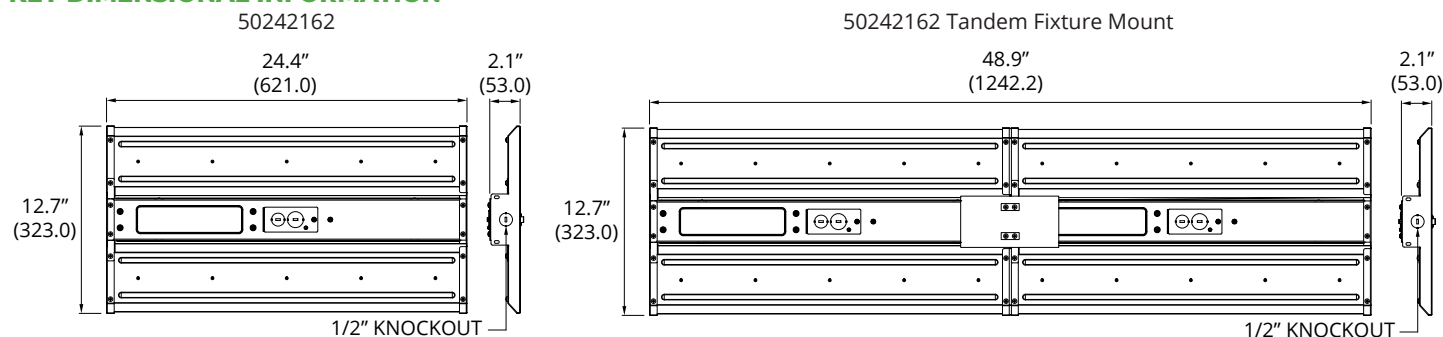
KEY DIMENSIONAL INFORMATION

50242162

24.4" (621.0)   2.1" (53.0)   12.7" (323.0)   1/2" KNOCKOUT

50242162 Tandem Fixture Mount

48.9" (1242.2)   2.1" (53.0)   12.7" (323.0)   1/2" KNOCKOUT

ETi Solid State Lighting
720 Northgate Parkway, Wheeling, IL 60090 | TEL: 1.855.384.7754
E-mail: etiorders@ETiSSL.com | www.ETiSSL.com.com

All specifications are subject to change without notice.
All reported values are nominal or typical values, measured under laboratory conditions @ 25° C (77° F).
Actual performance can vary slightly as a result of end-user application & environment.

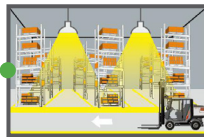ESS1007A | March 1st, 2021 | Page 2 of 4

HBL Series
EZ Install Integral OC Sensor Linear High Bay
18,529 Lumens | 175-400W HID Equivalent | DLC Premium | 5-yr Warranty

OCCUPANCY SENSOR FACTORY SETTINGS DETAILS

100%

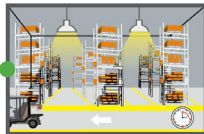### Occupancy Light Level - 'High Light Level'

When 'Occupancy' is detected, the fixture will remain or switch on at the set dimming level or 'High Light Level'.

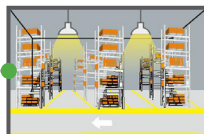**5 min**

Hold Time - 'Zero Occupancy Time'

Time required with zero occupancy before dimming to the 'Low Light Level' mode or switching to an 'off state'. If set to ∞, the OC sensor functionality will be disabled.

30%

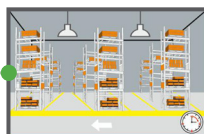### Standby Dim Level - 'Low Light Level'

After 'Hold Time' elapses with zero occupancy detected the fixture will dim to the 'Low Light Level' or standby dim level.

5 min

Standby Period - 'Time to OFF State'

Time required after 'Hold Time' elapses before the fixture will switch to an 'off state' with zero occupancy detected.

If set to 0 seconds, fixture will switch to an 'off state' after 'Hold Time' elapses. If set to ∞, the fixture will stay in the 'Low Light Level' mode until occupancy is detected.

Additional Factory Sensor Settings[1,2,3]

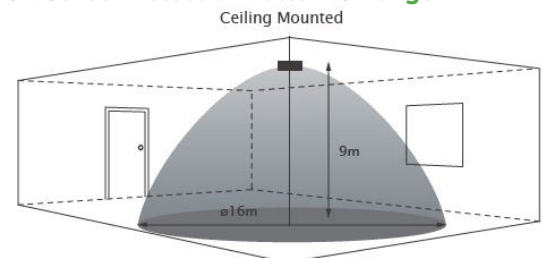| Function	Factory Settings
Detection Area	**75%** (detection angle approx. 83°-90°)
Daylight Sensor	**Disabled**

Notes:
1. Settings can be changed using the (70206101) remote programmer. (Max handheld remote programmer operating distance of 59' (18m))
2. See Instruction Manual for operation and additional setting details.
3. Max sensor height of 52.5' (16m)

Notes:
1. Hold Time & Standby Time can be manually adjusted using dip switches located on the driver door. (switches can easily move during shipping & install, check as needed) (handheld remote required to change all other factory settings)

75% Sensor Detection Pattern & Range

Notes:
1. Factory detection angle set to approximately 83° - 90° (max of 120°)

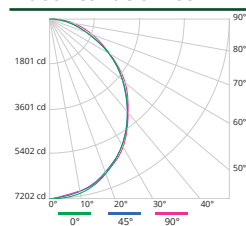## PHOTOMETRIC DETAILS

HBL-2FT-18000LM-8-50K-MV-LVD-OS

Luminaire Data

IES File Name	**50242162.IES**
CCT & CRI	**5000K, 80CRI minimum**
Initial Delivered Lumens	**18,529**
Wattage	**138.1W**
Efficacy	**134.2**
Beam Angle	**50% = 102° 10% = 159°**
Spacing	**0° = 1.20 90° = 1.24**

Photometric values based on tests performed in compliance with LM-63 & LM-79

Indoor Candela Plot

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	5434	29.3%
0-40	8753	47.2%
0-60	14901	80.4%
0-90	18513	99.9%
0-180	18529	100.0%

Candlepower

Angle	0°	90°
0	7152	7152
5	7105	7134
10	6970	7022
15	6791	6867
20	6505	6592
25	6166	6281
30	5726	5884
35	5254	5455
40	4748	4963
45	4223	4403
50	3677	3861
55	3089	3314
60	2594	2753
65	2078	2206
70	1579	1694
75	1122	1198
80	684	734
85	268	305
90	0.4	1

Coefficients of Utilization

	Effective Floor Cavity Reflectance 20%																
rc	80%				70%				50%			30%			10%		0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	79	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	31	27	25

PRODUCT SPECIFICATIONS

Construction

Low-profile 2.1" high formed steel primary housing with a full-length center driver compartment that is accessed from below via two phillips head screws. Additional removable top wiring access cover plate via a single phillips head screw with a 1/2" and 3/4" knockout for wire entry. Each housing end cap includes a single 1/2" knockout for thru-wire and tandem installation. Specially engineered thermal management helps to promote cooling to help reduce operating temperatures in order to maximize the life of all electrical components. Fixture is designed for use in damp locations.

Optics & LED Platform

LEDs are surface mounted to a metal printed circuit board (MCPCB) and is coupled with a semi-diffuse, frosted, 1mm thick secondary polymer lens. Diffusing lens provides a uniform and soft visual appearance when in direct view with minimal LED pixelation and provides excellent visual comfort. Designed to generate an extremely uniform all-purpose beam distribution. Available in 5000K CCT, with a minimum CRI of 80.

Electrical

UL recognized drivers are rated for 50,000 hours to deliver optimal performance over the extended system life of the luminaire. Universal 120-277V driver with 0-10V dimming capability is pre-wired to the integral step dimming occupancy sensor (no other 0-10V control connection required). Drivers shall have a power factor greater than 0.90 and less than 20% total harmonic distortion. 4kV surge protection is standard. Drivers are rated for FCC part 15 Class B use in commercial applications. 91.0% LED lumen maintenance at 54,000 hours (L91/54,000) per IES TM21. Projected L70 @ 202,100 hours.

Mounting & Installation

Luminaire is designed for easy and flexible suspension mount installation via supplied 28" metal chain, V-clip and S-hook system. A direct surface mount bracket and pendant stem/downrod mount hardware is also included with each fixture (1/2" conduit or 7mm threaded pipe stem/downrod by others, see instruction manual for details). Other aircraft cable or suitable suspension mounting systems can be used as required per application (supplied by others). Optional tandem mounting bracket accessory allows you to connect multiple fixtures for continuous run and thru-wire (up to 3 fixtures total) if needed for added design flexibility (max number of fixtures can be dependent on local electrical codes). Installer must ensure installation compatibility in any application and overall compliance to all applicable local and national building and electrical codes.

Compliance & Certification

All luminaires are cETLus listed and are built for damp location use. Shall be suitable for use in -40° C (-40° F) to 50° C (122° F) high ambient environments. Complies to FCC part 15 Class B. Adheres to LM79, LM80 and TM21 industry standards for performance and lifetime calculations. DesignLights Consortium® (DLC) Premium qualified product. Always refer to DLC website at www.designlights.org/QPL to confirm specific product configurations that are qualified.
(Search first 6-digits of the model # followed by '##' on the DLC QPL...Ex. '502401##' to view DLC qualified products)

Standard Available Control Options

Internal microwave OC sensor included as standard. 'Hold Time' & 'Standby Time' settings can be manually adjusted using dip switches located on the driver door. Additional factory sensor settings can be changed using an optional handheld remote programmer accessory (59' |18m max distance, see instruction manual for details). Standard factory default settings: 100% high, 30% low, hold time @ 5 minutes (no motion detected, dim to low), standby time @ 5 minutes (time after hold time w/ no motion detected fixture turns off), daylight sensor is disabled, factory detection range 75% (detection angle approx. 83°-90°). Max sensor height 52.5' (16m).
(External hold & standby time dip switched can easily move during shipping & handling, installing contractor responsible to confirm proper setting during installation)
(Universal 120-277V driver with 0-10V dimming capability is pre-wired to the integral step dimming occupancy sensor, no other 0-10V control connection required)

Standard Available Emergency BBU Options

Optional remote/external emergency battery backup units are available in approximately 25 or 40-watts for 120-277V use to meet required life-safety requirements (50° C/122° F max ambient). The battery system provides 90-minutes of continuous power to the LED system for code compliance. BBUs are certified in CA Title 20 MAEDBS. Test switch/indicator light is located on the exterior housing of the round BBU housings and via a remote test switch/indicator light for the rectangular BBU housings. Optional handheld test remote available for round BBU SKUs only. Multiply the lumens per watt of the specified SKU by the BBU wattage for the approximate delivered lumens. (Ex. 134 LPW x 40-watts = approximately 5,360 lumens)

Warranty

The HBL series of high bay luminaires ships with ETi SSL's 5-year standard warranty. (Terms & Conditions apply)

Load Information

Power Factor	> 0.90
THD	< 20%
Frequency	50/60 Hz
Sound Rating	< 20 Dba
Low Temp Start	-40° C (-40° F)
Max Temp	50° C (122° F)
Unit Weight	6.1lbs

Lumen Maintenance

Ambient Temperature	TM-21 Lumen Maintenance (54,000 hours)
25° C (77° F)	> 91.03%

Ambient Temperature	TM-21 Theoretical L70 (hours)
25° C (77° F)	202,100

Shipping Information

Size	Unit Weight	Pallet (48"l x 40"w x 51"h)
138W	9.3 lbs	36 units per

PROJECT NOTES

ETi Solid State Lighting
720 Northgate Parkway, Wheeling, IL 60090 | TEL: 1.855.384.7754
E-mail: etiorders@ETiSSL.com | www.ETiSSL.com.com

All specifications are subject to change without notice.
All reported values are nominal or typical values, measured under laboratory conditions @ 25° C (77° F).
Actual performance can vary slightly as a result of end-user application & environment.

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