

ΤМ

LED Linear Highbay

FLHB Series

The







### LED Linear Highbay









#### **TECHNICAL SPECIFICATIONS**

#### COMPLIANCE

#### **UL** Listed

UL 1598, Suitable for Damp Location

#### IESNA LM79 & LM-80 Testing

Paclights LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

#### **DLC Qualification**

Selected models of this product are on the Design Lights Consortium (DLC) Qualified Products List and are eligible for rebates from DLC Member Utilities. To view our DLC qualified products, please consult the DLC Qualified Products List at www.designlights.org/qpl

#### LED CHARACTERISTICS

#### LEDS

Long-life, high-efficacy, surface-mount LEDs

#### Lifespan

100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations

#### **Color Rendering Index**

>82

#### Correlated Color Temperature

4000K and 5000K CCT selectable with a dip switch

#### **Color Uniformity**

PacLights' range of Correlated Color Temperature follows the guidelines of the American National Standard for Specications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017

#### OTHER

#### 5-Year Limited Warranty\*\*

The PacLights 5-year, limited warranty covers light output, driver performance and paint finish.

\*\*PacLights's warranty is subject to all terms and conditions found at paclights.com/warranty

#### PROJECT:

DATE:

TYPE:

PREPARED BY:



#### **KEY FEATURES**

Field-selectable Wattage & Color (CCT) on all models

Compact design for easy deployment

Low glare PMMA lens optimized for visual comfort

Optional Bi-level motion and Networked lighting controls

Emergency backup option

#### CONSTRUCTION

#### IP Rating

IP20 rated

#### Ambient Temperature

Suitable for up to  $50^{\circ}$  C ( $122^{\circ}$  F) ambient temperature when fixture is suspended at least 18'' from ceiling

#### Housing

Durable cold rolled steel housing provides strength and uniformity. Luminaire is pre-painted to enhanced smooth finish.

#### Mounting Methods

Comes standard with v-hook and chains. Accessories available for aircraft cable mounting (up to 120" or 196"), surface mounting, or conduit/pendant mounting.

#### Green Technology

Mercury and UV free, and RoHS compliant.

#### Lens

Frosted, PMMA

#### ELECTRICAL

#### Drivers

Class 2. Input Voltage: 120-277v AC (optional 480v), 50-60 Hz; 0-10V dimming (dimto-off); Power Factor > 0.95; THD < 20%; Surge protected 6kV Common and 4kV Differential Mode.

#### Wattage / Input Voltage / Input Current

Wattage selectable with a dip switch on all models

Models	Wattage	120v	208v	240v	277v	480v (optional)
FLHB/2-15LM	100w	0.93A	0.53A	0.46A	0.40A	0.23A
FLHB/2-17LM	115w	1.06A	0.61A	0.53A	0.46A	0.27A
FLHB/2-20LM	135w	1.25A	0.72A	0.63A	0.54A	0.31A
FLHB/2-23LM	155w	1.44A	0.83A	0.72A	0.62A	0.36A
FLHB/2-28LM	185w	1.71A	0.99A	0.86A	0.74A	0.43A
FLHB/2-30LM	200w	1.85A	1.07A	0.93A	0.80A	0.46A
FLHB/2-34LM	230w	2.13A	1.23A	1.06A	0.92A	0.53A
FLHB/2-40LM	270w	2.50A	1.44A	1.25A	1.08A	0.63A
FLHB/2-50LM	340w	3.15A	1.82A	1.57A	1.36A	0.79A
FLHB/2-60LM	400w	3.70A	2.14A	1.85A	1.60A	0.93A

### ORDERING INFORMATION

### **FLHB**<sup>™</sup> generation 2

FAMILY	MODEL	сст	CONTROL		EMERGENCY BACKUP		MOUNTS		OTHER
FLHB/2	- MODEL -	ССТ —	CONTROL	-	EMERGENCY	– [	MOUNTS	-	OTHER

#### EXAMPLE

FLHB/2-30/28/23LM-8CT FLHB/2-30LM-8CT-MCP-SM-6FTAC-PL7\_15P FLHB/2-60LM-8CT-EM9000-ACS-WG

#### MODEL

					MUST SELECT OINE
CODE	LUMEN PACKAGE	WATTAGE	CODE	LUMEN SELECTABLE	WATT. SELECTABLE
15LM	15,000	100w		20,000	135w
17LM	17,000	115w	20/17/15LM	17,000 15,000	115w 100w
20LM	20,000	135w		30,000	200w
23LM	23,000	155w	30/28/23LM	28,000 23,000	185w 155w
28LM	28,000	185w		40.000	270w
30LM	30,000	200w	40/34LM	34,000	230w
34LM	34,000	230w	60/50LM	60,000	400w
40LM	40,000	270w	OU/ JOLIM	50,000	340w
50LM	50,000	340w			

#### CCT

60LM

ССТ	* MUST SELECT ONE	
CODE	CRI	CCT SELECTABLE
8CT	> 82	4000K/5000K

60,000

400w

#### CONTROL

CODE	TYPE	PARTS SKU	SENSOR	MOUNT	INSTALL
МСР		SE-BC-BRI819PBD	PIR & Daylight Threshold	End mount	FIELD
MCW	Standalone	SE-BC-BRI819BD	Microwave & Daylight Threshold	End mount	FIELD
MCD		SE-BC-BRI819BVAL	Microwave & Daylight Harvesting	End mount	FIELD
WBP	Bluetooth Networked	KEILTON-EFS104	PIR & Daylight	End mount	FIELD

#### EMERGENCY BATTERY BACKUP

\* LEAVE BLANK, or SELECT ONE

\* LEAVE BLANK, or SELECT ONE

CODE	INPUT VOLTAGE	PARTS SKU	WATT	EMERGENCY LUMEN	COMPATIBLE	EMERGENCY RUNTIME	INSTALL
EM4500	120-277v	EMC-30	20	( 500 )	models up to 200w		
EM4500	480v EMC-30-H 30w 4,500 Lt	4,500 Lumen	(up to 30LM)				
EM6000	120-277v	EMC-40	40w	6,000 Lumen	models up to 270w (up to 40LM)	> 90 mins	FACTORY
	480v	EMC-40-H					
FM0000	120-277v	EMC-60	10		All models		
EM9000	480v	EMC-60-H	60w	9,000 Lumen			



#### \* MUST SELECT ONE



#### **ORDERING INFORMATION** continued

MOUNTS		* LEAVE BLANK (v-hook and chair	ns included), or SELECT ONE
CODE	PARTS SKU	ТҮРЕ	INSTALL
ACS	AC-LHB-ACS	Aircraft Cable Kit, adjustable up to 120"	
ACL	AC-LHB-ACL	Aircraft Cable Kit, adjustable up to 196"	FIELD
SM	AC-LHB2-SFM	Surface Mount Kit	FIELD
PM	AC-LHB2-PEM	Pendant/Conduit Mount Kit, 3/4″ NPT	

#### OTHER

#### \* LEAVE BLANK, or SELECT ONE or MORE (connect with "-")

Wire Guard			
CODE	PARTS SKU	COMPATIBLE	INSTALL
	AC-LHB2-WGS	20LM, 17LM, 15LM models	
	AC-LHB2-WGM	30LM, 28LM, 23LM models	
WG	AC-LHB2-WGL	40LM, 34LM models	FIELD
	AC-LHB2-WGX	HB2-WGX 60LM, 50LM models	

#### 480v Input Upgrade

CODE	PARTS SKU	COMPATIBLE	INSTALL
	TK-KTAT-250-480-277-SF	30LM, 28LM, 23LM, 20LM, 17LM, 15LM models	FACTORY
HV	TK-KTAT-375-480-277-SF	40LM, 34LM models	
	(2) TK-KTAT-250-480-277-SF	60LM, 50LM models	

#### Cord

CODE	PARTS SKU	TYPE	COMPATIBLE	INSTALL	
6FTAC	OS-GL-ES-183-SJT-W-72	6' cord, 3-wires (L/N/G)	Standard		
6FTAD	OS-GL-ES-185-SJT-W-72	6' cord, 5-wires (L/N/G and 0-10v dimming)	Models	FACTORY	
6FTACS	OS-GL-ES-184-SJT-W-72	6' cord, 4-wires (L/N/G and Switch)	Emergency Backup		
6FTADS	OS-GL-ES-186-SJT-W-72	6' cord, 6-wires (L/N/G, Switch and 0-10v dimming)	Models		

#### Plug

CODE	PARTS SKU	TYPE	Voltage	COMPAT	IBLE	INSTALL
P5_15P	PLUG-5-15P	5-15P Plug	120v	Standard Models	must also select	
PL7_15P	PLUG-L7-15P	L7-15P Twist Lock Plug	277v	Standard Models	"3-wires cord"	FACTORY
PL8_20P	PLUG-L8-20P	L8-20P Twist Lock Plug	480v	480v ("HV") Models	option	



#### PERFORMANCE

	Models	Lumen Package	Wattage	CCT Setting	Lumen Output	LPW						
	FLHB/2-15LM	15000	100w	4000K	15,000	150						
		15,000		5000K	15,200	152						
	FLHB/2-17LM	17,000	115w	4000K	17,250	150						
				5000K	17,480	152						
	FLHB/2-20LM	20,000	135w	4000K	20,250	150						
				5000K	20,520	152						
CRI	FLHB/2-23LM 23,000			4000K	23,250	150						
82 C		23,000	155w	5000K	23,560	152						
	FLHB/2-28LM	28,000	185w	4000K	27,750	150						
Delivered Lumens,				5000K	28,120	152						
Lur	FLHB/2-30LM	30,000	200w	4000K	30,000	150						
red				5000K	30,400	152						
live	FLHB/2-34LM	34,000	230w	4000K	34,500	150						
De				5000K	34,960	152						
		<b>0LM</b> 40,000	270w	4000K	40,500	150						
	FLHB/2-40LM			5000K	41,040	152						
	FLHB/2-50LM 50,000		340w	4000K	51,000	150						
		50,000		5000K	51,680	152						
	FLHB/2-60LM	60,000	400w	4000K	60,000	150						
				5000K	60,800	152						
-						i		ատարոստի	nuun nuun hu	ատիստությո	ապատակա	
						Lumen	10,000	20,000	30,000	40,000	50,000	60,00

#### DLC CHART

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DLC Primary use designation: High-Bay Luminaires for Commercial and Industrial Buildings



MODEL#	CLASS	DLC PRODUCT ID
FLHB/2-20/17/15LM-8CT-xx-yy	Premium	S-RW00TH
FLHB/2-30/28/23LM-8CT-xx-yy	Premium	S-SGCDKK
FLHB/2-40/34LM-8CT-xx-yy	Premium	S-HZ14DG

#### STANDARD FEATURES

#### Field Selectable Wattage and Color (CCT)



Select the desired output light color temperature by sliding the respective CCT Selection Switch left and right to 4000K (Neutral white) or 5000K (Daylight). Also for the wattage with another dip switch. It can be adjusted before, during and after installation. It offers flexibility on site and reduce complexity of models on preparing installation.

#### Compact Size for Easy and Fast Deployment

The compact size of the FLHB models accelerates the installation process significantly, even though they deliver the same lumen performance as full-sized linear high bay lights. This smaller design greatly reduces the time and labor costs associated with large-scale deployments, making it an efficient and cost-effective lighting solution for extensive areas.



#### CONTROL Options

#### Standalone Sensor Controls (option: -MCP/-MCW/-MCD)

#### Passive Infrared Bi-level Motion & Daylight Control (option: -MCP)



A PIR (Passive Infrared) sensor is capable of detecting variations in infrared radiation, which depend on the temperature and surface properties of objects in its field of view. This sensor has a 3-step dimming function, which is ideal for areas needing gradual light adjustments before a complete shutdown. Additionally, if the daylight function is activated, the sensor can turn off the light based on a preset level of ambient light. The settings for these functions can be fine-tuned with the dip switches on the sensor, or using an optional wireless commissioning device.

#### Microwave Bi-level Motion & Daylight Control (option: -MCW)



Microwave occupancy control sensors are designed to detect motion through materials such as plastic, glass, and thin non-metallic substances. They are equipped with a 3-step dimming function that is ideal for areas where gradual changes in lighting are preferred before a complete shutdown. If the daylight sensor feature is activated, it can turn off the light based on predetermined levels of ambient light. The settings for these functions can be fine-tuned with the dip switches on the sensor, or using an optional wireless commissioning device.

#### Motion and Daylight Harvesting Control (option: -MCD)



In addition to all the features offered by a microwave bi-level occupancy control, daylight harvesting control further reduces the use of electric lighting in building interiors when natural daylight is available. This function adjusts the artificial lighting levels based on the amount of natural light entering the space, enhancing energy efficiency and providing a more sustainable lighting solution.

#### Networked Lighting Control (option: -WBP)



Network Lighting Controls (NLC) offer Luminaire Level Lighting Control (LLLC) based on Bluetooth-enabled Mesh Networking of Luminaires. Individual addressability enables luminaires to be communicated with each other within the zone/network. Luminaires can be grouped, trim and controlled by using the smart device app or connected wall switches. Scheduling, scene and sensors can be added for automation among the lights within the zone/group.

 (-WBP) Wireless bluetooth networked control with PIR occupancy and daylight harvesting sensor





Option: -MCP O SKU: SE-BC-BRI819PBD SKU: S

Option: -MCW SKU: SE-BC-BRI819BD



Option: -MCD SKU: SE-BC-BRI819BVAL



**Optional** wireless commissioning remote device SKU: SE-BC-RC-100

#### -MCP / -MCW / -MCD Controls Specification \*default setting

Sensitivity	20%/50%/75%/100%*		
Hold Time (before dim)	10s*/1min/5min/10min/15min/20min/30min/60min		
Daylight Threshold	10/30*/50/100/300/500 Lux, or Disable		
Stand-by Time(before turn off)	1min/30min/60min*, or Never		
Stand-by Dimming Level	10%/30%*/50%		
Detection Height	up to 40ft		
Detection Radius	up to 50ft		



SKU: KEILTON-EFS104



FREE iOS/Andriod APP will be used to commissioning or customize settings of networked controls.

#### EMERGENCY BACKUP Option

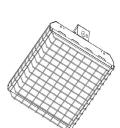
#### **Emergency Battery Backup**



When there is a power outage, the emergency backup driver and battery will power the FLHB to an brightness up to 9,000 lumen for at least 90 mins  $^{\star}$ 

### WIREGUARD Option

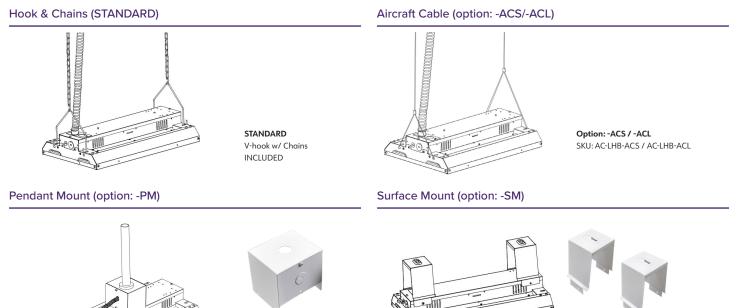
#### Wire Guard



Optional wire guards can be attached to FLHB High Bays to provide extra protection from physical damage.

#### MOUNTING Options

\* conduit/cord shown is not inclu



Option: -SM

### DIMENSIONS

#### FLHB/2-15LM, FLHB/2-17LM, FLHB/2-20LM, FLHB/2-20/17/15LM

weight 7 lbs

260 mm 10-1/4 in

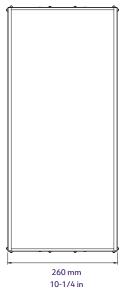
420 mm 16-9/16 in 80 mm 3-1/8 in

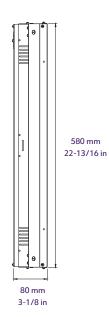
Option: -PM

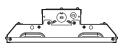
SKU: AC-LHB2-PEM



### FLHB/2-23LM, FLHB/2-28LM, FLHB/2-30LM, FLHB/2-30/28/23LM weight 8 lbs







SKU: AC-LHB2-SFM

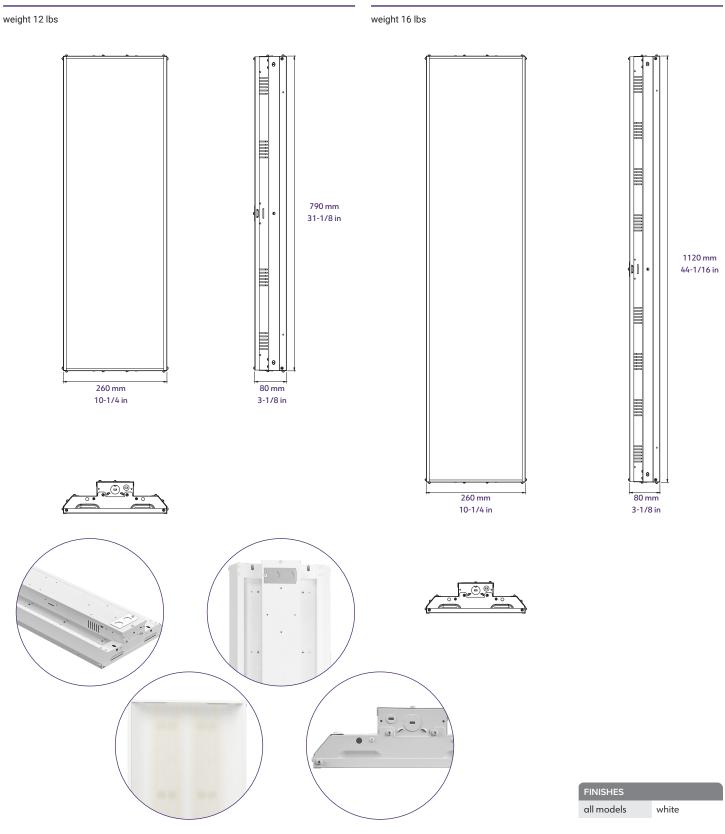




FLHB/2-50LM, FLHB/2-60LM, FLHB/2-60/50LM

**DIMENSIONS** continued

#### FLHB/2-34LM, FLHB/2-40LM, FLHB/2-40/34LM

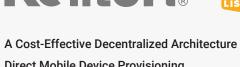


 Need help? Tech help line: (800) 988-6386
 Email: cs@PacLights.com
 Website: www.PacLights.com

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Keilton Networked Controls, a DLC® Qualified Networked Lighting Controls Product, make it easy for facilities to save energy, improve occupancy comfort and achieve code compliance by adding Luminaire Level Lighting Controls (LLLC) to indoor and outdoor applications. It allows for easy field installation of sensors and network nodes with selected PacLights controls ready fixtures. Using the Keilton app, nodes can be commissioned without the need for a gateway or internet access.



**Direct Mobile Device Provisioning** Best-In-Class Scale, Performance & Reliability







#### LEARN MORE, VISIT www.paclights.com/NLC





### **FEATURES**

- Luminaire Level Lighting Control (LLLC)
- Bluetooth-enabled Mesh Networking of Luminaires and Devices
- Individual Addressability, address individual or multiple luminaires
- High-end and Low-end Trim
- Zoning & Grouping
  - $\diamond$ Add and control up to 100 devices per zone
  - $\diamond$ Add unlimited zones to scale for bigger installation
  - Create unlimited groups (combination of sensor or network nodes) within a zone ٥
  - $\diamond$ Link and control the whole group or zone
- Scene control
  - Create and link scenes to individual lights or groups within a zone  $\diamond$
  - Select scene with App or wall switch  $\diamond$
- Time Scheduling for individual lights, groups or scenes
- Sensors integrated with BLE, occupancy and daylight sensing
- Multi-level Dimming, Daylight Harvesting and Occupancy controls
- Manual/Automatic ON/OFF and Automatic partial ON/OFF control capability .
- Control with wireless wall switch or smart device
- Secure commissioning with Keilton App
- Up to 100 ft node-to-node and 50 ft node-to-device .
- Demand Response option (works with OpenADR gateways)
- Controlled 120v 20A Receptacle available
- Other control features to meet code compliance

Keilton and its logo is a trademark of Litetrace; PacLights and its logo is a trademark of PacLights, LLC DLC and its logo is a trademark of DesignLights Consortium. Keilton is the qualified system name listed on the DLC Networked Lighting Controls QPL.



LIGHTING PLATFORM by

PacLights

NETWORKED CONTROL by

Keilton

## **NETWORKED CONTROLS for** FLHB series



### **NETWORKED NODES WITH SENSOR**

SKU		DESCRIPTION	FUNCTION	CONTROL ORDER CODE
KEILTON-EFS104	( <b>1</b> )	KEILTON EFS104 LINE VOLTAGE BLUETOOTH MESH NODE W/ PIR DLH SENSOR	Enable network controlled - on & off, dim, trim, zone, group, scene & schedule, etc. And, PIR occupancy & daylight (harvesting) sensing.	-WBP

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