







# LED Linear Highbay













#### 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

#### **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.design-lights.org/qpl

# LED CHARACTERISTICS

#### LEDS

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

#### Lifespar

 $100,\!000$ -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.

 ${}^{*}{}^{\text{PacLights's}}$  warranty is subject to all terms and conditions found at paclights.com/warranty

#### 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



#### **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 ONE

CODE	LUMEN PACKAGE	WATTAGE
15LM	15,000	100w
17LM	17,000	115w
20LM	20,000	135w
23LM	23,000	155w
28LM	<b>3LM</b> 28,000 1	
30LM	30,000 200w	
34LM	34,000	230w
40LM	40,000	270w
50LM	50,000	340w
60LM	60,000	400w

CODE	LUMEN SELECTABLE	WATT. SELECTABLE
20/17/15LM	20,000 17,000 15,000	135w 115w 100w
30/28/23LM	30,000 28,000 23,000	200w 185w 155w
40/34LM	40,000 34,000	270w 230w
60/50LM	60,000 50,000	400w 340w

#### CCT

\* MUST SELECT ONE

CODE	CRI	CCT SELECTABLE
8CT	> 82	4000K/5000K

#### CONTROL

\* LEAVE BLANK, or SELECT ONE

CODE	TYPE	PARTS SKU	SENSOR	MOUNT	INSTALL
MCP		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**

 $^{\star}$  LEAVE BLANK, or SELECT ONE

CODE	INPUT VOLTAGE	PARTS SKU	WATT	EMERGENCY LUMEN	COMPATIBLE	EMERGENCY RUNTIME	INSTALL			
EM4500	120-277v	EMC-30	20	0w 4,500 Lumen models up to 200w (up to 30LM)	models up to 200w					
EM4300	480v	EMC-30-H	30W							
EM6000	120-277v	EMC-40	40w	6,000 Lumen models up to 270w (up to 40LM)	( 000 )	6 000 L	models up to 2	models up to 270w	> 90 mins	FACTORY
EMIOOOO	480v	EMC-40-H	40W		(up to 40LM)	> 90 mins	TACTORT			
E140000	120-277v	EMC-60	40	9,000 Lumen	All models					
EM9000	480v	EMC-60-H	60w		All models					



# **ORDERING INFORMATION continued**

#### **MOUNTS**

#### \* LEAVE BLANK (v-hook and chains included), or SELECT ONE

CODE	PARTS SKU	TYPE	INSTALL
ACS	AC-LHB-ACS	Aircraft Cable Kit, adjustable up to 120"	
ACL	AC-LHB-ACL	Aircraft Cable Kit, adjustable up to 196"	FIFI D
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	
WG	AC-LHB2-WGM	30LM, 28LM, 23LM models	FIELD
WG	AC-LHB2-WGL	40LM, 34LM models	FIELD
	AC-LHB2-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	
HV	TK-KTAT-375-480-277-SF	40LM, 34LM models	FACTORY
	(2) TK-KTAT-250-480-277-SF	60LM, 50LM models	

#### Cord

#### \* can be ordered in multiple of 6', such as 12FTAC, 18FTAC, etc.

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	CODE	PARTS SKU	TYPE	COMPATIBLE	INSTALL
ı	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	FACIORY
	6FTADS	OS-GL-ES-186-SJT-W-72	6' cord, 6-wires (L/N/G, Switch and 0-10v dimming)	Models	

#### Plug

3						
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**



## 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.







**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

20%/50%/75%/100%*
10s*/1min/5min/10min/15min/20min/30min/60min
10/30*/50/100/300/500 Lux, or Disable
1min/30min/60min*, or Never
10%/30%*/50%
up to 40ft
up to 50ft

#### 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: -WBP 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



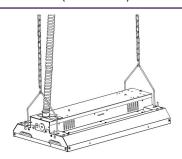
Optional wire guards can be attached to FLHB High Bays to provide extra protection from physical damage.



#### MOUNTING Options

\* conduit/cord shown is not inclu

#### Hook & Chains (STANDARD)



STANDARD V-hook w/ Chains INCLUDED

# Aircraft Cable (option: -ACS/-ACL)



Surface Mount (option: -SM)

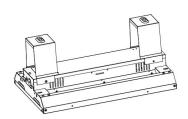
Option: -ACS / -ACL SKU: AC-LHB-ACS / AC-LHB-ACL

Pendant Mount (option: -PM)





Option: -PM SKU: AC-LHB2-PEM





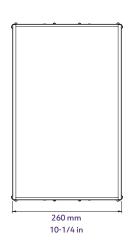
Option: -SM SKU: AC-LHB2-SFM

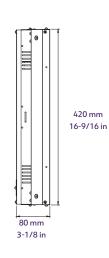
#### **DIMENSIONS**

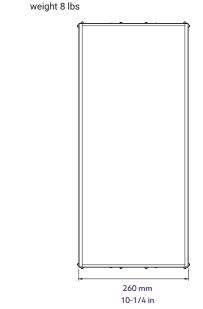
# FLHB/2-15LM, FLHB/2-17LM, FLHB/2-20LM, FLHB/2-20/17/15LM

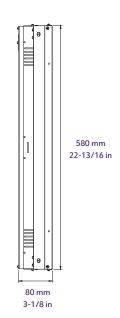
#### FLHB/2-23LM, FLHB/2-28LM, FLHB/2-30LM, FLHB/2-30/28/23LM

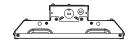
weight 7 lbs

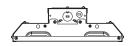














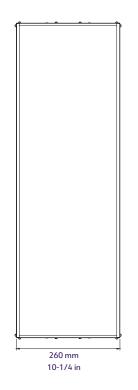
# **DIMENSIONS** continued

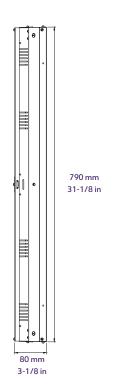
#### FLHB/2-34LM, FLHB/2-40LM, FLHB/2-40/34LM

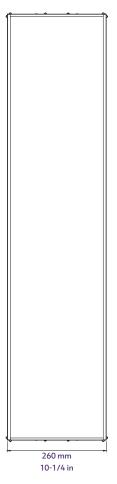
#### FLHB/2-50LM, FLHB/2-60LM, FLHB/2-60/50LM

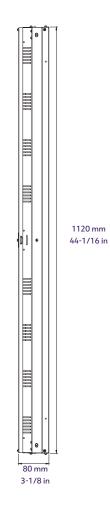
weight 12 lbs

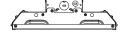
weight 16 lbs













FINISHES all models white

# **NETWORKED CONTROLS**MADE EASY

**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.





A Cost-Effective Decentralized Architecture
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
  - Add and control up to 100 devices per zone
  - Add unlimited zones to scale for bigger installation
  - Oreate unlimited groups (combination of sensor or network nodes) within a zone
  - ♦ Link and control the whole group or zone
- Scene control
  - Create and link scenes to individual lights or groups within a zone
  - ♦ Select scene with App or wall switch
- 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.



# **NETWORKED CONTROLS** for FLHB series



# **NETWORKED NODES WITH SENSOR**

SKU **DESCRIPTION FUNCTION** CONTROL ORDER CODE KEILTON-EFS104



KEILTON EFS104 LINE VOLTAGE Enable network controlled - on & BLUETOOTH MESH NODE W/ PIR DLH SENSOR

off, dim, trim, zone, group, scene & schedule, etc. And, PIR occupancy & daylight (harvesting) sensing.

-WBP

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