



# POINT FLASHING BEACON

## PFB LED

### FAA L-864

### ICAO TYPES B & C

Pending ETL Listed to UL 1598 US & CSA C22.2 No.250.0-04 Canada  
 Compliances: ETL Listed to UL 1598A Marine Vessels  
 ETL Verified FAA L-864 to FAA Advisory Circular 150/5345-43F  
 ICAO Annex 14 Medium Intensity Types B & C  
 Army TM 5-811-5, para. 7-5.c. Hazard Beacon

The PFB LED red medium intensity flashing beacon is specified for use on aviation obstructions. All castings are aluminum, all hardware is stainless steel and the lens is glass. There is no plastic. All exterior metal beacon parts are powdercoat painted aviation yellow for corrosion resistance that meets the US Military Standard Salt Fog Test conducted per MIL-STD-810E, Method 509.3, Procedure I.

Designed & tested to withstand defined waveforms detailed in Table 4, Location Category C1 of ANSI/IEEE C62.41-1991 "Recommended Practice on Surge Voltages in Low Voltage AC Power Circuits".

Point Type	Color	Voltage	Options & Accessories
PFB-37001	R: Red	1: 120 volts ±20%	SEE TABLE ON PAGE 2
	C: Clear/White	2: 220 volts ±20%	
	G: Green	3: 12 VDC	
	Y: Yellow	4: 24 VDC	
		5: 48 VDC	

PFB-37001-R-1

#### FEATURES

- Flasher failure alarm; beacon remains ON
- LED array failure alarm
- Over voltage & over current protection
- Short circuit & open circuit protection
- Metal oxide varistor surge protection
- No external plastic parts
- Modular components for servicing
- Replaceable LED array sections (5)



PATENT PENDING



Intensity: 2,000 candelas as defined in FAA Advisory Circular 150/5345-43F

Wattage: 70.2 watts Peak (AC & DC)  
 52.5 watts Average (AC & DC)

Volt-Amps: 110.4 VA (120V AC only)

Input Range: 93 to 144 volts (120V unit)  
 176 to 264 volts (220V unit)

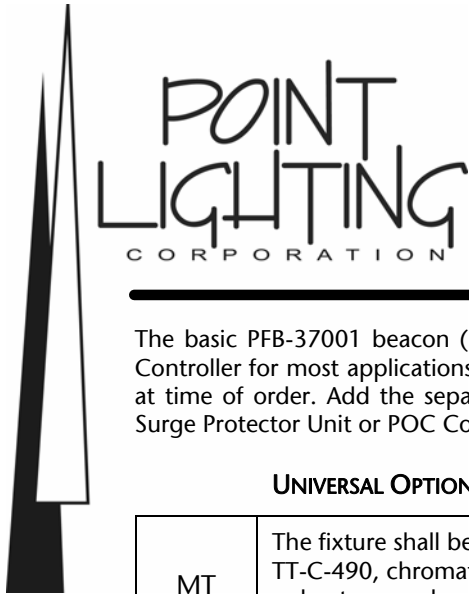
Temp Rating: ± 55° C

Dimensions: 15 (381) x 15 (381) x 12 (304) H  
 Inches (mm)

Weight: 41 lbs 18.6 kg

Mounting: 4 Holes on 13.25-inch circle





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### ICAO Types B & C

The basic PFB-37001 beacon (Patent Pending) catalog number is intended for use with a Point POC Controller for most applications. Other configuration options below are available to be factory installed at time of order. Add the separate FAA Photoelectric Controller to all systems. Add the separate SPU Surge Protector Unit or POC Controller as required by the system.

#### UNIVERSAL OPTIONS

MT	The fixture shall be treated for marine conditions by cleaning per US MIL method III of TT-C-490, chromate priming per US MIL-C-5541, epoxy powder base coat and glossy polyester powdercoat finish coat in color RAL 6003 (FED-STD-595 color #14097) green. Oven cured per US MIL-PRF-24712A.
GPS	Control unit & antenna for GPS synchronization of flashing multiple beacons.

#### STYLE OPTIONS

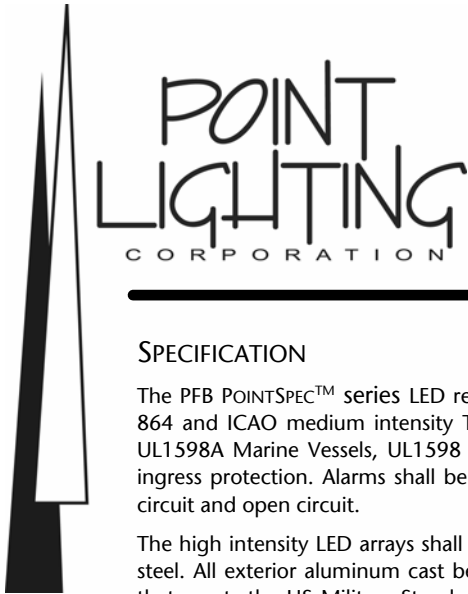
	Note: The basic beacon is FAA L-864 style. Specifically, failure of any LED array results in all arrays turning OFF; partial failure results in no light output. The options below are for ICAO versions; if one array fails, an alarm is generated and the beacon remains ON.
B	ICAO Medium Intensity Type B (flashing)
C	ICAO Medium Intensity Type C (steady-burning)

#### ALARM CONFIGURATION OPTIONS

	Note: The basic beacon is intended to be installed with a POC Controller. The options below represent ways to install the beacon <b>without a POC controller</b> .
SA1	Single beacon with alarm line powered by the line voltage (non-isolated alarm line)
SA2	Single beacon with voltage free alarm line to be powered by a remote AC or DC source supplied by others (isolated alarm line)
MA1M	Master beacon used with multiple synchronized beacons with alarm line powered by the line voltage (non-isolated alarm line); one master per system.
MA1S	Secondary beacon used with multiple synchronized beacons with alarm line powered by the line voltage (non-isolated alarm line); 1 to x per system.

#### RECOMMENDED OR REQUIRED

SPU	Each beacon contains limited surge protection. All POC controllers include circuit level surge protection. For systems without a POC, an SPU Surge Protector Unit is strongly recommended: SPU-10770-x    x = 1 for 120v    x = 2 for 220v Separately ordered and separately installed in the line feeding power to the system.
PPC	One FAA Photoelectric Controller is required per system. Separately ordered and separately mounted. PPC-40001-34T            For 120v systems with a POC Controller PPC-40011-34T            For 220v systems with a POC Controller PPC-40001-34T-OS        For 120v systems without a POC; includes override switch PPC-40011-34T-OS        For 220v systems without a POC; includes override switch Option -P                    For wind turbine applications



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#### SPECIFICATION

The PFB POINTSPEC™ series LED red beacon (patents applied for in the U.S. and abroad) shall comply with FAA L-864 and ICAO medium intensity Types B and C. The beacon shall be listed *Suitable for Use in Wet Locations* to UL1598A Marine Vessels, UL1598 2nd Edition Luminaries; CSA C22.2 No. 250.0-04, 2nd Edition. Sealed to IP66 ingress protection. Alarms shall be generated for flasher failure, LED array failure, over voltage, over current, short circuit and open circuit.

The high intensity LED arrays shall be replaceable and fitted with plug-in connectors. All hardware shall be stainless steel. All exterior aluminum cast beacon parts shall be powdercoat painted aviation yellow for corrosion resistance that meets the US Military Standard Salt Fog Test conducted per MIL-STD-810E, Method 509.3, Procedure I. The clear lens shall be made of strong soda-lime glass manufactured by Kopp Glass. There shall be no plastics used in the structural construction of the beacon.

SPU SURGE PROTECTOR  
SEE HL-4.1.5 FOR DETAILS



POC SYSTEM CONTROLLER  
SEE OL-3.2.0 FOR STANDARD UNITS



#### OPTIONAL PL40139 HEAT SHIELD

The beacon heat limit is 55-deg C. Installation in higher temperature locations is not warranted.

The heat shield shall be installed suspended in the air space between the heat source and the beacon. The heat shield shall be fabricated of a rigid alumina fiber matrix that shall remain stable for continuous use at temperatures up to 3128-deg F (1720-deg C). The material shall not be affected by oil or water and shall be resistant to chemicals. Note: Do not use in the presence of hydrofluoric acid, phosphoric acid & very strong alkalis. The heat shield shall be 24-inches wide by 36-inches high. The shield should to be oriented as required to maximize protection.

See OL-8.3.0 for Heat Shield drawing

The PL40139 Heat Shield shall limit transmission of heat in accordance with these tested temperatures:

STACK FACE	BEACON FACE
800	252 F
1200	343 F
1600 F	429 F

These temperatures are surface measurements on opposite faces of the PL40139 Heat Shield. It is expected that the air spaces between the stack skin and the shield and between the shield and the beacon will further limit the heat transmission.

FAA PHOTOELECTRIC CONTROLLER  
PPC-40001-34T-OS  
INCLUDES OVERRIDE SWITCH





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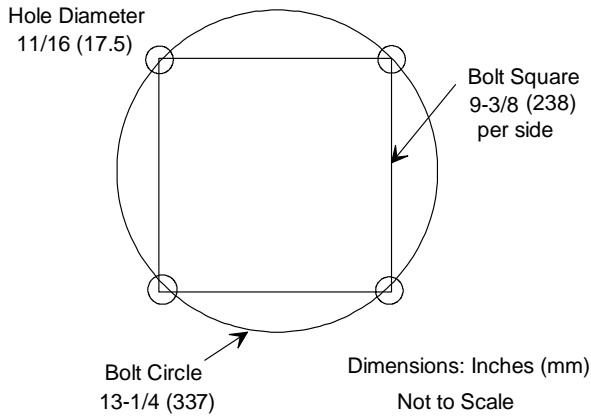
### ICAO Types B & C

#### SPARE PARTS & SERVICE

Do not open the beacon unless there has been an in-service failure. Opening the beacon before installation voids the warranty. See the instruction manual for troubleshooting procedures. All service must be performed inside a maintenance facility under clean and dry conditions.

See the instruction manual for a list of field servicable parts. Contact Point Lighting for return repair service instructions. Do not attempt any testing or repair procedure not stated in the manual.

#### Beacon Mounting Pattern



#### PRESET TORQUE TOOL PL10872

For Sealing Nut to reassemble PFB



#### BEACON CABLE PIGTAIL

Length: Two (2) meters  
Type: SOOW 600-volt  
Wires: Six (6) each #16 AWG

#### TYPICAL SYSTEM WIRING

Power (3): Line-Neutral-Ground  
Typically #12 AWG  
From POC or SPU

Alarm (1+): One (1) alarm line per PFB  
Typically #16 AWG

Data (2): One (1) flash synchronization  
One (1) Return  
Parallel from POC or master PFB  
to B1 to B2 to B3....  
Typically #16 AWG

See Manual for specific wiring schemes

#### REPLACEMENT PARTS

PL10754	Lens, Outer Clear	PL10807	Gasket, Lens Upper
PL10752	Reflector	PL10806	Gasket, Lens Lower
PL10773-x	LED Array Section	PL10818	Sealing Nut (see tool PL10872)
PL10824	Power Supply LED	PL10825	Motherboard
PL10808	Power Supply AC-DC	PL10821	Surge Protector

See Instruction Manual for parts specific to the version installed at specific location.

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