

APPROACH LIGHTING

PAPI - PPL Type

Precision Approach Path Indicator



Compliance with Standards

T/C: K342, TP 312

ICAO: Annex 14, Vol. 1 Para. 5.3.5.23 to 5.3.5.45

Uses

The PPL type PAPI units are available with either 2 or 3 light channels and offer the pilot information to carry out the approach procedure with the utmost accuracy and safety.

The standard four box PAPI system consists of four light units located at the side of the runway adjacent to the origin of the glide path. The nominal glide slope angle is midway between the angular settings of the central pair of the four units. If an aircraft is on the correct approach path, the pilot will see two red and two white light indicators. If the aircraft approach is too high, an increased number of white light indicators will be seen. If the approach is too low, the pilot will note an increased number of red light indicators.

The APAPI system is identical to the PAPI, except only two light units (instead of four) are used. The nominal glide slope is midway between the angular settings of the two units, and when the pilot is on or close to the correct approach path, the unit nearest the runway will be seen as red and the other unit as white. It is a Transport Canada requirement that APAPI systems be supplied with automatic tilt switches to de-energize the system in the case that the optical pattern of any light unit is raised between 0.5° and 1.0° or lowered between 0.25° and 0.5° with respect to the setting angle of the unit.

Operating Conditions

Temperature:	-55°C to +55°C
Humidity:	0 to 100% (including conditions where condensation takes place in the form of water or frost)
Altitude:	0 to 10,000 ft (3,000 m)
Exposure:	Withstands windblown rain, sand, dust particles, and a salt-laden atmosphere

Features

- The use of two lenses in tandem in each light channel makes a sharp transition from white to red (never exceeding three minutes of arc over the full beam width) ICAO chromaticity conformity is maintained over the whole width of the red beam
- Available in 2-lamp or 3-lamp configurations.
- Easy to use digital aiming device.
- Extended hood helps prevent frost formation or accumulations of ice or snow on the front glass.
- Specially imprinted front glass greatly reduces time required for clearing of any frost accumulation that occurred while the unit was turned off.
- Lenses protected from sandblast by a hardened front glass shield. Long-life tungsten halogen lamps are 200 W PK30d with a rated life of 1,500 hours at 6.6 A
- Easy installation and leveling using setting jig and aiming device.
- Mounting is accomplished with either 3-leg or 4-leg configuration.
- Tilt switch versions are available.
- Reduced maintenance. The unit is fully gasketed and remains clean inside.
- Lamp and filter replacement does not require any tools.
- No water can accumulate on the cover, so reflections that could constitute a false optical signal are eliminated.
- Corrosion-resistant aluminum, stainless steel hardware, and optical glass are used in the assembly.
- Fixture uses a black light box with an aviation yellow cover and stainless steel hardware.
- Meets both Class I and II temperature ranges: - Class I system operates down to -35°C- Class II system operates down to -55°C

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PAPI Unit¹ Ordering Code

PPL - X 00C

Number of Light Channels/Lamps

4 = 2 x 200 W (400 W per box)

6 = 3 x 200 W (600 W per box)

Notes

- Please contact ADB for FAA style PAPI unit applications requiring tilt switches.

¹ PAPI units are normally purchased in sets of 4. APAPI units are normally purchased in sets of 2.

Optional Accessories

Power Supply Size

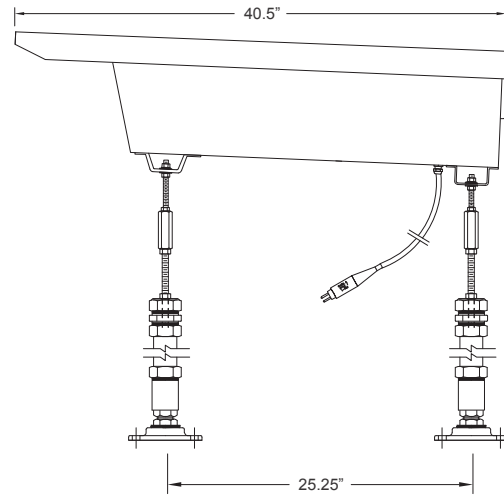
Digital Aiming Device Kit 44A6031

Transition Mtg. Plate (2 Lamp) 900915-B

Transition Mtg. Plate (3 Lamp) 901110-A

Note

Please contact ADB for PAPI Power Supply Selector units for anti-frost, anti-condensation applications



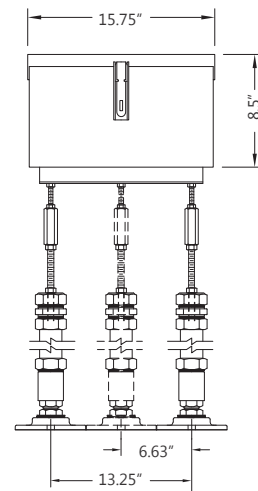
Typical Side View

Mounting Legs

- PPL units can be mounted on either 3 or 4 mounting legs. Complete leg hardware for 4 legs is supplied with each unit.
- 2" EMT conduit for the legs is supplied by others.
- Maximum recommended mounting height is 1000 mm from bottom of flange to top of PAPI unit.

Packaging

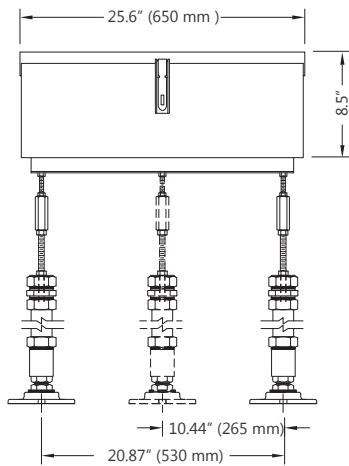
	2-Lamp	3-Lamp
Net weight:	44 lb (20 kg)	90 lb (41 kg)
In cardboard box:	25.6 x 13 x 40.2 in	35.8 x 15.6 x 39.8 in
	65 x 33 x 102 cm	91 x 39 x 101 cm
Gross weight:	46 lb (21 kg)	103 lb (47 kg)



PPL-400C - Rear View

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PPL-600C - Rear View

Suggested Specification

The PAPI unit will meet or exceed the performance specified by ICAO, Annex 14, Vol. I para. 5.3.5.23 to 5.3.5.45 and will be in compliance with Transport Canada TP 312 specification.

The average intensity in red light will be at least 15,000 cd for a horizontal beam spread -6° to $+6^{\circ}$ and a vertical angle of 3.5° below transition. The transition sector will not exceed 3 minutes of arc over the full beam width. The unit will use one pre-focus halogen lamp rated 200 W per light channel. The expected life of the lamps will be not less than 1500 hours at full intensity and typically 4000-6000 hours in actual service.

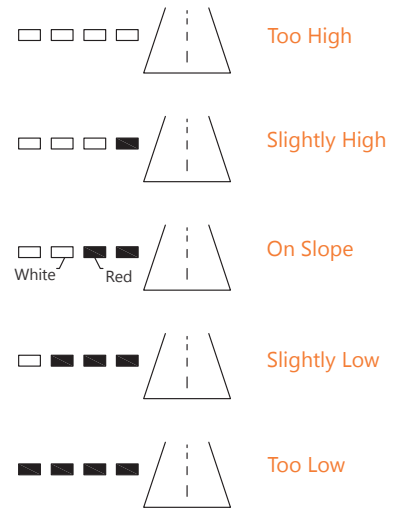
The optical system for each light channel will consist of a high purity aluminum reflector, a red, through-colored glass filter and two lenses made of optical glass.

Lamps and filters will be easily replaceable without need of tools or requiring re-calibration or re-aiming of the PAPI unit.

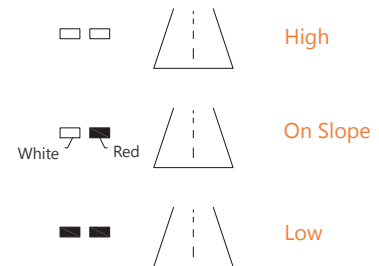
The PAPI unit will be mounted on three or four legs fitted with precision elevation adjustment hardware.

The unit will be made from aluminum and fully protected against corrosion. It will be weatherproof.

A special imprinted, hardened glass will be provided in front of the lenses to protect them against sandblast and to greatly reduce the time required for clearing any frost that has formed on the front glass. An extended hood will assist in the prevention of frost formation on the unit. A digital aiming device and custom case is available upon request.



PAPI Signal Display - 4 Box



PAPI Signal Display - 2 Box