

Uses

Visual Alignment Guidance System provides a combined signal of approach azimuth guidance and threshold identification. It will comprise of 2 Flashing Units (master and slave). The system is located symmetrically on both sides of the runway (or TLOF for heliport threshold). Depending of his position on the approach axis, the pilot will receive visual information of two “flashes” supplied by the two “flashing” units of the system.

Features



- Designed and built with simplicity and ease of maintenance in mind.
- High power LED technology.
- Lightweight, low-energy and environment friendly lighting fitting.
- Extensive use of aluminium alloys reduces fittings weight and eases handling in the field.
- Stainless steel fasteners.
- Light fixtures are provided with anti condensation valve. The system is equipped with focused LEDs and it can be remotely controlled, there are three brightness steps 10, 30, 100%.
- There are 2 dry contacts, one for each unit. Between the units there is a 485 communication monitoring the synchronization and the status of the lamp. In case of failure both units will be turned OFF and the dry contact will change the status, indicating a failure, according ICAO Annex 14, Vol II, paragraph 5.3.5.18
- If the pilot is on the axis +/- 0,5°, the two Flashes are simultaneous or if the pilot is not on the axis within an angle compromise between -15 and +15°, the two “Flashes” will be seen delayed of a time between 0 and 330ms (the further the aircraft is from the axis, the greater the delay). The delay between the two flashes produces a sequence effect which shows the direction of the axis.

AES-087-02-WH | Visual alignment guidance system



Technical Specifications

HOUSING MATERIAL	Powder-coated aluminium, RAL 1004 (aviation yellow)
DISPERSER	hardened glass
CABLE GLAND	nickel-plated brass
FASTENING	Stainless Steel
POWER SUPPLY	The system will be powered in 110VAC - 230VAC - 50/60Hz
POWER CONSUMPTION	maximum 25W/hour

Order Code

AES - 087 - 02 - WH

Series Indicator *Airfield Lighting*

Product Indicator

Number of LEDs used *2 LEDs*

LEDs Light Color *Cool White*



Environment

Temperature range: -20°C to +50°C (-50° to +50° with heating)

IP 65

Ka tested: Salt mist in accordance with IEC 60068-2-11 and IEC 60068-2-25

As an option the units can be equipped with heating for cold and wet environment.

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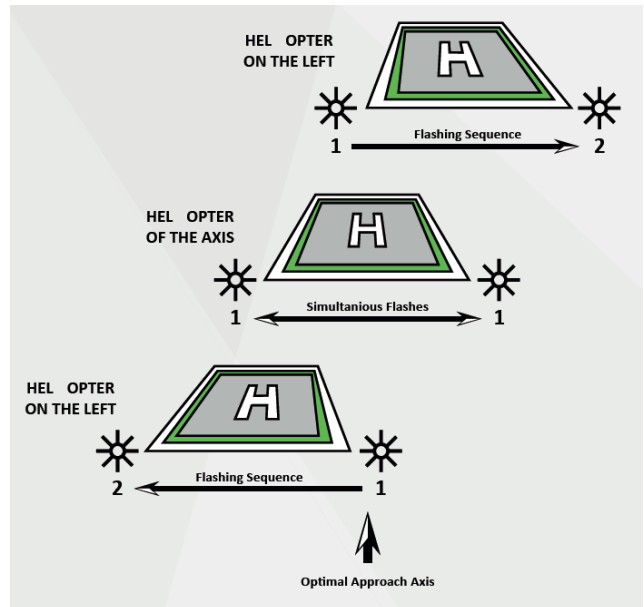
Operation Principal

The two light units of a SAGA system must be installed at 10 metres from the runway Edge symmetrically on both sides of the Runway threshold (for TLOF the two units must be installed as close as possible to the threshold edges). The Master unit must be installed on the right of the Threshold.

When the aircraft flies inside a 1° angular sector, centred on the approach axis, the pilot sees the two lights flashing simultaneously.

When the aircraft flies inside a 30° angular sector, centred on the approach axis and outside the previous one, the pilot sees the two lights flashing in a sequence with a variable delay 0 to 330 ms according to the position of the aircraft in the sector.

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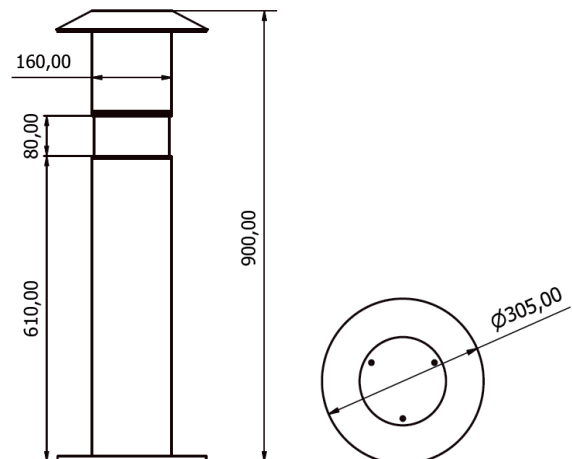
Weight and Dimensions

Installation is made with frangible bolts according to ICAO Annex 14, Vol. II, Paragraph 5.3.5.4

There is the possibility of rotating the light fixtures with +/- 7.5°.

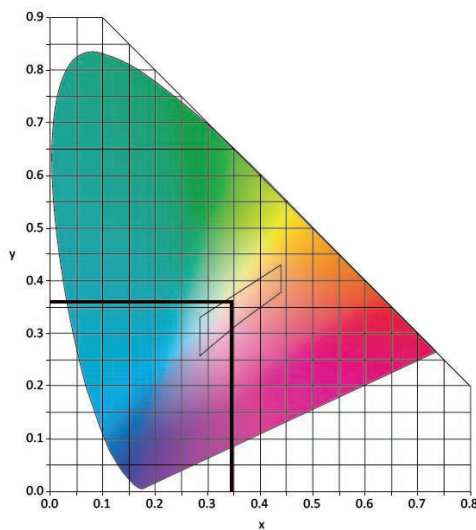
The unit levelling is adjustable from the fastening system.

Height	900 mm
Maximum diameter	305 mm
Light axis origin	650 mm



✈ Photometric Characteristics

The light colour emitted by the light fixture is white, with the trichromatic coordinates:



$x=0,348$
 $y=0,360$
 $z=0,292$

The measured trichromatic coordinates correspond to colour range requirements in:
ICAO Annex 14 - Aerodromes Vol. I, fig. A1-1-1b.
Colors for aeronautical ground lights (solid state lighting),

Light distribution

- 1° in horizontal plane (Divergence of the “on track” sector) according to:
ICAO Annex 14, Vol. II, Figure 5-13
- Light intensity average 40.000cd, equal to or better than APAPI white intensity according to:
ICAO Annex 14, Vol. II, Paragraph 5.3.5.13
- 10° in vertical plane above 0°

Each unit generates a flash with a frequency of 1 Hz