HAPI

Helicopter Approach Path Indicator



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Compliance to standards

ICAO:

International Civil Aviation Organization, Aerodromes, Annex 14, Volume 2, Fourth Edition, July 2013
Photometric - (ICAO) Figure 5-11 illustration 4 – HAPI system and 5-15 HAPI signal format

Application

The HAPI is intended to serve the approach to a heliport and shall be capable of operation under both daytime and nighttime conditions, where visual information on the required approach slope is required.

The HAPI signal format shall consist of four discrete signal sectors, providing indications for "**above slope**," "**on slope**," "**slightly below slope**," and "**below slope**."

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 aluminum alloys reduces fitting weight and eases handling in the field.

Product Code

AL - 117 - 76 - GR-RE

Series Indicator (Airfield Lighting)	**AL**
Product Indicator	**117**
LEDs Number (72 LEDs : 36 green & 36 red)	**76**
LEDs Light Color (green - red)	**GR-RE**

Description

Housing - Powder coated aluminum RAL 1004 (aviation yellow)

Fastening system powder - coated aluminum, RAL 1004 (aviation yellow)

Anti-glare visor powder - coated aluminum, RAL 9005 (gloss black)

Disperser -hardened front glass for sandblast protection

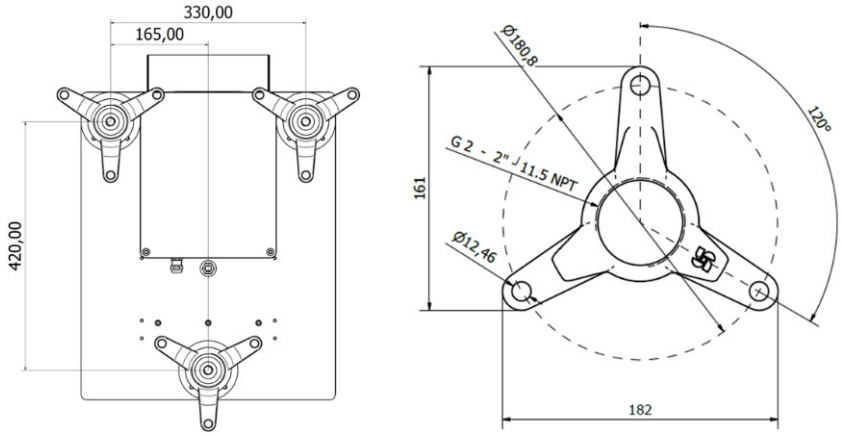
Cable gland - nickel plated brass

Environment

Temperature range:	-40^0 to $+55^0$
Degree of protection:	IP65
Humidity:	0-100%

Mounting

Hapi unit may be aimed at any vertical angle up to 12°. The mounting system is equipped with frangible couplings and tripods.

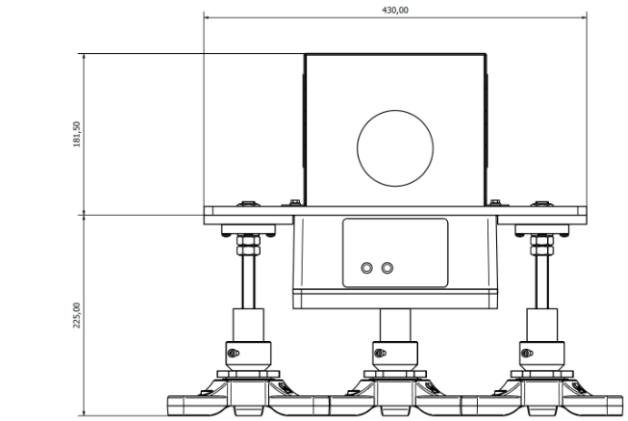


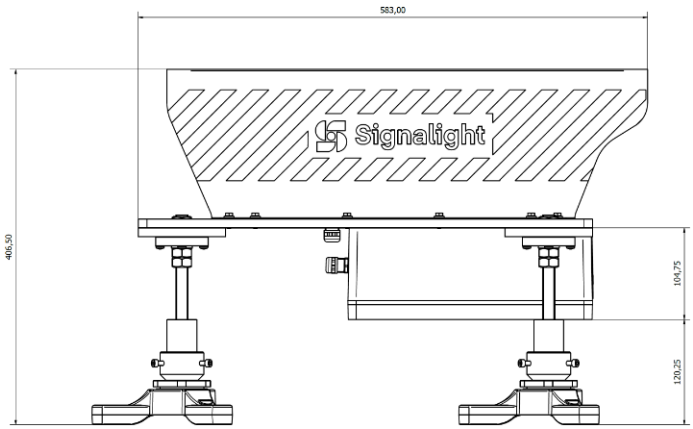
For more accurate installation, a digital clinometer with a factory-set zero position is integrated inside the housing.
The clinometer is equipped with two buttons and a display where you can see the coordinates and the brightness level.
By simultaneously pressing both buttons, the correct position in the field is saved.
After the field position has been saved, any deviation greater than 0.5° will activate the alarm and cause the LEDs to switch off. If the system is combined with a Signalight Controller, the alarm will be displayed on the controller display.



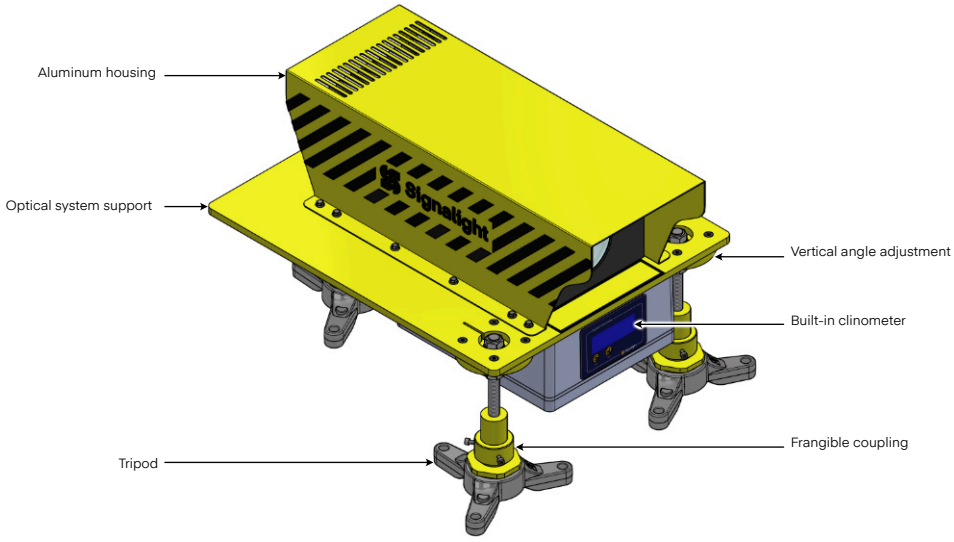
Mechanical Characteristics

Overall dimensions: 583 × 430 × 406,5 mm





The HAPI is supplied in a ISPM15 - compliant wooden crate.
Packaging: 650 x 500 x 1400 mm 26 kg



Electrical Characteristics

Power consumption: max. 50 W + 20 W heater

Power supply:

- 48 VDC from controller - dimmable : 100% ,30%, 10%
- 24 VDC from solar system - dimmable: 100% ,30%, 10%
- 110 - 230 V, 50/60 Hz - dimmable via contacts 100% ,30%, 10%
- 2.8 - 6.6 A series from CCR - dimmable via current changes 100%, 30%, 10%

Type of power supply to be specified in order.

Types of power supply :

- 48 VDC power supply from controller with 3 core cable
  V+ (brown)
  V- (blue)
  Dimming (green/yellow)

- 24 VDC power supply from controller with 3 core cable
  V+ (brown)
  V- (blue)
  Dimming (green/yellow)

- 230 VAC directly from mains power supply
  Live (brown)
  Neutral (blue)
  Ground (green/yellow)

- 2.8-6.6 A power supply by isolating transformer from constant current regulator power supply.

Recommended transformer power: 100 W

Optional

Heater: An optional heater resistor is available and must be specified when ordering. The heater includes an internal thermostat within the HAPI unit.

Photometric Characteristics

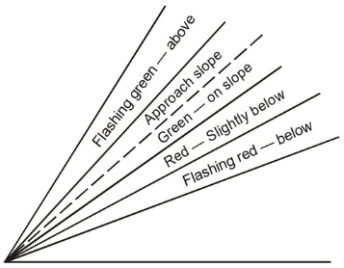
Light color: Green light and red light

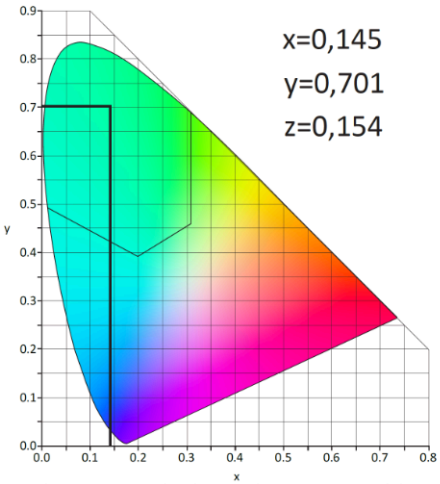
Azimuth angle	3°	6°	9°	12°	15 °
Vertical elevation angle	2°	4°	6°	8°	10°
Required minimum intensity [cd] red/green	9000	6375	3750	1875	375

The angular size of the “on-slope” sector of the HAPI shall be 45 minutes.

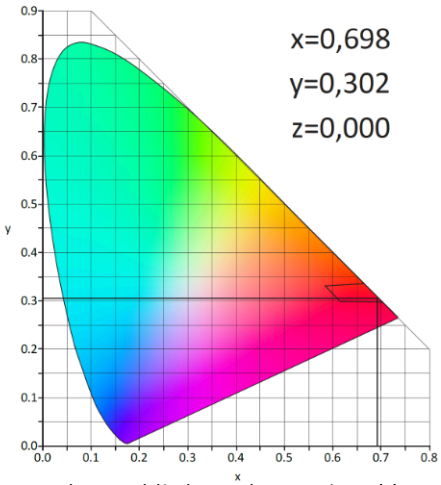
HAPI Signal format

Sector	Format
Above	Flashing green(2Hz)
On slope	Steady green
Slightly below	Steady red
Below	Flashing red (2Hz)





The green light color emitted by the light fixture, with the following trichromatic coordinates.

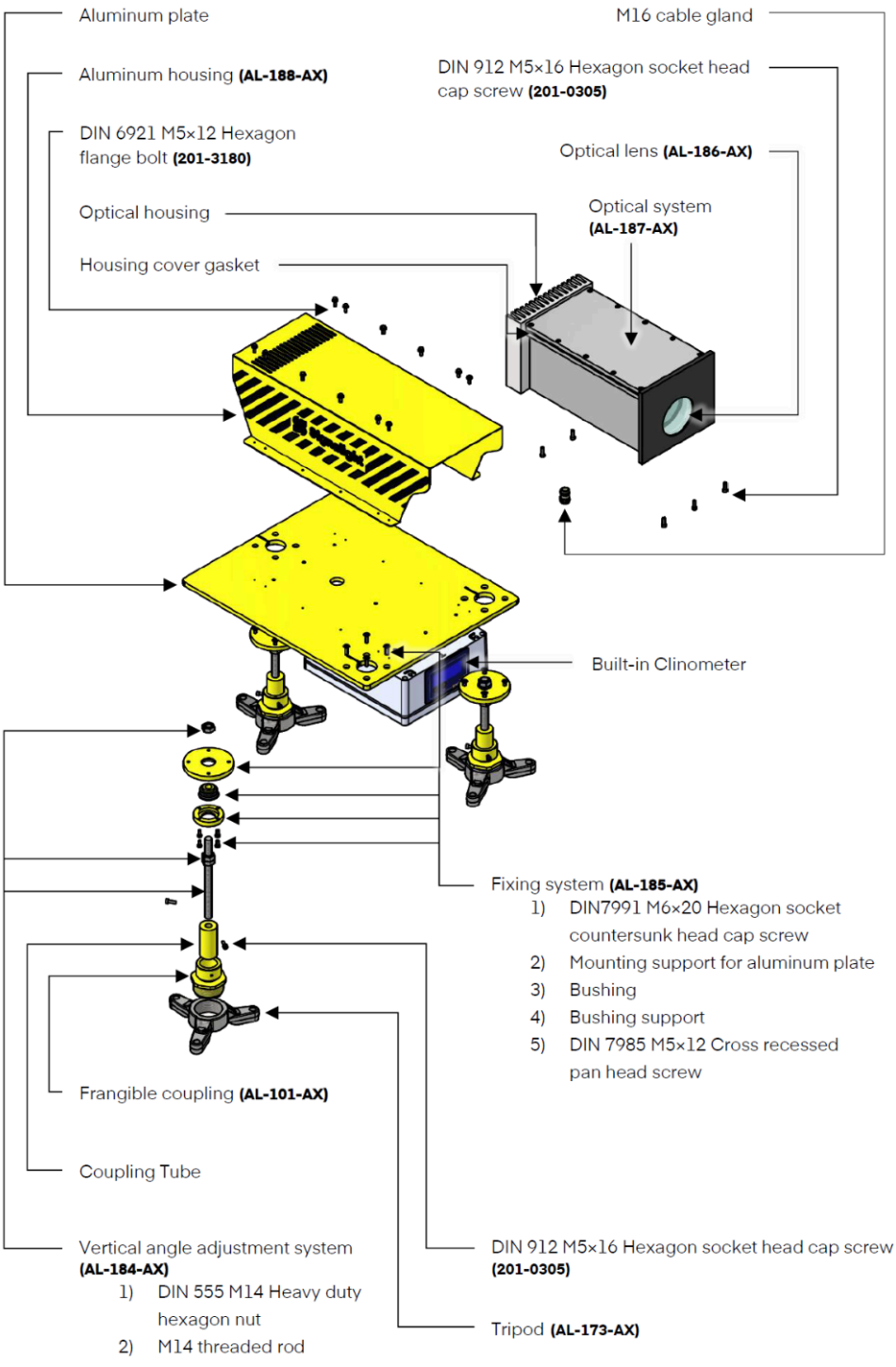


The red light color emitted by the light fixture, with the following trichromatic coordinates.

The measured trichromatic coordinates correspond to color range requirements in:

ICAO Annex 14 - Aerodromes Vol.1, fig. A1-1b.
Colors for aeronautical ground lights (solid state lighting)

Spare Parts


Aluminum plate
Aluminum housing **(AL-188-AX)**
DIN 6921 M5×12 Hexagon flange bolt **(201-3180)**
Optical housing
Housing cover gasket
M16 cable gland
DIN 912 M5×16 Hexagon socket head cap screw **(201-0305)**
Optical lens **(AL-186-AX)**
Optical system **(AL-187-AX)**
Built-in Clinometer
Fixing system **(AL-185-AX)**
1) DIN7991 M6×20 Hexagon socket countersunk head cap screw
2) Mounting support for aluminum plate
3) Bushing
4) Bushing support
5) DIN 7985 M5×12 Cross recessed pan head screw
Frangible coupling **(AL-101-AX)**
Coupling Tube
Vertical angle adjustment system **(AL-184-AX)**
1) DIN 555 M14 Heavy duty hexagon nut
2) M14 threaded rod
DIN 912 M5×16 Hexagon socket head cap screw **(201-0305)**
Tripod **(AL-173-AX)**

Accessory

To order accessories please call our customer support.
For contact details please refer to our website - www.signalight.com

#	NAME-SERIES	PRODUCT CODE	IMAGE
1	Tripod	AL-173-AX	



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