



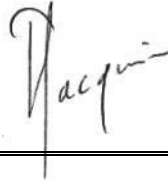



INTERFACE CONTROL DOCUMENT

LED POSITION LIGHT SYSTEM

RED POSITION LIGHT - P/N: 6491411 AMD(0)

GREEN POSITION LIGHT - P/N: 6491421 AMD(0)

Diffusion	Interne à JPC				Externe à JPC	
	1 ex →				1 ex →	
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LIST OF EVOLUTIONS

Date	Issue N°	Page modified	Description of the evolution
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1 General

1.1 Generalities

This document defines the electrical, mechanical, thermal interfaces and the installation procedure for “Led Position Light System”: Red Position Light P/N 6491411 amd(0) , Green Position Light P/N 6491421 amd(0).

1.2 Destination

Aircraft Position light.

1.3 Description

The Led Position Light system aims to produce red & green light in accordance with CS-ETSO (ETSO-C30c). This system is a variant of our Position light already certified CS-ETSO (ETSO-C30c) and Position Lights qualified on helicopters for AIRBUS HELICOPTERS, with the same design and same no complex electronic system and no EMC interferences. It offers an extremely high reliability, a high resistance to shocks and vibration.

Positive points of those new equipment:

- Electric interface and mechanics interface preserved.
- 20.000 hours MTBF.
- Low power: 2.3W for our Led Position Light, compares to 26W for incandescent lamp.

- Red position light:

The light source uses 4 power red/orange LED assembled on a SMI PC board, with a PWM electronic regulation (same configuration used in all our standard Position lights)

The lens is made in borosilicate glass.

Mechanical parts are made in aluminum with SURTEC 650 protection.

- Green position light:

The light source uses 3 power green LED assembled on a SMI PC board, with a PWM electronic regulation (same configuration used in all our standard Position lights)

The lens is made in borosilicate glass.

Mechanical parts are made in aluminum with SURTEC 650 protection.

2 Physical, electrical and optical features

2.1 Physical features

2.1.1 Red Position Light

- Individual weight : 75 grs +/- 10 %
- Dimensions : see 2D drawing in annex
- Number of LEDs : 4 Red LED
- Envelope color : Aluminum with SURTEC 650 protection

2.1.2 Green Position Light

- Individual weight : 75 grs +/- 10 %
- Dimensions : see 2D drawing in annex
- Number of LEDs : 3 Green LED
- Envelope color : Aluminum with SURTEC 650 protection

2.2 Electrical features

2 G22 free end wires length 10 cm

Red wire : +V input

Black wire : 0V input

2.3 Electrical power supply

Supply Voltage : 14 / 28 V DC (DO 160 D, cat A)

Same performances from 12 to 32 V

Performances and current In all situations (12, 14, 16, 24, 28 and 32 V):

2.3.1 Red Position Light

Power supply level (in Volts)	Current	Performances
12 V	0.18 A	Preserved
14 V	0.15 A	Normal
16 V	0.14 A	Preserved
24 V	0.1 A	Preserved
28 V	0.09 A	Normal
32 V	0.08 A	Preserved

2.3.2 Green Position Light

Power supply level (in Volts)	Current	Performances
12 V	0.19 A	Preserved
14 V	0.16 A	Normal
16 V	0.15 A	Preserved
24 V	0.1 A	Preserved
28 V	0.09 A	Normal
32 V	0.08 A	Preserved

2.4 Power dissipation

2.4.1 Red Position Light

Power dissipation	1.45 W
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2.4.2 Green & White Position Light

Power dissipation	1.55 W
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2.5 Optical features

2.5.1 Red Position Light

- 4 high power Red/Orange LED CREE XP-E2 in one serial strip.
- Led : Diffusion angle 120°
- Light energy and distribution in accordance with CS-ETSO requirements

2.5.2 Green Position Light

- 3 high power Green LED CREE XP-E2 in one serial strip.
- Led : Diffusion angle 120°
- Light energy and distribution in accordance with CS-ETSO requirements

2.6 Operating temperature

Positive temperature : +70°C
Negative temperature : - 45°C

3 3D views

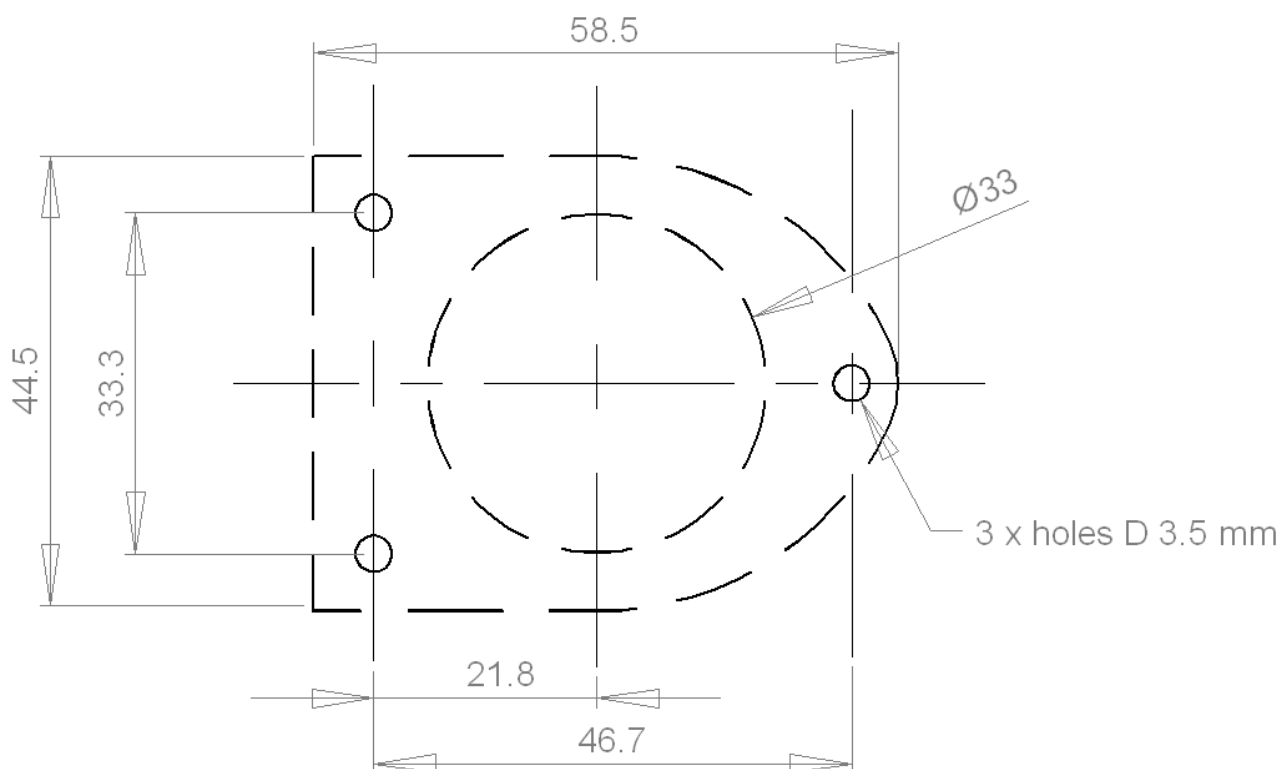
3.1 Red Position Light



3.2 Green Position Light



3.3 Mechanical interface

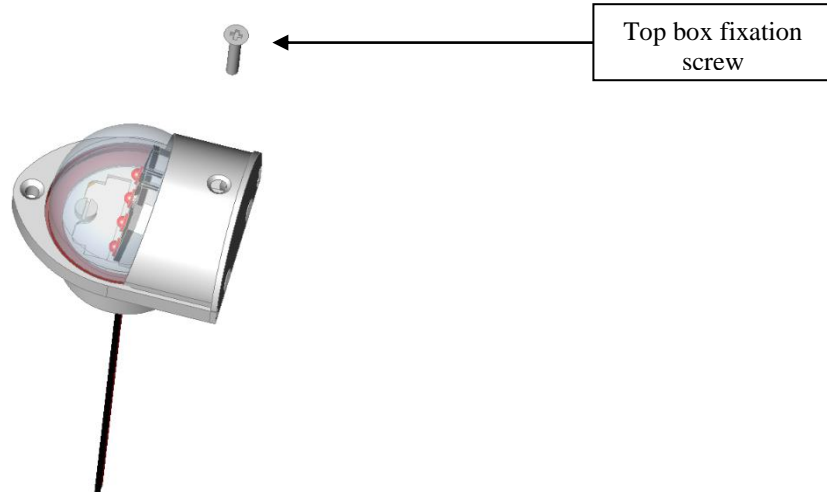


4 Installation procedure

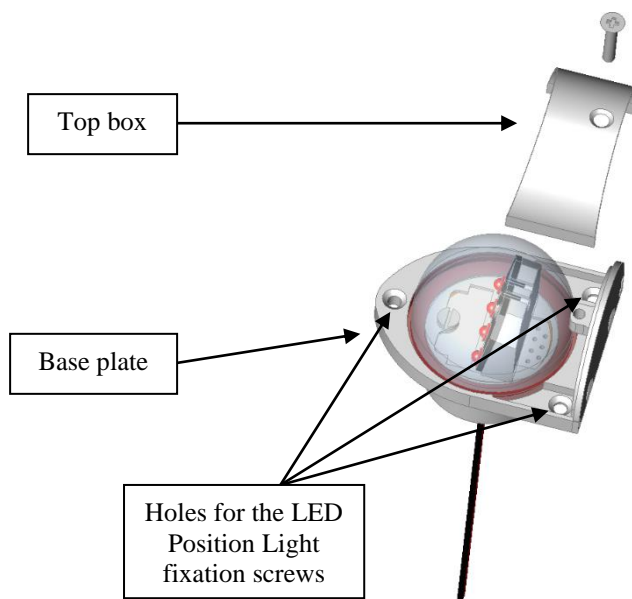
The following information provides guidelines for the installation of LED POSITION LIGHTS.
Please refer to the OEM manual of the aircraft for specific removal and installation instructions.

4.1 Red or Green Position Light

- Connect the supply wires (see polarity in §2.2) of the equipment.
- Remove the Top box fixation screw with a screwdriver (see picture below).



- Remove the Top box of its location (see picture below).



- Place the equipment in its aircraft location and tighten the 3 fixation screws (not furnished) to hold the equipment in position.
- When necessary, waterproof the Base plate to aircraft. Apply single part silicone (DC 799) or equivalent around any open area where water could get in.
- Place the TOP box in its location.
- Add a drop of threadlocker (example: LOCTITE 243) on the Top box fixation screw.
- Tighten the Top box fixation screw on the Top box with a screwdriver until it stops.

5 Periodic Inspections

Every 100 hours or annually:

- Check that all Leds are illuminated.
WARNING: Due to the high light intensity emitted by the equipment, it is recommended to wear eyes protection.
In case of Leds failure, the equipment must be replaced or repaired (see documents reference "649 14 11 CMM 01" or "649 14 21 CMM 01" at the last issue into force).
- Check the glass aspect (absence of scratches or cracking). In case of presence of scratches or cracking on the glass, the equipment must be replaced or repaired (see documents reference "649 14 11 CMM 01" or "649 14 21 CMM 01" at the last issue into force).
- Check the good state of the mechanical assembly and the electrical connections. In the case of a bad condition of the mechanical assembly or the electrical connection, they can be readjusted if they are not broken, otherwise the equipment must be replaced or repaired (see documents reference "649 14 11 CMM 01" or "649 14 21 CMM 01" at the last issue into force).

6 2D drawing

