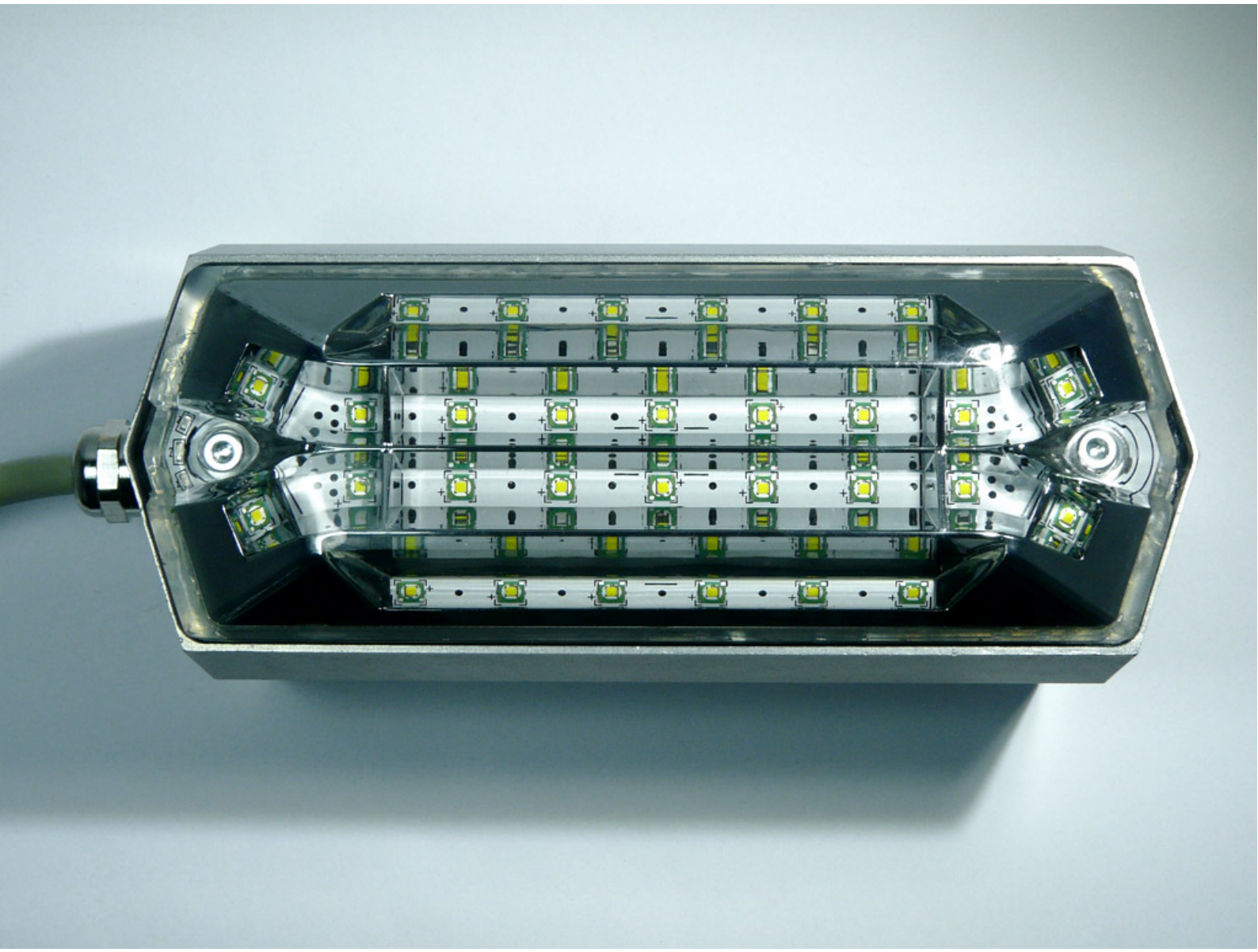
AVEO ENGINEERING GROUP



SmartStrobe

INSTALLATION MANUAL

AVE-IS30ANCSAS-02G-IM

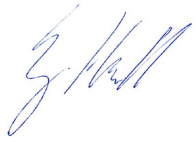
Part 0 Manual Administration

0.1 Table of Contents

0.2 Document approval

This document has been established in accordance with an alternative procedure to DOA approved under EASA AP429.
This installation manual is according EASA ETSO [Authorization number] and applicable for part number AVE-IS30ANCSAS-02G

Compiled by:_____ 01. – Jul - 2014
Petr Jaroš
Engineer, Aveo Engineering Group, s.r.o.



Approved by:_____ 01. – Jul - 2014
Georg Hartl
Head of DO, Aveo Engineering Group, s.r.o.

0.3 Amendment Record procedure

The master copy of this document shall be kept electronically as a read only document under the control of Aveo Engineering Group, s.r.o. as Master Copy.
ALL amendments to this manual will initiate a raise of Issue
ALL raises of issue will be given a sequential Alphabetic Issue Ident sequentially from 01 to 99 in Table 01 - ***Issue No:*** Column– Initial Issue of Document will be **"01"**
ALL Issues of this document will be approved by Head of DO

Issue No.	Details	Date	Effected Pages
01	Initial Issue	01.Jul.2014	ALL

Table 01: Document Amendment Record Table

0.4 Effected Pages Procedure

ALL pages affected by ANY raise of issue of this manual will be listed in Table 01 - *Effected Pages* Column.
The reason(s) for ALL raise of issue and description of change due to raise of issue will be provided for ALL raises of issue in Table 01 - *Details* Column.
Changes from the previous issue are highlighted by YELLOW HIGHLIGHTING over new content. AND YELLOW HIGHLIGHTING AND CROSSING OUT of deleted content.
Example (~~CROSSING OUT~~)

0.5 Distribution List

As stated in 0.3 above; the master copy of this document shall be kept electronically as a read only document under the control of Aveo Engineering Group, s.r.o. as Master Copy.
All holders of copies of this Document will be recorded by listing in Table 02 – Distribution List.
Copy holders listed will be issued a copy of this document with sequential copy number as shown in Table 02 – Distribution List

Copy No.	Holder
MASTER	**Aveo Engineering Group, s.r.o.**

Table 02: Distribution List

1. PRODUCT INFO

SmartStrobe™ is a LED anticollision light assembly ETSO Compliant anticollision lights, low drag and low profile designed for aircrafts wing position light. This powerful LED light system features easy installation, fail safe system, unbreakable construction, waterproof and high candela output.

SmartStrobe™ also is a Drop-In replacement strobe light to the Honeywell Part No. 30-2446-3, Wingtip Strobe Light. It operates at 115 VAC supply voltage. The SmartStrobe™ also features the exclusive Aveo LEDCheck™ technology, a real time indicator of operational status.

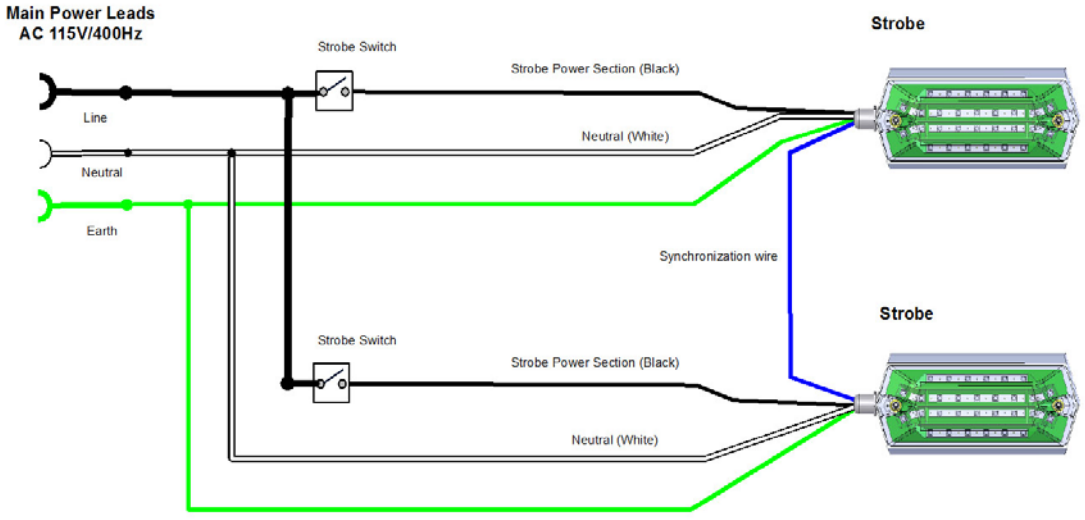
- **SmartStrobe™ P/N: AVE-IS30ANCSAS-02G**

2. OPERATING INSTRUCTION

When installed on the aircraft, using the aircraft's power (115 volts), the light will be at its maximum intensity. (Meet the requirement of **ETSO-C96A, Anticollision Light Systems)**

3. WIRING DIAGRAM

Base interconnection schematic for Integrated Strobe (SmartStrobe)



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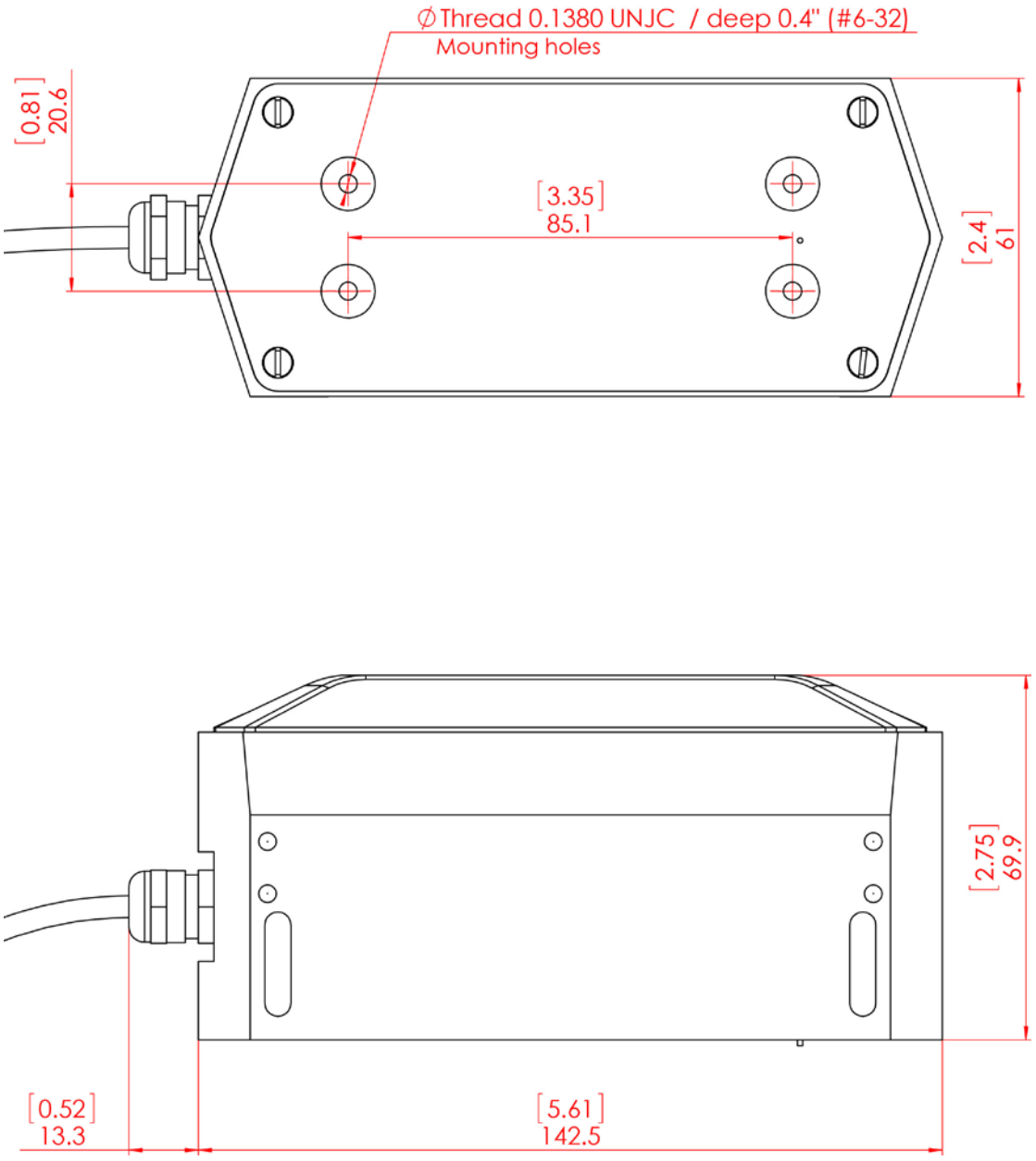
4. CONTROL & POWER INPUT's:

BLACK WIRE	Strobe Power Section line (Line)
GREEN WIRE	Negative common power supply line (Earth)
WHITE WIRE	Carries current in normal operation, connected to Earth (Neutral)
BLUE WIRE	Strobe synchronization line (Sync)

5. TECHNICAL SPECIFICATION

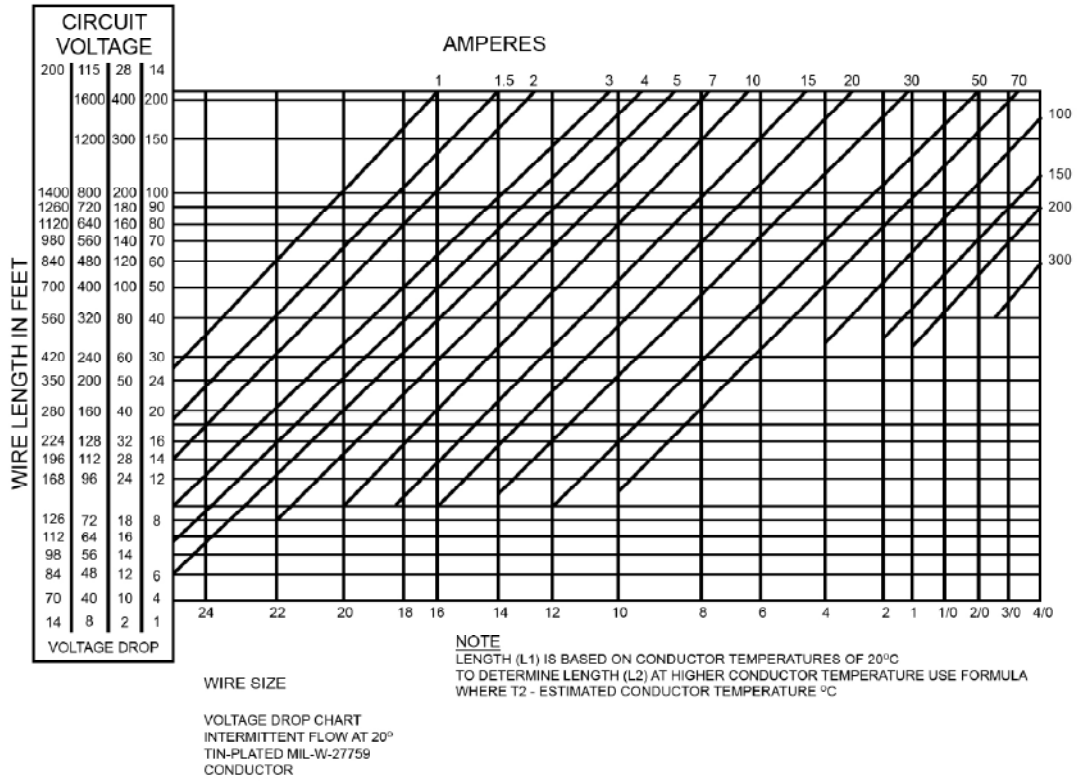
Dimensions (mm):	143.1 x 61 x 69.7mm
Dimensions (inches):	5.63" x 2.4" x 2.75"
Weight (g):	580g
Weight (lbs):	1.28lbs
Operating voltage range:	96 – 129 VAC, 360 – 440 Hz
Primary input voltage:	115V AC
Over-voltage protection:	Yes
Maximum Input current at 115V:	0.625 A
Over-Voltage shut down:	Yes
Under-Voltage protection:	Yes
Operating temperature:	-55°C + 85°C
Over-Temperature protection:	+85°C
Output power	45 W
Number of LEDs:	30
Color:	cool white

6. TECHNICAL DRAWING



*dimensions in [inches] millimeters

7. WIRING SIZE CHART



8. EQUIPMENT LIMITATION

SmartStrobe™ should only be powered by 115V AC power input

9. TESTING THE FUNCTION OF THE AVEO LIGHTS BEFORE INSTALLATION

All Aveo Aviation lights undergo rigorous testing prior to being released from our engineering manufacturing department. This testing involves a burn-in time as well as other function testing. No light is released for sale without undergoing this extensive operational testing.

When you receive the SmartStrobe light, and wish to test the function of the light prior to installation on your aircraft, please note the following:

1. Please review the written information that is enclosed in the packaging. Warranty information as well as a cautionary note about power supply removal is enclosed with each package.

2. Remove the light from the package. Note that there is no connector:
   - ● – line lead, Black wire
   - ○ – neutral lead, White wire
   - ● – earth lead, Green wire
   - ● – synchronization lead, Blue wire

3. Testing of the function of the light can be done with a 96 – 129 VAC, 360 – 440 Hz power supply. Connect green wire to Earth. Connect the white wire to the Neutral lead of the power supply, then connect the black wire to the Line leads on the power supply. Switch **ON** power to the harnesses, the anti-collision light should start flashing after LED check finished self test function. Connecting the blue wires from each AveoFlash light together (and not to the ground or any other terminal leads) should show that the lights are flashing together and indicates the synchronization feature is working properly. When the lights are installed on the aircraft, using the aircraft's power then the light will be at maximum intensity.

After testing, the light can be installed on the aircraft.

IMPORTANT NOTES:

Under no circumstances should not be used any power supplies which are not fulfill specified operational range of the light. The light is functional between 96 and 129 volts AC. Do not use: Battery chargers, battery back-up power devices, or other bench avionics testing methods to test the aviation light. Do not use any AC power supplies which frequency does not match the given range.

Usage of a battery charger or non stable other power unit to test the light will void the warranty and may damage the light.

All power supplies for existing strobe lights, flasher beacons, etc. are required to be removed from the aircraft prior to the installation of the Aveo light.

If you have any questions about the installation of the lights, please refer to our web site: www.aveoengineering.com, and check FAQ and other links on our aviation lights web page.

10. CARE AND CLEANING OF YOUR AVEO ENGINEERING AVIATION LIGHTS

When you receive your Aveo Engineering Aviation Lights, they have been factory polished and ready to install on the aircraft. Upon installation, just give the lights a good coat or two of a quality automotive polish. This should protect the lights from dirt and other environmental factors. Once or twice a month, just refresh the polish and hand buff to bring back the lights to factory like new condition.

If the lights need a deeper cleaning, they can be polished with a good automotive cleaner wax and/or a liquid polishing compound. The liquid polishing compounds can normally be found at automotive parts stores or an automotive paint store. After using a polishing compound, just give the lights another coat of an automotive polish and you will again protect the lights against dirt, etc.. An electric buffing machine, with a lamb's wool cover, can also be used for deeper cleaning and polishing. Under no circumstances should any petroleum based product be used to clean the lights.

11. NOTES ON INSTALLATION

Spread the tightening forces evenly around the mounting hole. Stainless steel screws is recommended. Length depends upon placement location on aircraft.

12. CONTINUED AIRWORTHINESS INSTRUCTIONS

The Aveo SmartStrobe lights should always be checked for proper operation during preflight. This procedural information is already provided in all general aviation aircraft flight manuals.

The lights should be visually inspected for general condition, proper operation, and correct installation at each annual and/or 100 hour inspection.

Turn the lights on, and do the following:

Put on sunglasses or welder goggles to prevent eye damage when looking into the lights.

Examine the individual LEDs as per the diagram below.
LED check function is used for monitoring various features of light like output current, output voltage, internal electronics status and functionality of both LED strings.

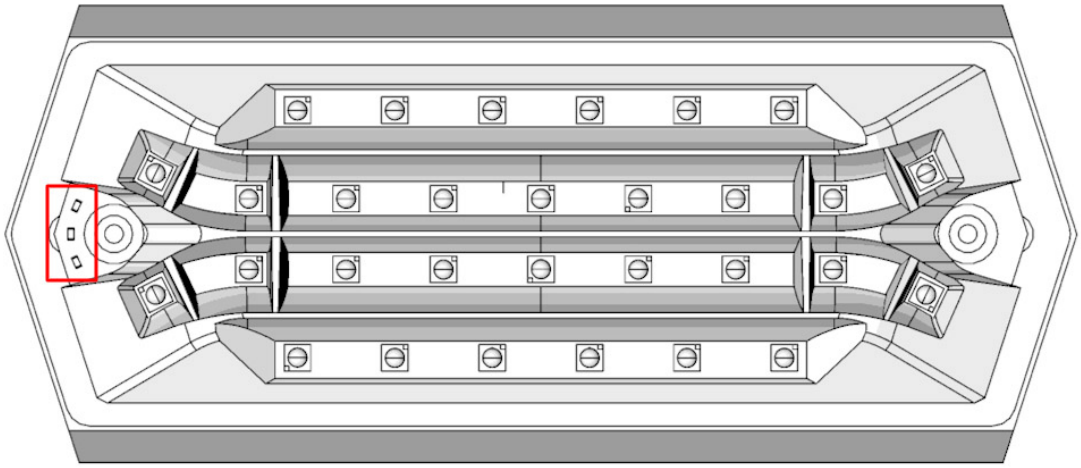


FIGURE 1: LED check position

Green LED	Amber LED	Red LED
All Ok	One LED string fail	Internal electronics fail-Both LED strings are disconnected -Output power out of range

TABLE: LED check function description

If any of the conditions as indicated on the diagram are exceeded, the light shall be removed and sent to Aveo Engineering for replacement under the Aveo Lifetime Warranty Program. The maximum number of LEDs that may fail to remain ETSO legal intensity for flight is TWO LEDs (not in one section).

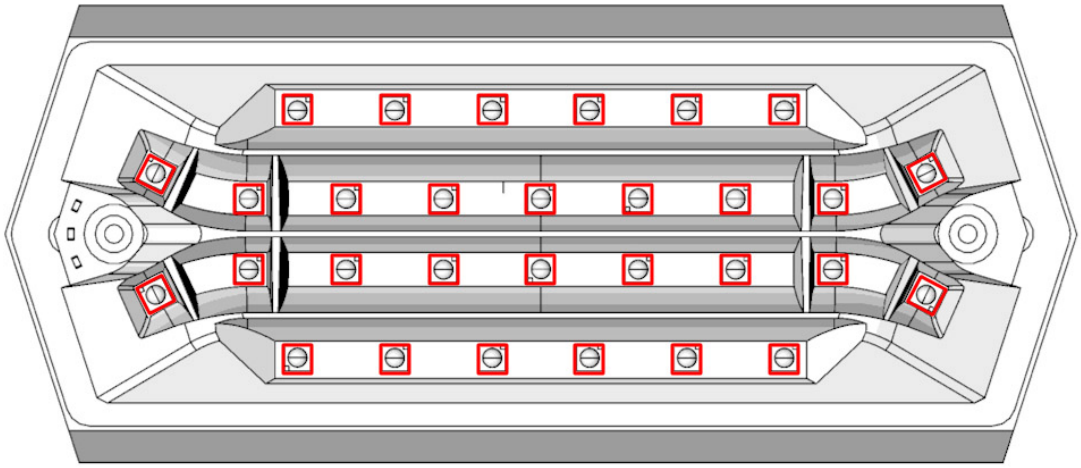


FIGURE 2: STROBE LEDS - ALL LEDS (30 pcs)

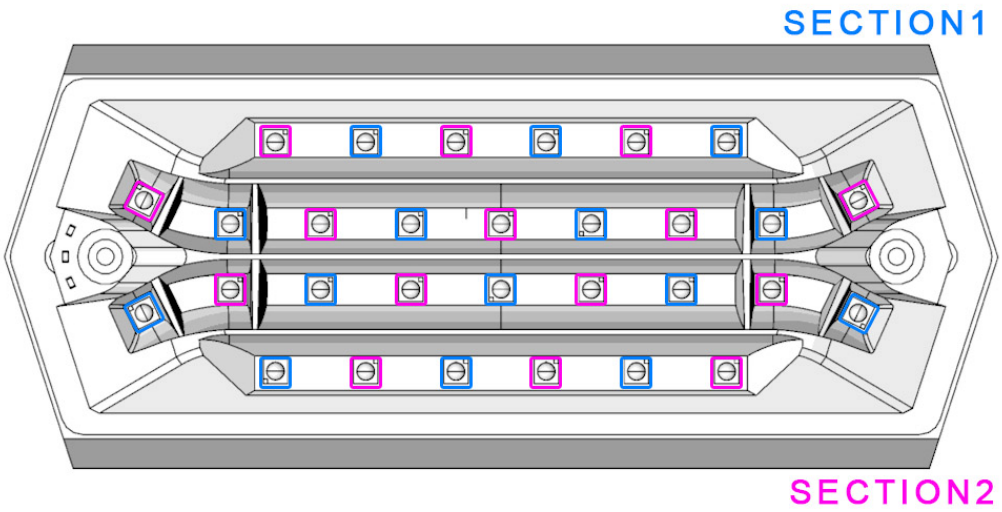
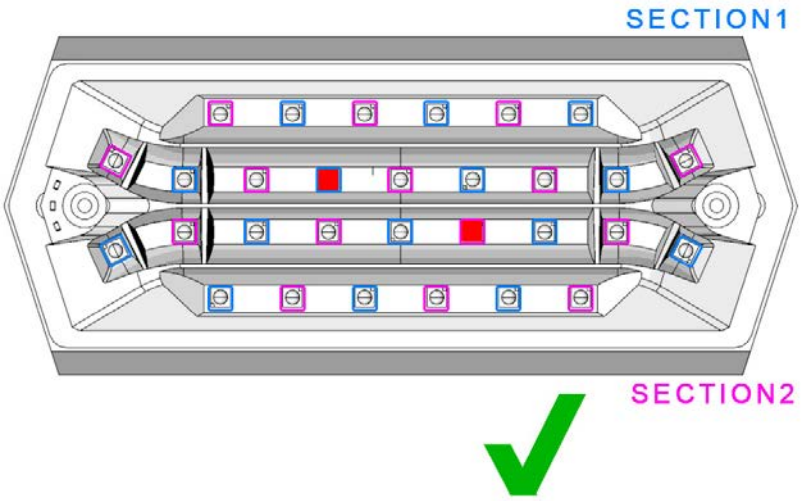


FIGURE 3: STROBE LEDS - SECTIONS (2x15 pcs)



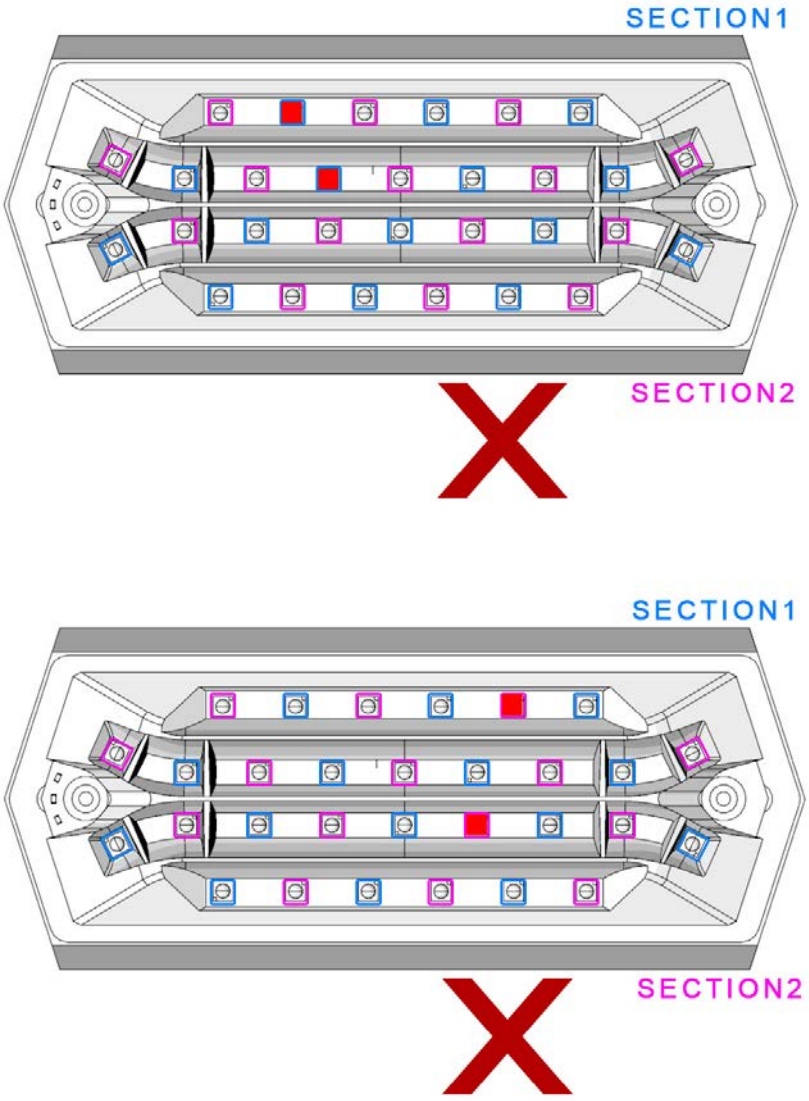


FIGURE 4: **2 LEDS** may fail to remain ETSO legal intensity for flight **(not in one section)**