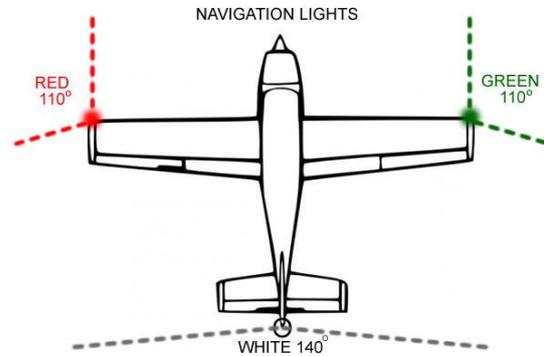


LED based NVG compatible Wing and Fin Navigation Lights for LCA

Introduction

Navigation Light is a coloured source of illumination on an aircraft, used to signal aircraft's position, heading and status. Navigation Lighting Systems include:



- Wing Navigation Light
 - A red light is mounted on left or port side of the aircraft.
 - A green light on the right or starboard side of the aircraft.
- Fin Navigation Light
 - A white light is mounted on fin tip of the aircraft.

In a situation, where the paths of two aircraft cross, these lights help each crew determine the other aircraft's direction and indicate who has right-of-way. CSIR-CSIO has developed night vision goggle compatible Wing and Fin Navigation Lights as per the requirements of LCA.

System Overlay

The Navigation Light System consists of three lights:

- Left Wing Navigation Light – Aviation red
- Right Wing Navigation Light – Aviation green
- Fin/Tail Navigation Light – Aviation white

Specifications

Key Specifications of Wing & Fin Navigation Lights	
Input Power Supply	28 V DC as per MIL-STD 704D
MTBF	Wing light ~ 25,000 hrs, Fin Light ~ 25,000 hrs
Dimension	Wing: 123.5 (L) X 40.5 (W) X 70.9 (H) (in mm) Fin: 62 (L) X 63.5 (W) X 68.3 (H) (in mm)
Weight	Wing: 150 g, Fin 144 g
NVG compatibility	As per MIL-STD 3009 for Gen-III class B/C

Flashing Rate	85±15 flashes per minute
Operating Temp.	-40°C to +71°C
Cooling	Thermal management achieved thru anodized aluminum finned mech. housing.
Mounting location on the Aircraft	Left wing Tip (Red), Right Wing Tip (Green), Fin Tip (White)

Status

The technology has been developed and qualification testing has been completed. The technology is ready for deployment in the field.

Field Units of Left Wing Navigation Light - Aviation Red, Right Wing Navigation Light – Aviation Green, and Fin/Tail Navigation Light – Aviation White Lights



Test Rig for Validation of NVG Compatible Wing & Fin Navigation Light

