

## **AIRWORTHINESS ADVISORY**

### **NIGHT VISION GOGGLE (NVG) ADVISORY PERTAINING TO CERTAIN RED COLOR LIGHT EMITTING DIODES (LED)**

**PURPOSE:**

This Airworthiness Advisory advises Weapon System Program Offices and NVG operators that certain LED lighting systems fall outside the combined visible and near-infrared spectrum of NVGs.

**SCOPE:**

This advisory applies to all United States Air Force (USAF) aircraft, including those operated by the Air National Guard and the USAF Reserve, which use NVGs for operations and training.

**REFERENCED DOCUMENTS:**

SAFO 09007, NVG Advisory Pertaining to Certain Red Color Light Emitting Diodes (LED), U.S. Department of Transportation, Federal Aviation Administration, 3/6/2009.

**BACKGROUND:**

The Canadian Air Force's Directorate of Flight Safety identified an issue with certain red obstruction lighting systems in a 2008 Flight Safety Flash which was followed by FAA Safety Alert for Operators (SAFO) 09007. Obstruction light manufacturers are beginning to use red LEDs for improved reliability. LEDs have very narrow spectral emission bands and limited infrared content. Aviation Red light ranges from 610 to 700 nm; however, NVGs with Class B minus blue filters are only sensitive to energy between 665 to 930 nm. LED lighting systems falling in the frequency range from 610 to 665 nm and thus outside the combined visible and near-infrared spectrum of the NVGs will not be visible.

**DISCUSSION:**

This advisory is to notify operators and program offices that newer LED lighting system obstruction lights can be less visible than incandescent obstruction lights when using NVGs. Conversion of obstruction lights from incandescent to LED lighting may result in previously visible obstruction lights becoming less visible or not visible.

**GUIDANCE/RECOMMENDATIONS:**

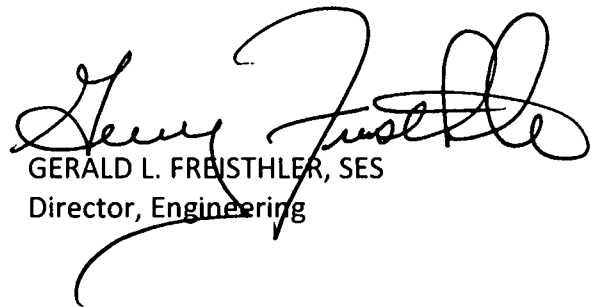
1. Aircrews are advised to exercise extra caution when flying in the area of obstacles during NVG operations.
2. Aircrews are advised to report any hazardous sites to their military safety officer.
3. Operational wings should ensure this information is incorporated into pilot NVG training programs.

**POINTS OF CONTACT:**

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Contact the ASC/AFRL Engineering Standards Group (ASC/ENRS, 937-904-5476, DSN 674-5476, [Engineering.Documents@wpafb.af.mil](mailto:Engineering.Documents@wpafb.af.mil)) for Airworthiness Advisory/Alert publication issues.



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