

OL 770-NVS

POWERED BY EXPERTS - CUSTOMER DRIVEN: *OL 770-NVS Automated Display Measurement System*



Optronic Laboratories has developed the [OL 770-NVS Night Vision Display Test and Measurement System](#), featuring powerful user-friendly software, precise direct viewing imaging optics, and DSP technology. The system provides fast, multi-channel measurements of spectral radiance, luminance, chromaticity, NVISa and NVISb and provides Pass/Fail results per MIL-L-85762A (*now obsolete*)// MIL-STD-3009 requirements.

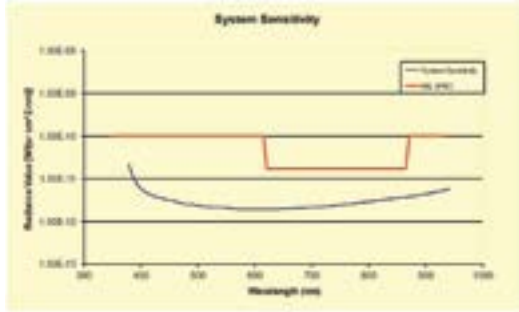
Compatibility between night vision goggles or imaging systems and crew and cockpit displays and lighting is critical in ensuring the safety of military, security and rescue teams as well as to the successful execution of field operations. Out of specification displays can result in blinding effects, such as blooming, that can lead to disastrous impairment of visibility. MIL-L-85762A and MIL-STD-3009 are the governing standards that prescribe the operating boundary conditions in terms of IR emissions to which all on board light sources must adhere. Spectroradiometers and photometers used to test such performance must conform to rigorous sensitivity and dynamic range criteria that few commercial instruments can meet. Optronic Laboratories has led the industry in offering the very best compatibility test solutions for over a decade. The OL 770-NVS addresses the needs of the aerospace lighting industry for quantifying cockpit display NVIS compatibility and aircraft exterior lighting.

Design Features

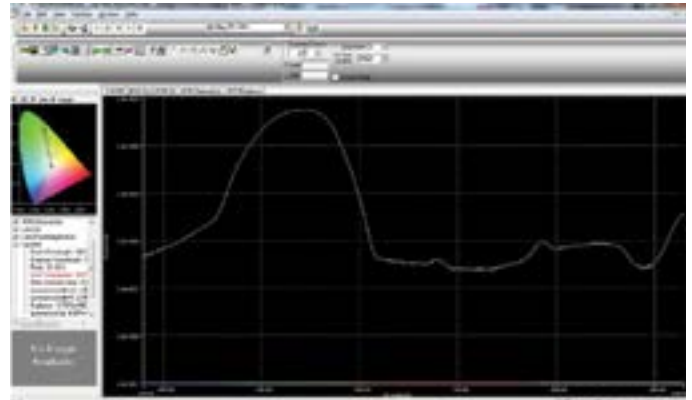


- **Speed** – Multi-channel detection provides more measurements in less time
- **Exceeds MIL-STD-3009/ MIL-L-85762A Appendix B requirements**
- **Portable** – Lightweight and compact footprint
- **Choice of measurement modes** - Auto and manual integration modes, continuous and single scans
- **Precise Direct Viewing Imaging Optic** – The OL 620-NVS CCD Imaging Telescope ensures accurate alignment of the measurement target and eliminates parallax errors
- **USB Interface** - Powerful Windows[®] 7-compatible software
- **Application software** – Provides instantaneous NVIS compatibility Pass/Fail results
- **Affordable** – Get the right tool for the job and meet your budget
- **Measurement of flashing sources** – Versatile! Can be used for a variety of other aircraft lighting applications

The OL 770-NVS is your total aerospace lighting solution. The software provides measurement results for not only NVIS compatibility but also exterior aircraft lighting with Pass/Fail chromaticity results per SAE AS8037 and AS25050 requirements.



OL 770-NVS Exceeds MIL-STD-3009 Sensitivity Requirements



Lighting Component	TYPE I CLASS I	TYPE I CLASS II	TYPE I CLASS III
Primary	✗	✗	✗
Secondary	✗	✗	✗
Structural Controls	✗	✗	✗
Component	✗	✗	✗
OMs, Work and Inspection Lights (EWI)	✗	✗	✗
OMs, Work and Inspection Lights (EIM)	✗	✗	✗
Control and Advisory Lights	✗	✗	✗
Anti Lights	✗	✓	✓
Warning Signal	✗	✓	✓
Master Caution Signal	✗	✓	✓
Emergency Air Lighting	✗	✓	✓
Electronic and Electro-Optical Signal	✗	✗	✗
Electronic and Electro-Optical Extra Vehicle	✗	✗	✗
Electronic and Electro-Optical Extra Mast	✗	✗	✗
MIL Systems	✗	✗	✗

Provides Pass/Fail indicators For each lighting component

Software Features

The OL 770-NVS Application Software allows for turnkey automated operation while providing the user with easy and complete access to the system's full power and capabilities.



Actual Measurement Data and Display from Master Caution Light



- Active zoom view CIE diagram with customizable lighting requirement boundaries
- Ability to see all Pass/Fail conditions for all lighting requirements in a specification simultaneously
- Fast access to all NVIS data, even while the instrument is continuously measuring
- Editable NVIS requirements to alter current specification or add new ones
- Built-in support for MIL-L-85762A (*now obsolete*), AS8037, AS25050, and UK Working Paper
- Image of measurement area stored with each scan
- Feedback on what aspect of a DUT failed a lighting requirement
- Easy access to Goggle A and Goggle B response graphs
- Windows XP/2000 OS-compatible



Report Template Builder!



OPTRONIC[®]
LABORATORIES

Data Sheet: B240 Dec 2020 | Rev A

As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

OL 620 CCD IMAGING TELESCOPE SPECIFICATIONS	
Wavelength Range	380 – 1100 nm
Lens	Achromatic, Fixed Focus, f/2 Objective Lens
Objective Lens Magnification	3X
Spot Size*	< 0.17 mm @ 100 mm Focal Distance
Mounting Thread	(2) 1/4-20 Tapped Holes on Underside of Housing
Mounting	Tripod (<i>Not Supplied</i>), OL 622 XYZ Alignment Stage
XYZ Alignment Stage (Included)	1-inch Travel Each Axis; Two (2) Adjustable Centerline Heights: 4.125 - 5.125" or 6.125 - 7.125"
Size	3"W x 5"H x 13.75"L (7.62 cm W x 12.70 cm H x 34.93 cm L) (Includes Objective Lens)
Weight	5.5 lbs (2.49 kg) (Includes Objective Lens)
OL 770-NVS SPECTRORADIOMETER SPECIFICATIONS (TYPICAL)	
Wavelength Range	380 – 930 nm
Spectroradiometer Accuracy**	< 1%, u'v' < 0.0003
Wavelength Accuracy**	< 0.75 nm
Half Bandwidth	10 nm
Stray Light (tungsten source)	< 2.5E ⁻⁴
Spectroradiometer Optics**	Full Scale at < 0.1 fL
Polarization Sensitivity**	< 1%
Signal Resolution	16 bit
Zero Drift (typical)**	< 0.01%
Linearity**	In Scale < 0.5%, Between Scales < 0.1%

* Other spot size configurations available upon request

** As defined by ML-STD-3009/ MIL-L-85762A

OPTRONIC[®]
LABORATORIES

Data Sheet: B240 Dec 2020 | Rev A

As part of our policy of continuous product improvement,
we reserve the right to change specifications at any time.