

ISV series

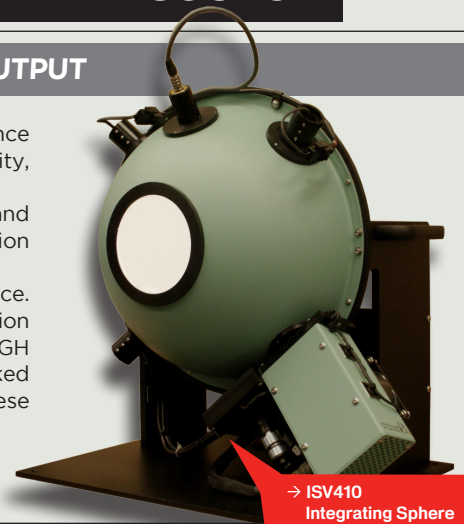
UV TO SWIR**INTEGRATING SPHERE SOURCE**

► CLOSED LOOP CONTROL OF LUMINANCE FOR A RELIABLE OUTPUT

The ISV Integrating Sphere Sources are compact, reliable and easy-to-operate reference sources providing an adjustable luminance output with unprecedented accuracy and stability, over the UV-VIS-NIR and SWIR spectral ranges.

They have been specifically designed for the calibration and test of cameras and sensors such as night vision systems, image intensifier cameras, radiometers, UV-vision enhancement systems, visible to SWIR focal plane arrays and optical detectors.

The emitting head is controlled via a 2U electronic unit through an ergonomic interface. Superior stability and repeatability are obtained through a closed loop control regulation based on an optical reading and acting on an iris attenuator. As well as all other HGH sources, the ISV sources are delivered with a certificate of radiometric calibration linked to International Primary Standards demonstrating the accuracy and reliability of these reference sources.



→ ISV410
Integrating Sphere

High performance radiation 200nm to 2500nm wavelength range thanks to the highest PTFE diffuse reflexion factor:

- o Highly uniform output port up to 4 inches (>101.6 mm)
- o Intuitive interface
- o Real time display of the luminance or radiance
- o High stability suitable for most sensitive sensors
- o Wide dynamic range with ultra-stable spectrum
- o Control through colored touchscreen panel
- o Radiometric calibration over multiple bandwidths including SWIR
- o Easy selection of luminance units
- o Display of color temperature and night levels
- o Remote control via Ethernet link, RS232, IEEE488
- o Built-in test equipment (BITE)
- o Infratest-LT remote control software

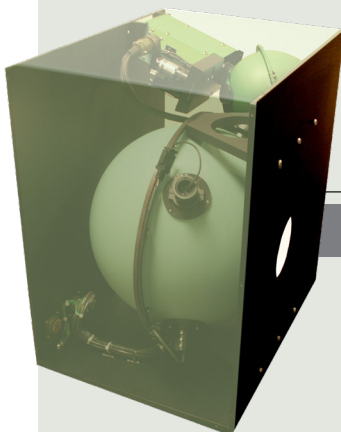
► HIGH PERFORMANCE MODELS

o **ISV410-UV:** Unique 5000K CT model utilizing four Xenon arc lamp – ideal for the test and calibration of radiometers and UV-enhanced cameras.

o **ISV 410-LL:** Low light VIS and NIR source specifically for the test and calibration of Night Vision systems.

► OPTIONS

- o Automated shutter for immediate ON/OFF of radiation
- o Low or high contrast USAF 1951 targets for resolution and MRC testing
- o Targets for LSF/MTF, distortion, FOV tests
- o InGaAs or Ge detector for improved SWIR regulation



→ ISV410-LL
Low Light Integrating Sphere



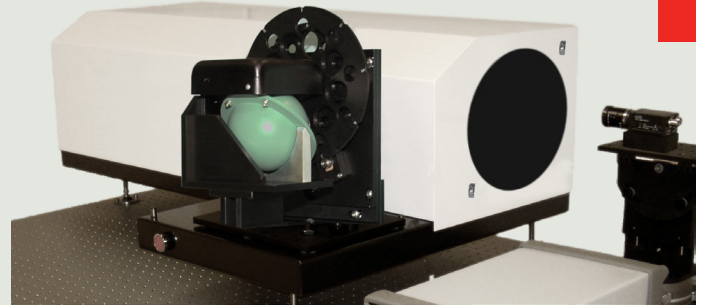
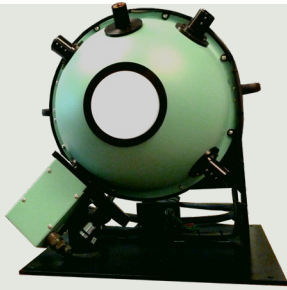
ISV series

UV TO SWIR

ILLUMINATION SOURCE

ISV series

ref: ISV-Len-aj]



→ UV to SWIR test equipment

TECHNICAL DATA ➤

	ISV210	ISV410	ISV410-HL	ISV410-UV	ISV410-LL
Color Temperature *	2950 K ± 25 K			5000 K ± 25 K	2856 K ± 25 K
Spectral Range	300 nm to 2500 nm			200 nm to 2500 nm	300 nm to 2500 nm
Luminance Range *	1 to 3,500 cd/m²	1 to 35,000 cd/m²	1 to 85,000 cd/m²	1 to 35,000 cd/m²	10 ⁻⁵ to 0.5μW/cm².sr (continuous range) 7 fixed steps to 10 ³ μW/cm².sr
Dynamic Range up to	1: 10000	1: 100000	1: 10000	1: 100000	
Luminance Uniformity	> 98 %				
Luminance Stability	<0.1% or < 2 cd/m² whichever is greater			Long term: <0.5% over 8 hours Short term: down to ± 10 cd/m²	0.5% or ± 3x10 ⁻⁵ μW/cm².sr whichever is greater
Display resolution/ units	Five significant figures / cd/m² or fL or W/cm²/sr				1.0 x 10 ⁻⁶ μW/cm².sr
Warm Up Time	< 5 min. per lamp				< 10 min. per lamp
Step Change Time	< 30 sec for change of 3,000 cd/m²	< 60 sec for change of 8,000 cd/m²			< 60 sec (continuous range)
Lamp Life	At least 500 hours				
Luminance Control Loop	Automatic				
Detector	Si standard, peak at 950 nm Optional: Ge or InGaAs (optional), peak at 1500 nm				
Sphere Diameter	6" (152.4 mm)	12" (304.8 mm)			
Output port Diameter	2" (50.8 mm)	4" (101.6 mm)			2" (50.8 mm) optional
Controller Size	2U x 19" Rack Mount				
Controller Weight	7 kg		10 kg	10 kg	7 kg
Computer Interface	Ethernet, RS-232, IEEE-488				
Power Requirements	100-240VAC, 50/60Hz				

* All models are delivered with a calibration certificate in color temperature and absolute radiance.



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