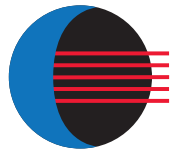


Full Spectrum. Full Calibration. Full Testing.



COLOSUS

Collimated Optics, Software
and Uniform Source Solutions

Labsphere
advancing the technology of light

MEASURE
any light source

CREATE
any spectrum

REFLECT
any wavelength

SBIR
SANTA BARBARA INFRARED, INC.
a HEICO company

Combining the Expertise of Two Industry Leaders to Give You An Immense Range of Complete Electro-Optical Testing Solutions



Labsphere is the world's premier source for ground-based calibration systems for large earth observing satellites, imaging systems and remote sensing optical calibration solutions. Labsphere is committed to always being on the cutting edge in measurement uncertainty and system performance that enables the next generation of remote sensing, climate science, military hardware and tactical calibration. Our engineering team designs standard and custom products to solve your radiometric challenges.



Santa Barbara Infrared is the leading supplier of sophisticated, integrated, multi-function E-O test systems used by the commercial, science and military markets for laboratory, factory, depot and field test environments. SBIR is capable of complete design activity to support all aspects of E-O testing including mechanical, electrical, electro-mechanical, electro-optical and software/firmware design. SBIR's practical, design-for-manufacturing approach results in both production and custom systems that are highly reliable and user-friendly.

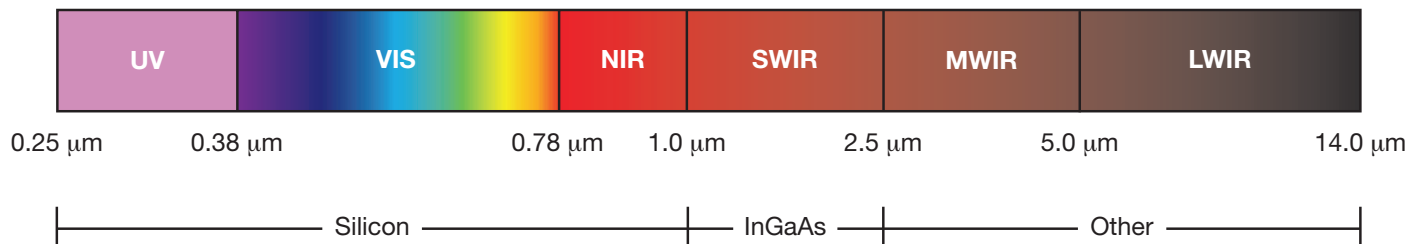
One Family of Test and Calibration Solutions Spanning the Two Worlds of VIS to IR

- One Software
- One Footprint
- One Calibration
- One Call for Support
- The Best of Two World Class Companies
- Creating a New Standard Platform for the Evolution of Test Specifications

Comprehensive 0.3 - 14 μm Solutions

- Traceable Radiance/Irradiance
- Technician/Development/Programmers Level for Test Development and Execution
- Collimated, Spatial & Flood Characterization
- VIS, NIR, SWIR, MWIR, LWIR

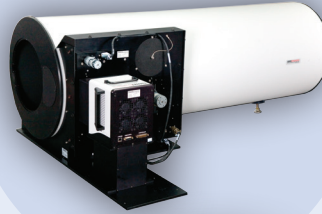
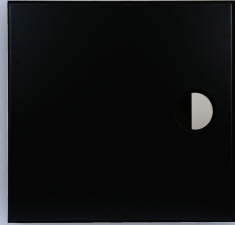
UV-VIS and Infrared Spectrum



COLOSUS Systems

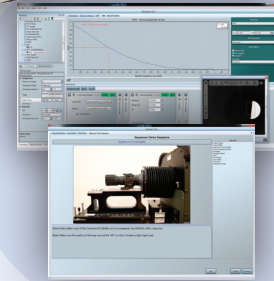
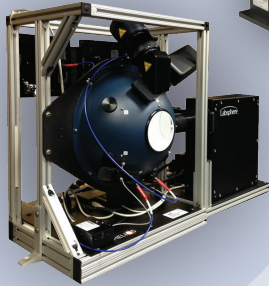
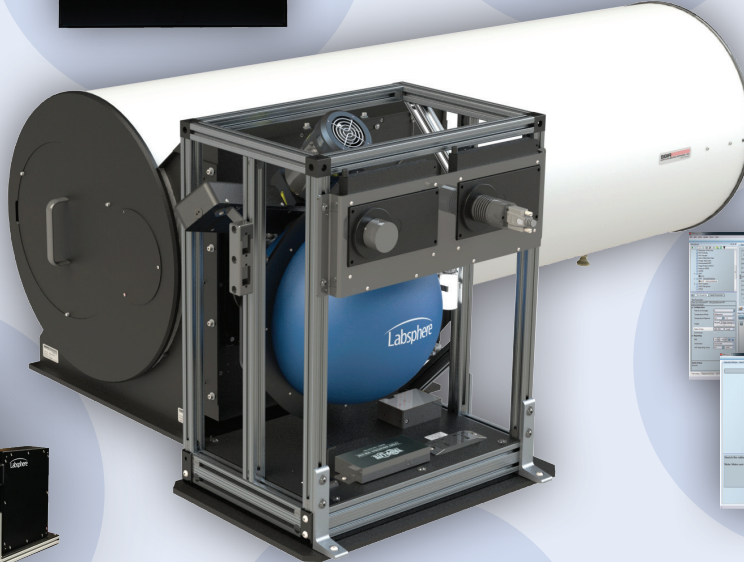
Target Wheels

- Rugged design
- 6, 12 and 16 position automated wheels
- Laser cut features for precise dimension specifications
- Huge range of precision targets to meet all testing needs
 - Emissive or reflective targets
- Custom designs



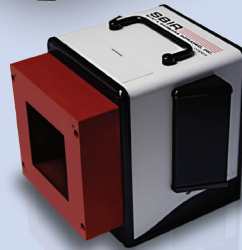
Collimators

- Off-axis Newtonian designs
- 6", 8" and 12" apertures
- Optics optimized for bands
- Optional non-infinite focus capability
- Custom designs including larger apertures and focal lengths



Integrating Sphere Systems

- HELIOS®-based modular systems sources and materials to suit 0.3-14um range
- 1200K-6500K or adjustable CCT solar radiance levels and spectrums
- Night vision levels
- Huge dynamic ranges ($>1e10$)
- Absolute traceable calibration
- Monitoring options: broadband, multispectral or spectral
- Color and tuneable spectrum options
- Custom designs for any application



Blackbodies

- Variety of temperatures from -40°C to $+175^{\circ}\text{C}$
- Aperture sizes from 4" to 12"
 - COLOSUS requires a 4" aperture
- Unparalleled emissivity option for enhanced radiometric control – emissivity $> 0.998!$
- Excellent temporal and thermal stability (mK)
- Uniformity $>98\%$
- Accuracy of 0.010°C
- Custom Designs

IRWindows™4

- Most advanced E-O software suite available
- Widely used in commercial, government & military establishments
- Core control of all system assets
- Ergonomic, adaptable, easy-to-use GUI
- Operator, developer and programmer modes
- Supports >100 standardized radiometric, laser and thermal tests
- Supports all standard framegrabber formats including Analog, GigE, Camera Link, DVI, CoaXPRESS, Firewire, HD 720 & 1080i (SMPTE 292M, 296M, 259M, 274M), USB3.0 and more!
- Custom camera and framegrabber support
- SQL database collection of data
- Custom test design and reports

IRWindows™4

Complete Control, Real Time Imaging and Standard Testing

Fully automates the execution, data collection and results analysis for industry standard E-O performance tests

IR Tests (50+ available)

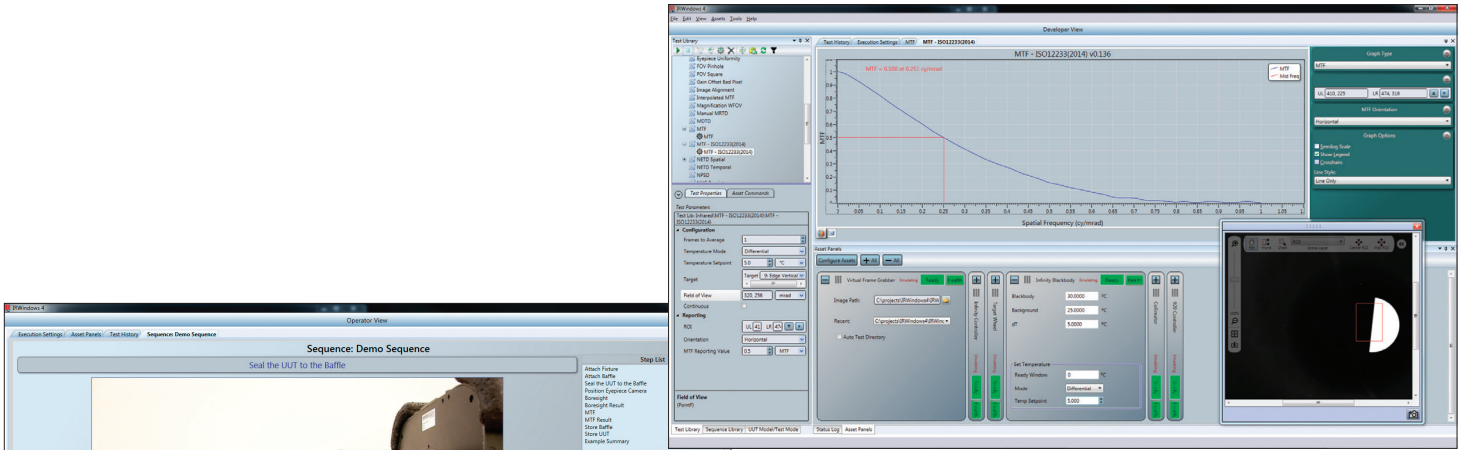
- NETD (Spatial, Temporal & 3D)
- SITF
- MTF (Interpolated, Continuous)
- MRTD (Manual & Auto)
- Gain, Offset, Bad Pixels (GOBP)
- Boresight
- Distortion
- Uniformity
- And more!

Visible Tests (40+ available)

- Responsivity
- Noise Equivalent Input
- NETD
- MTF (Interpolated, Continuous)
- Field of View
- MRC
- Boresight
- Distortion
- Uniformity
- And more!

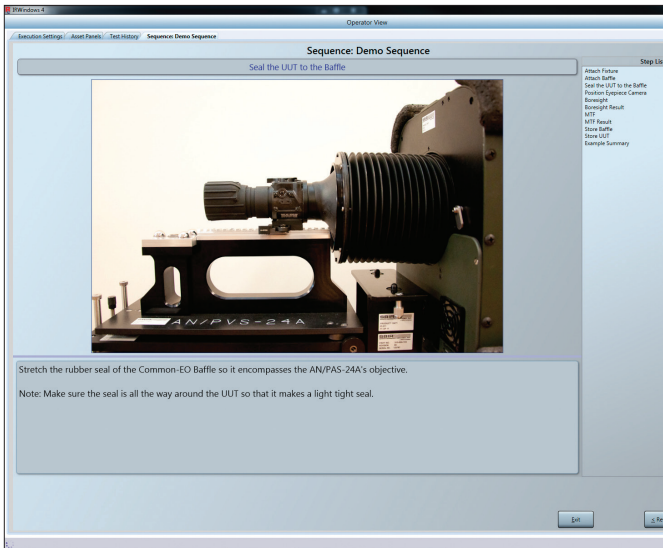
Laser Tests (15+ available)

- Beam Divergence
- Laser Energy
- Laser Power
- Laser Presence
- Laser Pulse Width
- Boresight
- Atmospheric Extinction Ratio
- And more!



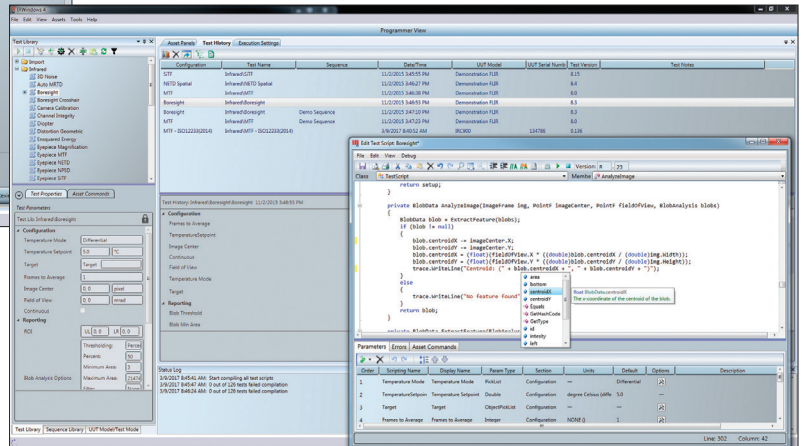
Developer Mode

Real time asset health feedback provides user with current and historical status of connected hardware



Operator Mode

Easily configure test program instructions (TPIs) with text, images and video for technicians to follow

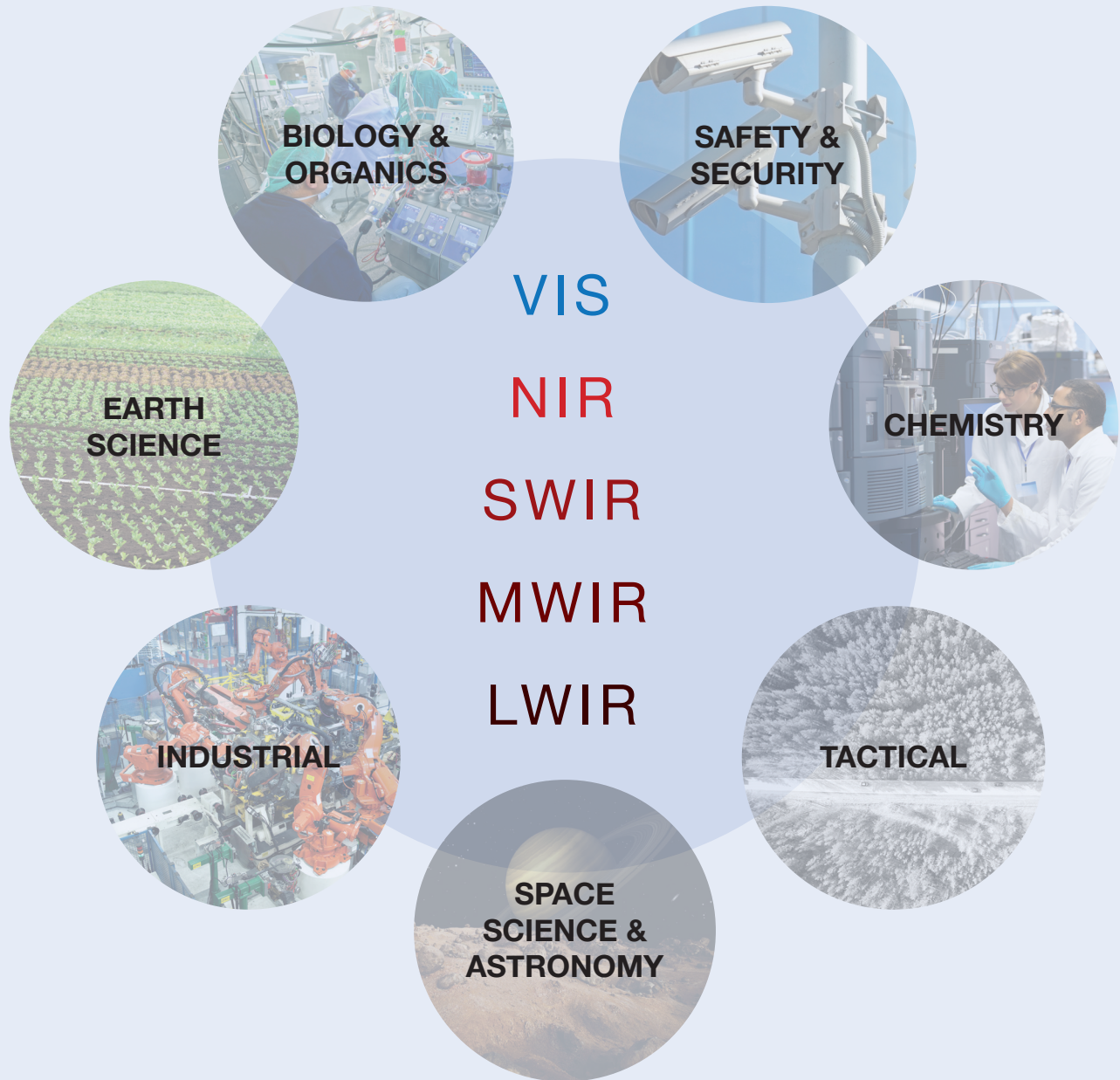


Programmer Mode

100+ tests including: visible, infrared, laser and multi-spectral



Collimated Optics, Software and Uniform Source Solutions
for a World of Radiometric Applications



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