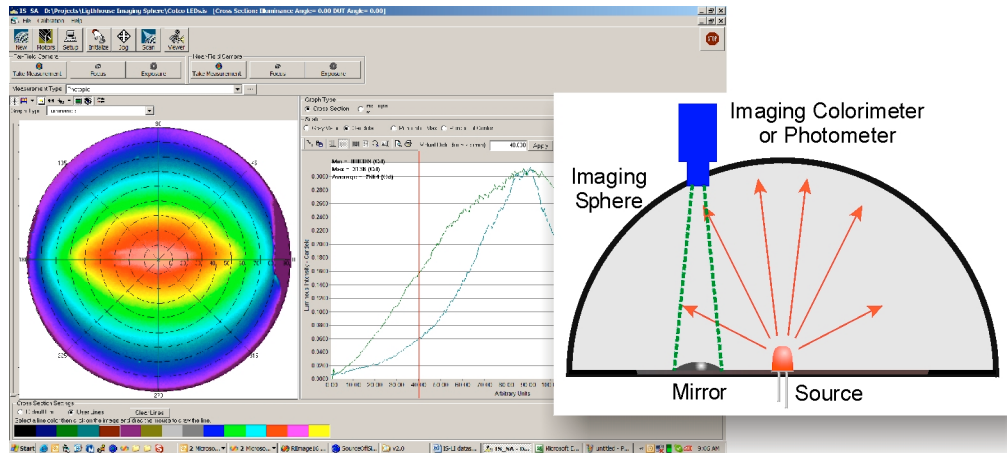


Imaging Sphere – Luminous Intensity (IS-LI)

High speed, low cost, luminous intensity measurement system for LEDs and other small sources.



RADIANT

Radiant Imaging's new Imaging Sphere™ (IS-LI) is the first system to enable rapid, comprehensive measurement of luminous intensity, radiant intensity, CIE chromaticity coordinates and correlated color temperature (CCT), all as a function of angle, for LEDs and other small light sources. Based on patented technology developed jointly with Royal Philips Electronics, the IS-LI acquires data over an entire 2π steradian in a single measurement, taking just seconds or less. Previously, obtaining these precision measurements required goniometric tools; but, with no moving parts, the new IS-LI is orders of magnitude faster than traditional methods. This unique combination of high precision, high resolution and speed enables real-time, production-line QC of LEDs for the first time, and makes the IS-LI ideal for R&D purposes as well.

The IS-LI system consists of a 20" (550 mm) diameter, hemispherical measurement chamber, mated with our PM-1400 Series Imaging Colorimeter (with a 512x512 pixel detector). Other imagers offering different dynamic range and resolution are available as well. System software supports automated and/or customized measurements, as well as data analysis and display functions. Data can be displayed as isometric plots, cross-sectional graphs, radar plots, bit maps and color graphs. For technical or sales support contact us at sales@radiantimaging.com or call us at 425-844-0152.

IS-LI Advantages

- Captures all angles at once for high speed operation.
- Produces high angular resolution results.
- More economical than alternative technologies.
- Has no moving parts for high reliability.
- Includes powerful, flexible image acquisition and processing software.

Performance Specifications

Luminous intensity range	
Minimum	0.1 candela
Maximum [w/ ND]	1 x 10 ⁷ candela
Angular accuracy	
2mm DUT	0.25%
10mm DUT	1.20%
Angular resolution	
	0.5°
Angular range	
	Azimuth: 0° - 360° Inclination: 0° - 85°
Dynamic range	
	14 bits (16,384 gray scale levels)
System accuracy	
Luminous Intensity	±0-5%
Chromaticity coordinates [x,y]	±0.005
Short term repeatability	
Luminous Intensity	±0.5%
Chromaticity coordinates [x,y]	0.0006
Minimum measurement time	
	1 sec
Dimensions (LxWxH)	
	552 mm x 635 mm x 673 mm
Weight	
	30 kg

Testing Capabilities

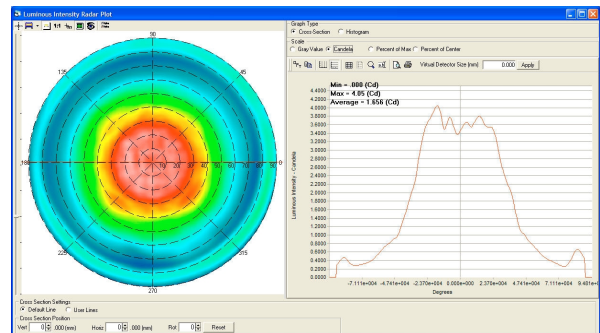
- Luminous intensity
- Radiant Intensity
- CIE chromaticity coordinates
- Correlated color temperature (CCT)
- Color difference (delta u'v')

Host Computer Requirements

Pentium IV
512 MB RAM
Windows® 2000/XP
USB 2.0 Interface

Imaging System Compatibility

The Imaging Sphere is normally configured with a Radiant Imaging PM-1400 series Imaging Colorimeter and a 512x512 detector. However, any of the Radiant Imaging PM Series™ Imaging Photometers and Colorimeters are compatible with the Imaging Sphere, offering the user an expanded range of performance and cost options. Contact Radiant Imaging Technical Support for camera recommendations specific to your application.



Luminous Intensity Plot