

Compact Imaging Sphere
IS-LITE™



Applications

- LED luminous intensity distribution measurement
- Small light source luminous intensity distribution measurement
- Production quality control
- Optional color distribution measurement

Benefits

- Fast, compact, low cost luminous intensity distribution measurement
- Nearly instantaneous characterization of LED output
- Designed specifically for production applications

Rapid, low cost, production measurement of far-field luminous intensity distributions

The IS-LI TE™ (Imaging Sphere for Luminous Intensity Measurement, TE version) is a smaller, lower cost version of Radiant Vision Systems IS-LI™ system. It is designed for applications in production and R&D where speed of measurement and smaller size are important. The key differences are that the IS-LI TE™ uses a smaller optimized measurement dome and a faster, lower dynamic range imaging colorimeter to image the light source and capture luminous intensity data. Because of this, the IS-LI TE™ provides measurement precision and cost appropriate for production applications.

The IS-LI TE™ provides rapid, comprehensive measurement of

- far field luminous intensity
- radiant intensity
- CIE chromaticity coordinates
- correlated color temperature (CCT)

all as a function of angle, for LEDs and other small light sources.

Because the IS-LI TE™ captures full luminous intensity distribution data in a matter of seconds or less with no moving parts, the system is ideally suited for production line quality control measurements of LEDs. Its unique design provides, for the first time, an economic, fast method for not only measuring total flux but also angular output information that is critical for most illumination and display applications.



Key Features

- Complete luminous intensity distribution measurement in a single image capture
- Compact, portable form factor
- Rugged and reliable for production applications
- Complete Imaging Sphere measurement and analysis software

Specifications*

Optical Specifications

CCD type	Interline CCD
Luminous intensity range	Minimum: 0.05 cd Maximum: 1×10^5 cd
Field of view	Approximately 2π steradians
System Accuracy	Luminous Intensity: $\pm 5\%$, Chromaticity coordinates [x,y]: ± 0.006
Color measurement	CID 1931 matched X,Y,Z filters (photopic-only option also available)
Minimum measurement time	Photopic measurement: < 1 sec Colorimetric measurement: 5 sec

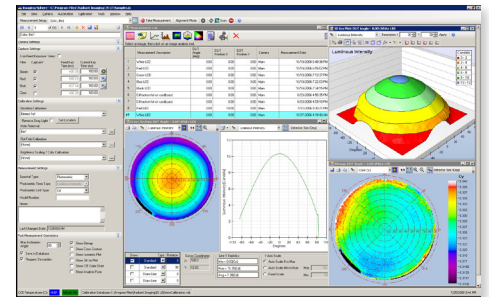
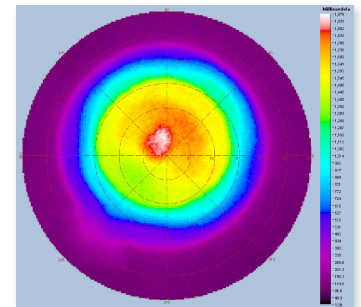
Mechanical Specifications

Overall size (WxHxD)	310 mm x 350 mm x 320 mm
Orientation	Vertical, face-down, or face-up
Test distance	100 mm (CIE "Condition B")
Angular resolution	0.5°
Weight (approximate)	14 kg
Construction	Integrated imaging dome and imaging colorimeter

Control and Analysis Software Specifications

Measurement capabilities	Intensity: cd, mcd Color: CCT; CIE x,y, u',v'; E
IS 1.x software function	Measurement set-up and image capture control Gray-scale and false color display Intensity and chromaticity cross-sections 3D surface plot of intensity or chromaticity Isometric plot of intensity or chromaticity Graph and image comparison for multiple captures intensity data export to multiple formats Process measurements (rotate, add, threshold, etc.)

* Specifications subject to change without notice



System Requirements

- 2.0 GHz or faster processor
- 1GB or greater RAM
- Windows® 7, Vista or XP
- USB 2.0 interface

¹ Based on a virtual detector radius of 10 pixels. Specification is for every point within the field of view of the camera.