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Technical Datasheet for Product: UHE-45 Highly Collimated

Product Description:

Sciencetech is proud to offer our new line of Ultra-High Efficiency solar simulators. Building on our existing Fully Reflective design, but optimized for greater illumination sizes and more power on target, our new UHE systems, of which the UHE-45 collimated is one model. This solar simulator is designed for illuminating concentrated photovoltaics and solar thermal applications.

By utilizing a completely new design for the beam homogenizer, the UHE systems are capable of maintaining Sciencetech's proprietary "Fully Reflective" design to maximize ultraviolet light throughput, but also produce a far more efficient and powerful unit than previously possible. All this without sacrificing temporal stability, spatial uniformity, or spectral matching.

This ASTM Class AAA Solar Simulator is capable of illuminating a 45 x 45 cm area at a working distance of 1.5 meters from the projector with a highly collimated light beam of 0.5° half angle divergence.

Due to the low power draw, compact size, and light weight design, the UHE are perfect for almost every application requiring small to medium size illumination targets. The compact nature of the system allows Sciencetech to provide top quality performance for a fraction of the cost of our competition.

The UHE comes standard with a downward facing alignment and stand. Includes internal power supply.

Optional Spectral response and ranges are available, for example: AM 1.5D extended spectral range from 300 nm to 1800 nm.

Calibration/Measurement Notes:

- All standards are ASTM E927-05 and IEC 60904-9 unless stated otherwise.
- System specifications are with AM1.5D filter unless stated otherwise.

For Further Information, Please Contact:
Sales@Sciencetech-inc.com
519-644-0135



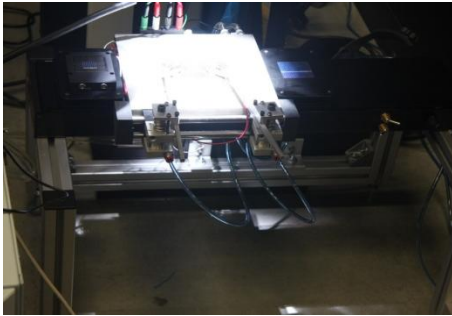
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Specification	Value
Illumination Area	45 cm x 45 cm (18" x 18")
Illumination Diameter	45 cm (18")
Working Distance	150 cm (59")
Collimation Angle	0.5 degrees (half angle)
Power on Target	1000 W/m ² (100 mW/cm ²)
Spectral Match	Class A 18.4% (400-500nm) 19.9% (500-600nm) 18.5% (600-700nm) 15.2% (700-800nm) 12.9% (800-900nm) 16.8% (900-1100nm)
Temporal Stability	Class A Better than 2%
Spatial Uniformity	Class A Better than 2%
Operational Lifetime	2,000 Hours (Average)
Stability of Power on Target (Short Term)	+/-1% after 10 minutes
Lamp Type	Xenon short arc
Electrical Power Line	Single Phase 200-240 VAC/ 8.5 Amps
Air Mass filter Standard	AM1.5D
Dimensions	200 x 100 x 60cm
Weight (approximate)	30 kg
Cooling Mechanism	Forced Air Cooling

Optional Components:
A full assortment of Standard and Extended Spectral range Air Mass filters (AM0, AM1D, AM1D, etc...)
UV or IR Filtering
High UV Operation (Note: High UV Operation generates Ozone due to bulb)
Replacement Xenon arc lamps
Calibrated Reference Cell
Electronic or mechanical shutter.
Remote control and digital readout.

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Technical Drawings and Photographs:



UHE-45 Collimated System
 45 x 45 cm Target
 1 Sun @ ASTM AAA Standards
 0.5° Collimation
 1.5 meter working distance
 Dimensions (h x w x d):
 2 meter x 1 meter x 0.6 meter

