



## LUMETRON IP-Series Integrating Spheres



### LUMETRON IP-1000



Photometric Integrating spheres are used for evaluation of luminous flux of light sources & luminaires with a single measurement & for comparative analysis. The sphere is an essential tool for photometric research laboratories & lamp/luminaire manufacturers. The LUMETRON IP series is available in 0.5 m, 1.0 m & 2.0 m diameter sizes. Smaller diameter spheres from 50 mm to 500 mm are also available for special applications. The spheres are constructed from fiberglass reinforced plastic with embedded tubular steel frame for rigidity. A good internal coating is essential for integrating spheres. The IP-Series is coated with a base coat paint & finished with special LUMETRON SP-80 water based BaSO<sub>4</sub> coating. The two hemispherical hinged halves allow easy internal access and magnetic clasps ensure firm light proof closure. Two circular windows are provided for auxiliary lamp & photocell fixing. Internal adjustable baffles are used to prevent the photocell from viewing the test or auxiliary lamps directly. The complete assembly is mounted on castors with leveling jacks.

#### SPHERE PAINT

The internal sphere wall is painted with a white, non-yellowing & hiding base coat. This keeps the sphere free from corrosion, ensures good adhesion & does not affect the optical properties of the final coating. The final coating is done with specially formulated sphere paint, LUMETRON SP-80, which has a nearly constant spectral reflectance of about 80%. The special sphere paint is

white matt & water removable. All other internal parts of the sphere are painted white with high reflectance.

### Features

- \* Spectral reflectance of LUMETRON SP-80 is nearly independent of wavelength with reflectance factor of about 80%.
- \* Lamp positioning device allows test lamps to be fixed at sphere center with precision kelvin lamp holders.
- \* Adjustable baffles between lamp & sensor can be fixed between  $d/4$  &  $d/6$  ( $d$  = Sphere Dia.)
- \* An auxiliary lamp, (Halogen, 12 V, 20 or 50 W) with baffle adjustable between  $d/4$  &  $d/6$ .
- \* The Sphere can be opened manually for lamp changing & maintenance due to its split hemispherical construction.
- \* Swivelling castors provide mobility to the Integrating Sphere & once positioned, can be jacked up in position.
- \* All connection wires are brought out & terminated in a junction box having 4 mm sockets. This allows the power supply & voltmeter to be easily connected. The junction box has a selector switch to select different filaments in dual filament lamps. Kelvin measuring system ensures lead voltage drops are compensated in the power supply.
- \* Applicable Standards : IS:2407, BS:5225, IS: 1606, IS: 3563

### LUMETRON IP-150



### Options

- \* Modular Precision Kelvin Lamp Holders LUMETRON MH-4 Series to suit various base cap configurations.
- \* Precision Digital Lux Meter LUMETRON PM-3, color and cosine corrected, with data hold.
- \* Electrical Test Panel LUMETRON EP-4 Series (Digital)
- \* Temperature Indicator with Probe.

### LUMETRON IP-500



### Models

Type	Diameter	Application
LUMETRON IP-150	150mm	Spectrophotometers
LUMETRON IP-500	500mm	Automobile / Miniature Lamps
LUMETRON IP-1000	1000mm	GLS / Automotive Lamps
LUMETRON IP-2000	2000mm	Fluorescent, High Intensity Discharge, Metal Halide Lamps etc.

