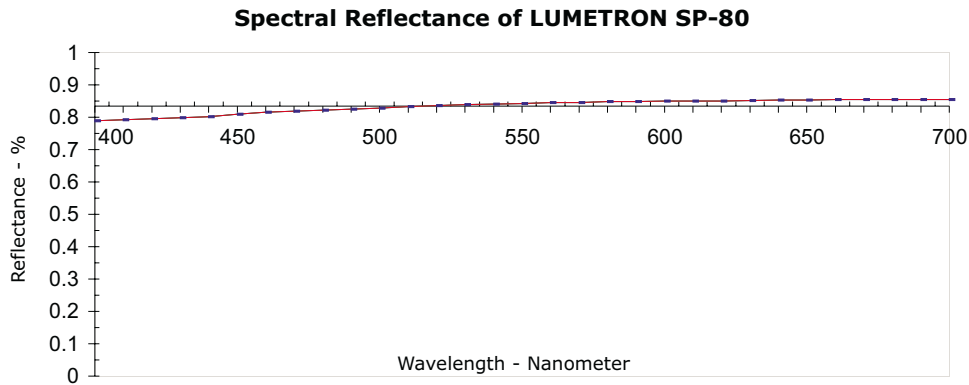




LUMETRON SP-80 Integrating Sphere Coating



Integrating Spheres are essential tools for photometric research laboratories & lamp / luminaire manufacturers. A good internal coating is essential for integrating spheres. **LUMETRON SP-80** is a special water based Barium Sulphate ($BaSO_4$) white reflective paint particularly suitable

for internal coating of Integrating Spheres. It offers an almost constant reflectance in the range of 380 nm to 780 nm (visible wavelength range). The reflectance factor of the sphere paint can be varied from 75% to 95% depending on the additives added during formulation and the end application. Usually, an 80% reflectance is suitable for photometric applications but other values can be provided on request. The sphere paint is supplied premixed in 4 kg packs and can be directly applied on the sphere surface with a brush (after proper surface preparation) or it may be diluted with distilled, filtered water and sprayed for better consistency.

Features

- * Spectral reflectance of *LUMETRON SP-80* is nearly independent of wavelength with reflectance factor of about 80%.
- * The special sphere paint is white matt & water removable.
- * Supplied in premixed 4kg packs with high viscosity to allow brush painting manually.
- * Can be sprayed coated on the sphere wall to achieve better consistency after diluting with distilled filtered water.
- * Usually requires 18 to 24 hours drying period for each coat depending on ambient humidity and temperature.
- * Several layers are required to achieve sufficient thickness of the coating to ensure good optical performance.
- * Between 9 to 14 square meters of coverage per kg. of paint depending on method of application.
- * Can be used for coating of *LUMETRON IP-Series* Photometric Integrating Spheres as well as spheres from other manufacturers.

NOTES ON BASE COATING

The internal sphere wall should be coated with a white, non-yellowing & hiding base coat. This keeps the sphere free from corrosion, ensures good adhesion for the barium sulphate paint does not affect the optical properties of the final coating. Several layers may be required to achieve proper opacity.

Further, if the Sphere is constructed of Aluminium, it is essential to first carry out chemical treatment such as chromatising to remove the oxidised layers and prevent corrosion, and then to apply several coats of suitable Primer, before coating with *LUMETRON SP-80* sphere paint.

Spheres should generally not be made of steel or iron sheets, mainly because the final coating is water based which easily corrodes the metal. The coating also yellows faster.

For further details on Sphere Paint and Coating services, please contact LUMETRONICS.

