

## Polymer Integrating Spheres



### Highlights:

- High efficiency
- Extreme positional independence
- Compatible with OPM150 system

### Our offer in Detail:

Artifex Engineering designs and manufactures a range of high quality polymer based integrating spheres for low average power applications in the visible and near infra-red. The larger spheres have standardized ports for modular configuration. The ports can be populated with either a photodiode or a fibre receptacle. The smaller sized spheres come with an integrated photodiode and an SMA fibre port. These spheres are compatible with our OPM150 series of optical power meters. Just plug it in to your USB port and start measuring!

The polymer integrating spheres from Artifex Engineering are very efficient due to the high reflectivity of the quality material we use. These spheres are CNC machined from solid raw material – not just coated. The result is a stable instrument you can trust!

### Options

- Fibre ports: SMA and FC
- Photodiodes: Si, Ge, InGaAs, VIS-enhanced InGaAs, IR-extended InGaAs
- Sphere inner diameters: 10mm, 20mm, 50mm, 100mm

### Specifications

- Wavelength range: 250-2500nm
- Positional dependence: <1% (full aperture)
- Angular dependence: <2% ( $\pm 30^\circ$ )
- Power and energy density: 1kW/cm<sup>2</sup>; 2J/cm<sup>2</sup>



### Your problem is our challenge – flexibility is our standard:

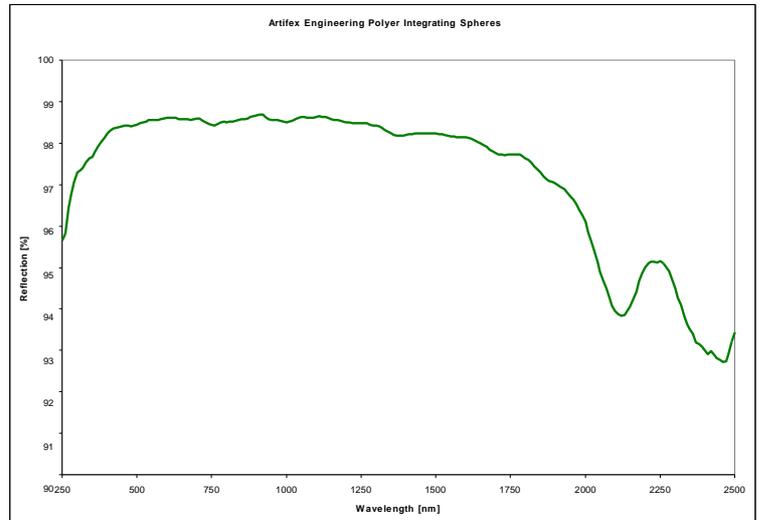
We will gladly adapt, for example, the aperture or diameter to suit your application. Let us know your requirements

# The perfect match!



The high reflectivity and lambertian diffusivity of the polymer we use ensures wide band efficiency over the full range of 250-2500nm.

These integrating spheres can be used for optical power measurement as well as beam homogenization for accurate spectral analysis. The 100mm sphere exhibits a homogeneity of better than 1% at the 25mm port when illuminated through the side (fibre) ports.



The 10mm and 20mm spheres feature an integrated photodiode (choice of UV-Silicon, VIS-enhanced InGaAs or Germanium) for optical power measurement, as well as an SMA fibre port for auxiliary functions such as spectral analysis. Both outputs are located on the back side of the device. Both of these spheres are calibrated and are compatible with our OPM150 series of optical power meter.

Inner diameter: 10mm  
Input port diameter: 3.5mm  
Max. power: 250mW



Inner diameter: 20mm  
Input port diameter: 7mm  
Max. power: 1W



The 50mm and 100mm spheres have modular ports with choice of SMA and FC fibre receptacles or photodiode. These spheres may be calibrated upon request.

Inner diameter: 50mm  
Input port diameter: 12.5mm  
Max. power: 5W



Inner diameter: 100mm  
Input port diameter: 25mm  
Max. power: 20W

