

Cosine Corrector

Cosine correcting probe for
Irradiance measurements in the visible range



The cosine corrector collects light over 180° with a near-cosine dependence on the incoming angle. It can be used for measurements of irradiance (radiant flux per area) and other measurements that require well-defined light collection characteristics. It can eliminate optical interfacing issues caused by the sampling geometry.

The Cosine Corrector can be attached to an optical fiber with an SMA905 connector or directly to the spectrometer.

Transmission characteristics

The diffusor itself transmits about 30% of the incoming light. When used with an optical fiber or a spectrometer, only a small amount of the transmitted light can be collected, because it is scattered in all directions.

Therefore, when using the cosine corrector with an optical fiber or a spectrometer, the overall transmission is much smaller, typically in the range of 0.1 to 1 %.

If you find that the sensitivity of the spectrometer with the cosine corrector is too low, please consider using a larger entrance slit. This increases the sensitivity while decreasing resolution.

Applications

- Irradiance measurements
- Measurement of sunlight radiation
- Colorimetry
- LED characterization

Specifications

Material	Opal diffusing glass
Angular dependence	Near-Lambertian
Wavelength range	330 - 820 nm
Clear aperture	8.5 mm
Field of view	180°
Housing	black anodized aluminium
Optical interface	SMA905 connector (can be connected to optical fiber or directly to spectrometer)

Ordering Information

Part number	Description
AC-COCOR-VIS	Cosine corrector for the visible range

Contact

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