

Manual for Installation and Operation.

JB COS

JB COS. The accurate cosine receptor for field spectroscopy application.

JB COS

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JB COS DESCRIPTION

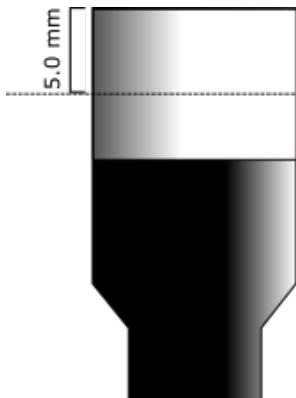
Last Update: 2023-09-05

Overview:

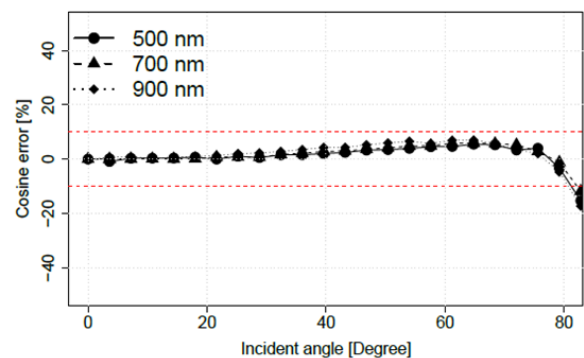
The JB Cosine Corrector (patent nr: 10 2021 133 529,9) was developed in order to meet the high expectation of accurate measurements in any given circumstances. These cosine correctors enable valid results at sun movements seen at the equator or the most northern or southern places of the planet. Each unit is tested for its response and calibrated accordingly. To trace the calibration, every unit has a serial number JB-COS-XXX.

Concept:

The cosine diffuser is built from a diffuser cap, which is glued to a black galvanised aluminium base. The latter features a SMA thread for connection to a fibre optic. Both, the diffuser cap and the metal part are UV resistant and intended for permanent outdoor use.



Side view of the cosine receptor. A dotted line indicates the necessary clearance of the diffuser above a holder.



Response deviation from cosine law. dash lines report 10% error (at 80 degree of incident angle)

Installation:

While handling the cosine receptor, do not touch the diffuser. Only touch the metal part.

To achieve a good cosine response the cosine response is screwed to the SMA end of the fibre optic. Eventually use two pliers to fully attach the SMA screw to the cosine receptor. Install the cosine receptor at the most upper position of your monitoring