

Applications

- The ELDONET represents a major advancement in solar radiation measurement. The versatile, low cost three-channel dosimeter makes it an ideal instrument for short-term and long-term measurement of solar and artificial radiation with high precision
- The ELDONET instruments are currently being installed in a dosimeter network funded by the European Commission including terrestrial, aquatic and high altitude stations

Visit our home page in the Internet: <http://www.eldonet.org>

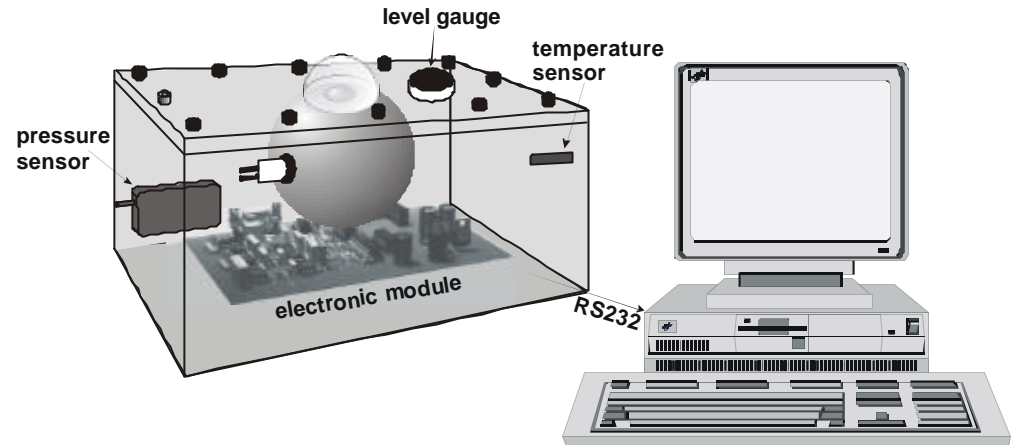
Real Time Computer

Neue Str. 9, D-91096 Möhrendorf,
Germany

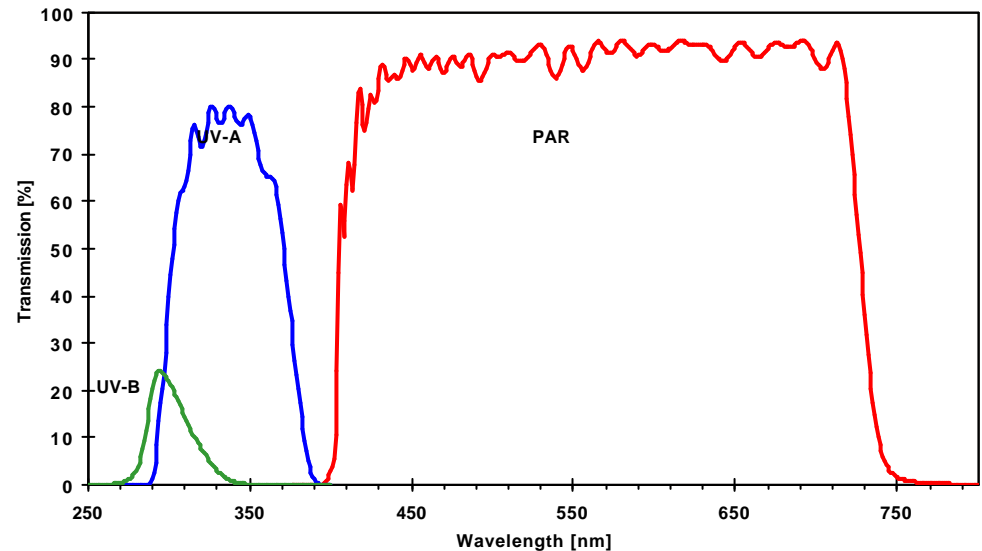
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ELDONET DOSIMETER

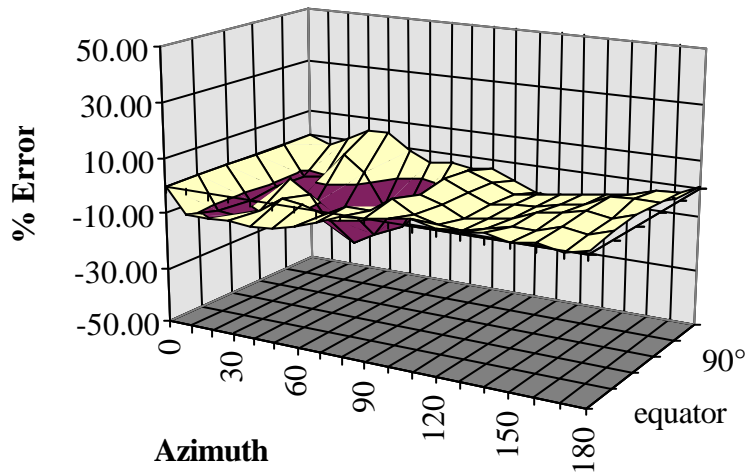
- **Three-channel dosimeter for continuous monitoring of solar radiation:**



Filter functions: UV-B (280 - 315 nm); UV-A (315 - 400 nm); PAR (400 - 700 nm)



- Temperature internally controlled (30°C) to prevent spectral shifts due to temperature changes
- Dynamic range 2^{12}
- External temperature measurement
- Level gauge for exact horizontal alignment
- Depth gauge in aquatic instruments
- Ulbricht integrating sphere for direct and diffuse radiation
- Custom-made hemispherical quartz dome
- Sensitive UV and VIS photodiodes
- High precision integrated circuits with low voltage offset and temperature compensation
- Superior linearity and long-term stability of calibration
- Low cosine error



- Resolution
 - < 0.1 W m^{-2} (PAR)
 - < 0.01 W m^{-2} (UV-A)
 - < 0.0005 W m^{-2} (UV-B)
- 12 Bit A/D conversion and digital output (RS232) for automatic computer measurements, compatible with any computer with serial port
- 115/230 VAC or 12 VDC power; backup power supply optional

- Rugged, fully weatherproof instrument case
- Terrestrial or underwater measurements
- Size 250 x 200 x 185 mm (length x width x height), 3150 g without cables
- Cable 15 m (45 feet); radio transmission of the RS232 signals optional
- Temperature range -40 to 70°C
- Frequent measurements (ca. 60 per minute) and integration over 1-min intervals
- Ease-of-use software (WINDOSE 2000) for WIN 95/98 for online measurements and graphical and numerical display



- Automatic data recording in ASCII files
- Software to calculate hourly, daily, monthly and annual doses
- High accuracy due to spectroradiometric calibration with PTB traceable quartz halogen calibrated lamps