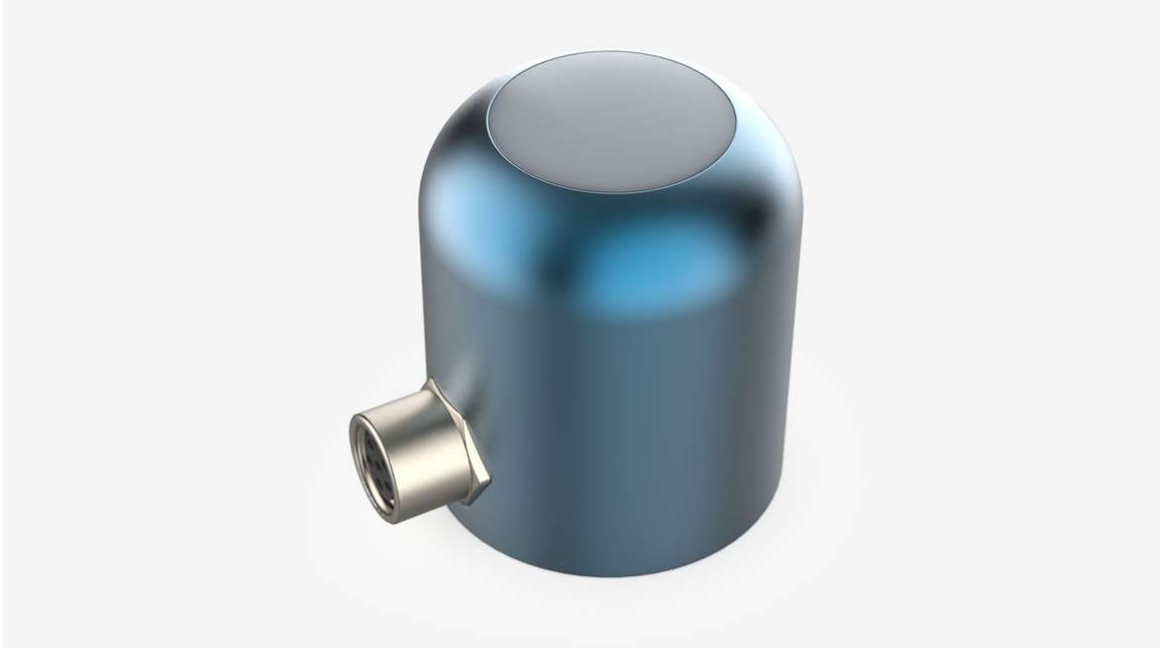




METER

SQ-521 PAR SENSOR



Measure photosynthetically active radiation (PAR)

Get accurate and cost-effective measurement of photosynthetically active radiation (PAR) from all light sources used to grow plants.

Use it absolutely everywhere

The SQ-521 is a full-spectrum quantum sensor that measures the Photosynthetic Photon Flux Density (PPFD) in $\mu\text{mol m}^{-2} \text{s}^{-1}$ from a field of view of 180 degrees. Get superior, continuous PPFD measurements over plant canopies in outdoor environments, greenhouses, and growth chambers, and reflected or under-canopy (transmitted) measurements in the same environments.

Best full-spectrum sensor on the market

It has an incredible spectral range of 389 to 692 nm \pm 5 nm, which means superior performance under variable sky conditions and increased accuracy under LED and other artificial light sources. Sensors are cosine-corrected to maintain their accuracy even when radiation comes from low zenith angles. Each sensor is carefully pre-calibrated for all light sources in controlled conditions and traceable to NIST reference standards.

Rugged, self-cleaning housing

The SQ-521 PAR Sensor is designed with a patented domed-shaped sensor head (diffuser and body) to facilitate runoff of dew and rain. This keeps the sensor clean and minimizes errors caused by dust blocking the radiation path. Sensors are housed in a rugged anodized aluminum body, plus each sensor comes with a special mounting bracket and leveling plate.

Easy setup. Easy data access.

The simple-to-set-up SQ-521 is plug and play with the ZL6 data logger, which self-identifies each sensor and includes a tilt sensor so you can see remotely if your quantum sensor is off level. Get instant and continuous data from the cloud wherever you are. See your data on computer, tablet or smartphone.



BILMAR BİLİMSEL ARAŞTIRMA VE MÜHENDİSLİK ANONİM ŞİRKETİ

Web page : www.bilmar.com.tr

E-mail : bilkim@bilmar.com.tr



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Specifications

Input voltage	5.5 to 24 VDC
Current draw	1.4 mA (quiescent), 1.8 mA (active)
Calibration uncertainty	±5%
Measurement range	0 to 4000 $\mu\text{mol m}^{-2} \text{s}^{-1}$
Measurement repeatability	Less than 1% (Up to 5000 $\mu\text{mol m}^{-2}\text{s}^{-1}$)
Long-term drift (nonstability)	Less than 2% per year
Response time	0.6 s, time for detector signal to reach 95% following a step change; fastest data transmission rate for SDI-12 circuitry is 1 s.
Field of view	180°
Spectral range	389 to 692 nm \pm 5 nm (wavelengths where response is >50%)
Spectral selectivity	Less than 10% from 412 to 682 nm \pm 5 nm
Directional (Cosine) response	\pm 2% at 45° zenith angle, \pm 5% at 75° zenith angle
Azimuth error	Less than 0.5%
Tilt error	Less than 0.5%
Temperature response	-0.11 \pm 0.04% per °C
Uncertainty in daily total	Less than 5%
Detector	Blue-enhanced silicon photodiode
Housing	Anodized aluminum body with acrylic diffuser
IP rating	IP68
Operating environment	-40 to 70°C; 0 to 100% relative humidity; can be submerged in water up to depths of 30 m
Dimensions	30.5 mm diameter, 37 mm height
Mass (5 m cable)	140 g
Cable length	5 m
Cable connector	3.5 mm stereo plug
Data logger compatibility	METER Em50/50G, EM60 series, ZL6 series, ZSC, ProCheck