

COASTAL ENVIRONMENTAL SYSTEMS
820 First Avenue South
Seattle, Washington 98134-1202



Telephone: 206-682-6048
1-800-488-8291
Fax: 206-682-5658
www.coastalenvironmental.com

**PART#: S1115W
S1115Z**

SENSOR

Solar Radiation

- +/- 1% Linearity • Temperature Compensated • High Precision •

Principle of Operation

The Eppley Black and White Pyranometer Model 8-48 is used for the measurement of global, reflected, and diffuse short-wave radiation. The detector is a differential thermopile with the hot-junction receivers blackened and the cold-junction receivers whitened.

The element is of radial wire-wound-plated construction with the black segments coated with 3M black and the white with Barium Sulfate. Built-in temperature compensation with thermistor circuitry is incorporated to free the instrument from the effects of ambient temperature. A precision ground optical glass hemishpere of Schott glass WG295 uniformly transmits energy from .285 to 2.800 micrometers. This hemispherical envelope seals the instrument from the weather, but is readily removable for instrument repair.

The cast aluminum case carries a circular spirit level and adjustable leveling screws. Also supplied is a desiccator, which can be inspected readily.

Technical Specifications

Physical

Size: 5 3/4 in. dia., 3 3/4 in. high
Weight: 2 lbs

Measurement

Sensitivity: 11 microvolts per watts m² (approx.)
Temp. Dependency: ±1.5% constancy from -20° C to +40°
Impedance: 350 ohms
Linearity: ±1% for 0 to 1400 watts m²
Response Time: 5 seconds (1/e signal)
Glass Transparency: 280-2800 nm
Cosine Response: ±2% from normalization 0-70° Zenith angle,
±5% 70° - 80° Zenith angle

**The following products are compatible
with the Solar Radiation sensor.**

- ZENO®-3200
- WEATHERPAK®

