

Specification

For simultaneous outputs of total radiation, diffuse radiation and sunshine status. Output can be pre-set to PAR, Energy or Lux units.

	Output setting		
	PAR	Energy	Illuminance
Units	$\mu\text{mol.m}^{-2}.\text{s}^{-1}$	W.m^{-2}	klux
Overall accuracy: Total	$\pm 10 \mu\text{mol.m}^{-2}.\text{s}^{-1} \pm 12\%$	$\pm 5 \text{W.m}^{-2} \pm 12\%$	$\pm 0.600 \text{klux} \pm 12\%$
Overall accuracy: Diffuse	$\pm 10 \mu\text{mol.m}^{-2}.\text{s}^{-1} \pm 15\%$	$\pm 20 \text{W.m}^{-2} \pm 15\%$	$\pm 0.600 \text{klux} \pm 15\%$
Resolution	$0.6 \mu\text{mol.m}^{-2}.\text{s}^{-1}$	0.3W.m^{-2}	0.060 klux
Range	0-2500 $\mu\text{mol.m}^{-2}.\text{s}^{-1}$	0-1250 W.m^{-2}	0-200 klux
Analogue output sensitivity	1 mV = 1 $\mu\text{mol.m}^{-2}.\text{s}^{-1}$	1 mV = 0.5 W.m^{-2}	1 mV = 0.100 klux
Analogue output range	0-2500 mV	0-2500 mV	0-2000 mV

Accuracy : Sunshine hours	$\pm 10\%$ compared to the WMO definition
Accuracy : Cosine correction	$\pm 10\%$ of incoming radiation over 0-90° Zenith angle
Accuracy : Azimuth angle	$\pm 5\%$ over 360° rotation
Temperature coefficient	$\pm 0.15 \%$ /°C (typical)
Temperature range	-20 to + 50°C with Alkaline batteries -20 to + 70°C with Lithium batteries
Stability	Recalibration recommended every 2 years.
Response time	< 250 ms
Spectral response	400-700 nm
Latitude capability	-90° to + 90°
Environmental	IP65 (shower and dust proof)
Sunshine status : contact closure	No sun = open circuit Sun = short circuit to ground
Internal battery	2 x 1.5 V AA alkaline batteries
Power requirement	2 mA (awake), <30 μA (asleep)
Heater power	12 V – 15 VDC, up to 1.5 A
Battery lifetime	1 year (typical)
Input voltage range – powered from internal battery	1.4 to 3.6 VDC
Input voltage range – external power	5 to 15 VDC
Fuse trip point, on sunshine status signal, (when in switch-closure mode)	0.5 A, 30 V (self-resetting)
Max applied voltage to sunshine status output, in contact closure mode	0 to 24 V
RS232 connector	5-pin M12
Signal output & power-in connector	8 pin M12
Mounting options:	Camera tripod socket (¼ inch Whitworth). Holes for 4 x M4 bolts at corners of box.
Size & Weight	120 mm x 122 mm x 95 mm, 635 g