

Job No.: R11172

Calibration Date: 12/19/11
Model Number: QSP2300
Serial Number: 70379
Operator: TPC
Standard Lamp: F484(10/19/11)
Operating Voltage Range: 6 to 15 VDC (+)

Note: The QSP2300 output is a voltage that is proportional to the log of the incident irradiance.

To calculate irradiance, use this formula:

$$\text{Irradiance} = \text{Calibration factor} * (10^{\wedge}\text{Light Signal Voltage} - 10^{\wedge}\text{Dark Voltage})$$

Dry Calibration Factor: 3.45E+12 quanta/cm²-sec per volt 5.72E-06 μ Einsteins/cm²-sec per volt
Wet Calibration Factor: 6.09E+12 quanta/cm²-sec per volt 1.01E-05 μ Einsteins/cm²-sec per volt

Sensor Test Data and Results²⁾

Sensor Supply Current (Dark): 3.5 mA
Supply Voltage: 6 Volts
Lamp Integrated PAR Irradiance: 1.04E+16 quanta/cm²-sec
Immersion Coefficient: 0.566 μ Einsteins/cm²-sec

Nominal Filter OD	Expected Transmission	Calibrated Trans.	Sensor Voltage	Expected Voltage	Voltage Error	Measured Trans.	Transmission Error (%)	Test Irrad. (quanta/cm ² -sec)
No Filter	100%	100.00%	3.480	3.480	0%	100.00%	0.0	1.04E+16
0.3	50%	36.10%	3.055	3.038	1%	37.56%	-3.9	3.91E+15
0.5	32%	27.60%	2.944	2.921	1%	29.07%	-5.1	3.03E+15
1	10%	9.27%	2.495	2.447	2%	10.32%	-10.2	1.07E+15
2	1%	1.11%	1.615	1.525	6%	1.33%	-16.6	1.39E+14
3	0.10%	0.05%	0.588	0.208	65%	0.09%	-43.5	9.90E+12
RG780	0.00%	0.00%	0.262	0.009	97%	0.03%	-100.0	2.85E+12

Dark Before: 0.009 Volts
Light - No Filter Hldr.: 3.481 Volts
Dark After - NFH: 0.009 Volts
Average Dark: 0.0087 Volts

Notes:

1. Annual calibration is recommended.
- 2) This section is for internal use and for more advanced analysis.