

Calibration Date: 06/01/16      Job No.: R12596  
 Model Number: QSP2300  
 Serial Number: 70361  
 Operator: TPC  
 Standard Lamp: V-035(3/4/15)  
 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: 4.88E+12      quanta/cm<sup>2</sup>-sec per volt      8.11E-06       $\mu$ Einsteins/cm<sup>2</sup>-sec per volt  
 Wet Calibration Factor: 8.62E+12      quanta/cm<sup>2</sup>-sec per volt      1.43E-05       $\mu$ Einsteins/cm<sup>2</sup>-sec per volt

#### Sensor Test Data and Results<sup>2)</sup>

Sensor Supply Current (Dark):		3.4	mA					
Supply Voltage:		6	Volts					
Lamp Integrated PAR Irradiance:		1.03E+16	quanta/cm <sup>2</sup> -sec	0.01713	μEinsteins/cm <sup>2</sup> -sec			
Immersion Coefficient:		0.566						
Nominal Filter OD	Expected Transmission	Calibrated Trans.	Sensor Voltage	Expected Voltage	Voltage % Error	Measured Trans.	Transmission Error (%)	Test Irrad. (quanta/cm <sup>2</sup> -sec)
No Filter	100%	100.00%	3.325	3.325	0%	100.00%	0.0	1.03E+16
0.3	50%	36.10%	2.885	2.883	0%	36.24%	-0.4	3.74E+15
0.5	32%	27.60%	2.770	2.766	0%	27.80%	-0.7	2.87E+15
1	10%	9.27%	2.296	2.292	0%	9.31%	-0.4	9.61E+14
2	1%	1.11%	1.373	1.370	0%	1.07%	3.8	1.10E+14
3	0.10%	0.05%	0.216	0.053	76%	0.03%	76.9	3.15E+12
RG780	0.00%	0.00%	0.003	0.003	-5%	0.00%	-100.0	3.05E+10

Dark Before: 0.003      Volts  
 Light - No Filter Hldr.: 3.325      Volts  
 Dark After - NFH: 0.003      Volts  
 Average Dark: 0.0028      Volts

#### Notes:

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