

Calibration Date: 04/07/21 **Job No.:** R50262
Model Number: QSP2300
Serial Number: 70547
Operator: TPC
Standard Lamp: V-042(11/12/20)
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:

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

Dry Calibration Factor: 3.59E+12 quanta/cm²·sec per volt 5.96E-06 μEinsteins/cm²·sec per volt
 Wet Calibration Factor: 6.33E+12 quanta/cm²·sec per volt 1.05E-05 μEinsteins/cm²·sec per volt

Sensor Test Data and Results²⁾

Sensor Supply Current (Dark): 3.4 mA

Supply Voltage: 6 Volts

Lamp Integrated PAR Irradiance: 9.43E+15 quanta/cm²·sec 0.01566 μEinsteins/cm²·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 ² ·sec) |
|-------------------|-----------------------|-------------------|----------------|------------------|-----------------|-----------------|------------------------|---|
| No Filter | 100% | 100.00% | 3.420 | 3.420 | 0% | 100.00% | 0.0 | 9.43E+15 |
| 0.3 | 50% | 36.10% | 2.986 | 2.978 | 0% | 36.79% | -1.9 | 3.47E+15 |
| 0.5 | 32% | 27.60% | 2.873 | 2.861 | 0% | 28.35% | -2.7 | 2.67E+15 |
| 1 | 10% | 9.27% | 2.407 | 2.387 | 1% | 9.67% | -4.1 | 9.12E+14 |
| 2 | 1% | 1.11% | 1.501 | 1.465 | 2% | 1.17% | -4.9 | 1.10E+14 |
| 3 | 0.10% | 0.05% | 0.363 | 0.148 | 59% | 0.05% | 8.6 | 4.69E+12 |
| RG780 | 0.00% | 0.00% | 0.006 | 0.006 | 0% | 0.00% | -100.0 | 4.79E+10 |

Dark Before: 0.006 Volts

Light - No Filter Hldr.: 3.420 Volts

Dark After - NFH: 0.006 Volts

Average Dark 0.0058 Volts

Notes:

1. Annual calibration is recommended.

2) This section is for internal use and for more advanced analysis.