

Calibration Date: 07/01/14

Model Number: QSP2300

Serial Number: 70546

Operator: TPC

Standard Lamp: V-034(3/7/12)

Operating Voltage Range: 6 to 15 VDC (+)

Job No.: L11854

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: 2.80E+12 quanta/cm²·sec per volt 4.64E-06 μEinsteins/cm²·sec per volt

Wet Calibration Factor: 4.94E+12 quanta/cm²·sec per volt 8.20E-06 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: 9.78E+15 quanta/cm²·sec 0.01625 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% | 3.544 | 3.544 | 0% | 100.00% | 0.0 | 9.78E+15 |
| 0.3 | 50% | 36.10% | 3.103 | 3.102 | 0% | 36.18% | -0.2 | 3.54E+15 |
| 0.5 | 32% | 27.60% | 2.984 | 2.985 | 0% | 27.51% | 0.3 | 2.69E+15 |
| 1 | 10% | 9.27% | 2.521 | 2.511 | 0% | 9.46% | -2.0 | 9.25E+14 |
| 2 | 1% | 1.11% | 1.609 | 1.589 | 1% | 1.13% | -2.0 | 1.11E+14 |
| 3 | 0.10% | 0.05% | 0.429 | 0.272 | 37% | 0.05% | 12.4 | 4.71E+12 |
| RG780 | 0.00% | 0.00% | 0.010 | 0.010 | -1% | 0.00% | -100.0 | 6.51E+10 |

Dark Before: 0.010 Volts

Light - No Filter Hldr.: 3.544 Volts

Dark After - NFH: 0.010 Volts

Average Dark 0.0101 Volts

Notes:

1. Annual calibration is recommended.

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