



721 West 1800 North
Logan, UT 84321

Certificate of Calibration Apogee Instruments PAR/FAR Sensor Model S2-141/441 Series

Serial Number	:	S2-141-SS_1139
Calibration Date	:	Dec-2020
Recommended Recalibration Date	:	Dec-2022
Calibration Uncertainty	:	$\pm 5 \%$
Measurement Repeatability	:	$< 1 \%$
Non-stability (Long-term Drift)	:	$< 2 \%$ per year
PAR Calibration Factor	:	71.00 $\mu\text{mol m}^{-2} \text{s}^{-1}$ per mV
FAR RED Calibration Factor	:	51.45 $\mu\text{mol m}^{-2} \text{s}^{-1}$ per mV

Calibration Procedure

The PAR sensor in Apogee S2 series PAR-FAR sensors are calibrated through side-by-side comparison to the mean transfer standard PAR sensors under a reference lamp. The transfer standard PAR sensors are calibrated with a quartz halogen lamp traceable to the National Institute of Standards and Technology (NIST).

The far-red sensor in Apogee S2 series PAR-FAR sensors are calibrated through side-by-side comparison to the mean flux density of four transfer standard far-red radiometers under far-red LEDs (735 nm peak, 710-760 nm range). The standard far-red sensors are calibrated against a spectroradiometer (Apogee Instruments model PS-300) under the same far-red LEDs. The spectroradiometer is calibrated with a quartz halogen lamp traceable to the National Institute of Standards and Technology (NIST).

Technical Manager :

Jacob Bingham

Date : 01-Dec-2020

Please keep this document for your records