

## 5.1 Calibration

Sensors typically come with a calibration that converts the signal produced by the sensor into a usable value. For example, a light (quantum) sensor may produce a 1 mV output for every 5  $\mu\text{mol}/\text{m}^2/\text{s}$  of light it receives. That light sensor would have a calibration constant of 5  $\mu\text{mol}/\text{m}^2/\text{s}$  per mV and a meter or microprocessor would multiply the measured voltage by 5 to give you the light level in units of  $\mu\text{mol}/\text{m}^2/\text{s}$ .

Sensors normally come with factory calibrations that are usually specified in the manual or on a calibration certificate. Manufacturers generally also indicate how long that calibration is valid. The calibration of many sensors changes over time and sensors need to be recalibrated at regular intervals to assure that they remain accurate. How often sensors should be recalibrated will depend on the sensor. Users should follow the guidelines from the manufacturer. Sensors that have not been recalibrated for extended periods are likely to give inaccurate results.