

The **SPAR-1** is a precision light meter that measures Photosynthetic Active Radiation otherwise known as PAR light. The SPAR-1 works with the Cromptiva SEN-1, **Sentry** and GUARD-1, **Guardian** main controllers.

Plants receive a combination of light “colors” from natural sunlight and from artificial light sources and can use all colors ranging from 380-720nm. Blue light (approximately 420nm) carries more energy than red light (approximately 680nm) does. The PAR meter accurately “weighs” each of the colors it is receiving and then provides a single light reading represented in **umol/m²/S**. Knowing the PAR light level is important in order to ensure you are providing the correct amount of light without wasting energy, and to ensure enough light is provided for the plant’s current stage of growth. When the SPAR-1 sensor is used, the controller can “actively” AUTOMATICALLY control your lighting to provide the EXACT amount of light you select. Alternately the SPAR-1 sensor can be used “passively” to constantly measure light levels and allow the user to manually control their lights based on the PAR light level measured by the SPAR-1.

To connect the SPAR-1 module, simply connect the small inline sensor module to the RJ12 Sensor / Device port on your Cromptiva controller using the provided RJ12 cable and Y-splitters. The inline sensor module comes with a 16ft / 5 meter cable that can be extended. You can replace multiple RJ12 Y-splitters with the UNIVERSAL multi-port RJ12 “powered” hub (RJ-HUB) to provide a centralized wiring “hub” to connect multiple device modules (AND sensors) to your Cromptiva main controller. The RJ-HUB and Cromptiva’s UNIVERSAL expansion ports provide a cleaner and more effective cable connection system.

The SPAR-1 sensor itself will be installed so that it is level with the “top” of the plant canopy where the highest light level will be. For best performance, position the sensor near the center of the space being monitored in order to provide an “Average” reading for the lighted area.

The SPAR-1 sensor is rated at IP66 which provides protection from high moisture environments, however, the sensor “cell” on the top of the sensor needs to be clean and free of debris or else the light reading can be affected. So the SPAR-1 must be positioned so that it is not exposed to mist or moisture that could accumulate on the surface of the sensor.

***DO NOT SPRAY OR ALLOW CHEMICALS TO COME INTO CONTACT WITH THE SPAR-1 SENSOR.**

SPAR-1 / Specifications



Model	SPAR-1 / PAR Lighting sensor
Product Dimensions	3.1x2.9" / 80x74mm
Protection Level	IP66
Operating Temperature	0-50 °C / 32-122 °F
Operating Humidity	≤90%, Non-Condensing
Operating Voltage	DC 10-30V
Power Consumption	≤ 0.1W
Measurement Range	0-2500 umol/m ² /S
Accuracy	±2% (1000umol/m ² ·s, 60%RH 25°C)
Cable type / Connection	RJ12, 6P6C, 6-wire cable
Certifications	CE, FCC

The SPAR-1 comes with a protective white plastic cover that is twisted onto the top of the sensor. The cover can be used to protect the sensor from spray when spraying within the growing area.

*** ENSURE THE COVER IS REMOVED BEFORE USING THE SENSOR.**