

# PAR Sensor

This device enables the measurement of photosynthetically active radiation (PAR), which is particularly valuable in agriculture, horticulture, and other contexts focused on monitoring plant growth parameters. This device, belonging to the PRO sensor series, includes Aranet Sub-GHz ISM band radio which wirelessly transmits sensor measurements to the Aranet PRO base station.

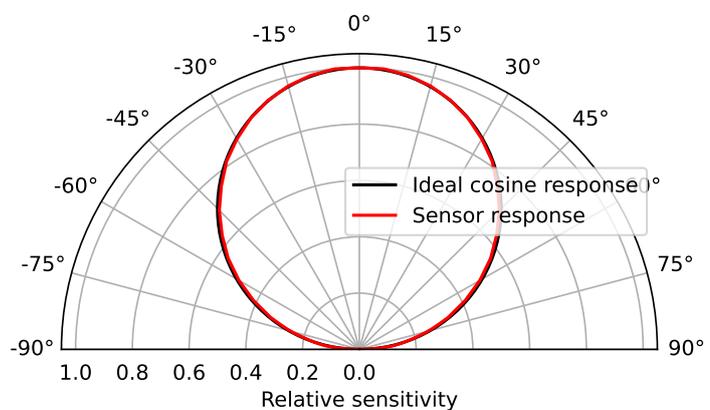
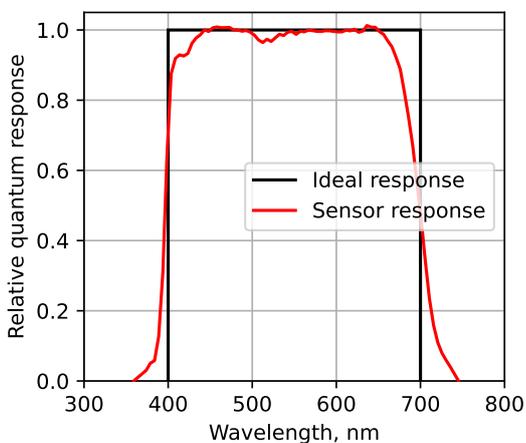


## Product numbers

European Union	TDSKAR02
United States	TDSKARU2
Asia	TDSKARU2

## Photosynthetic photon flux density (PPFD) measurement performance

Range	0–4000 $\mu\text{mol}/(\text{s}\times\text{m}^2)$	
Resolution	1 $\mu\text{mol}/(\text{s}\times\text{m}^2)$	
Accuracy	$\pm 10\%$	
Spectral range of operation	400–700 nm	
Cosine error	<2 % at 45°	<5 % at 75°



## General specifications

Ingress protection rating	IP68	
Operating temperature range	-20–60 °C	-4–140 °F
Operating relative humidity range	0–100 %	
Dimensions	∅35×117 mm	∅1.38×4.60 in
Weight (incl. battery)	80 g	2.8 oz
Enclosure material	ASA plastic, aluminium	
Packaging includes	1 pc AA alkaline battery	

## Aranet radio parameters

Line of sight range	3 km	1.9 mi
Transmitter power	14 dBm	25 mW
Data transmission interval	1, 2, 5 or 10 min	
Data protection	XXTEA encryption	

## Battery lifetime

Measurement interval	Alkaline battery lifetime	Lithium battery lifetime
1 min	0.9 years	1.1 years
2 min	1.7 years	2.2 years
5 min	3.7 years	5.1 years
10 min	6.4 years	9.1 years

- Battery lifetime data has been obtained by mathematical extrapolation and is provided for descriptive purposes only and is not intended to make or imply any guarantee or warranty.
- Battery lifetime tests and calculations performed assuming device is at 20 °C (68 °F) and using *Fujitsu Premium LR6G07* (alkaline) and *Energizer Ultimate Lithium L91* (lithium) AA batteries as reference.
- The operating temperature range may vary based on the battery type used. Generally, the range for alkaline batteries is between -20–50 °C (-4–122 °F), whereas for lithium batteries, it is -20–60 °C (-40–140 °F).

## Compliance information

**CE** Conformité Européenne

**FC** Federal Communications Commission (USA)

**IC** Innovation, Science and Economic Development Canada