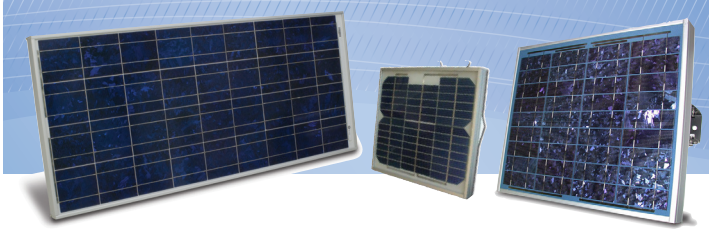
CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

Solar Panels

Photovoltaic power for recharging batteries

Rugged, Reliable, and Ready for any Application



RELIABLE SINCE 1974 MONITORING

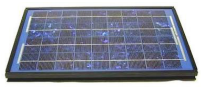
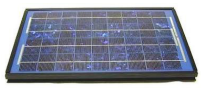
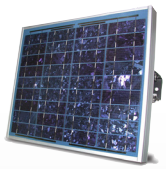
Solar panels are photovoltaic power sources capable of recharging batteries. The minimum battery size and solar panel output required depends on:

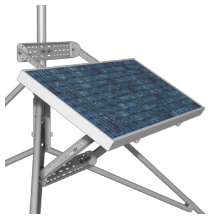
- The average current drain of the system
- The maximum time the battery must supply power to the system without being charged
- The average current drain of the system the location of the site

Solar panel characteristics assume 1 kW m^{-2} illumination and 25°C solar panel temperature. Individual panels may vary up to 10%. The output panel voltage increases as the panel temperature decreases. All solar panels are shipped with hardware for mounting to a tripod or tower.

For more information, refer to our Power Supplies brochure, or application note, or contact a Campbell Scientific Application Engineer.

MAJOR SPECIFICATIONS

		Cable Description	*Compatible Regulators*	*Compatible Batteries*	*Max. Power*	*Current at Peak*	*Voltage at Peak Power*	*Size*
SP5 | 5 W Solar Panel For ENC200 and TurfWeather Stations		Length 0.9 m (3 ft) Termination Connector for the ENC200 or TurfWeather	Regulator built in the ENC200 or Turfweather	pn 16869, 12 Vdc, 0.8 Ah battery	4.5 W	0.27 A	16.5 V	Dimensions 25.1 x 26.9 x 2.3 cm (9.9 x 10.6 x 0.9 in) Weight 0.9 kg (2 lb)
SP5-L | 5 W Solar Panel For systems with low-power requirements		Length user specified Termination Pigtails	Regulator built-in the CRVW3 or CR200X	pn 17365, 12 Vdc, 7 Ah battery or other 12 V Gel Cell or AGM lead acid batteries[a]	4.5 W	0.27 A	16.5 V	Dimensions 25.1 x 26.9 x 2.3 cm (9.9 x 10.6 x 0.9 in) Weight 0.9 kg (2 lb)
SP10 | 10 W Solar Panel For tropical to temperate latitudes		Length 6.1 m (20 ft) Termination Pigtails, prewired connector, or ET/CS110 connector	CH150, CH200, or regulator built in the PS150, PS200, CR6, CR3000, CR300, or CRVW3	12 V Gel Cell or AGM lead acid batteries[a] such as the batteries used with the PS150, PS200, BP7, BP12, BP24, and CR3000	10 W	0.59 A	16.8 V	Dimensions 41.9 x 26.9 x 2.3 cm (16.5 x 10.6 x 0.9 in) Weight 2.1 kg (4.5 lb)
SP10R-L[b] | 10 W Solar Panel with Onboard Regulator For tropical to temperate latitudes		Length user specified Termination Pigtails or prewired connector	N/A (solar panel includes onboard regulator)	User-supplied flooded, 12 Vdc batteries such as deep-cycle marine or RV batteries	10 W	0.59 A	16.8 V	Dimensions 41.9 x 26.9 x 2.3 cm (16.5 x 10.6 x 0.9 in) Weight 3.0 kg (6.9 lb)
SP20 | 20 W Solar Panel For higher elevation and latitude locations		Length 4.6 m (15 ft) Termination Pigtails or prewired connector	CH150, CH200, or regulator built in the PS150, PS200, CR6, CR3000, or CRVW3	12 V Gel Cell or AGM lead acid batteries[a] such as the batteries used with the PS150, PS200, BP7, BP12, BP24, and CR3000	20 W	1.19 A	16.8 V	Dimensions 50 x 42.2 x 5.1 cm (19.7 x 16.6 x 2 in) Weight 4.4 kg (9.6 lb)

		Cable Description	Compatible Regulators	Compatible Batteries	Max. Power	Current at Peak	Voltage at Peak Power	Size
SP20R-L[b] | 20 W Solar Panel with Onboard Regulator For higher elevations and latitudes		Length user specified Termination Pigtails or prewired connector	N/A (solar panel includes onboard regulator)	User-supplied flooded, 12 Vdc batteries such as deep-cycle marine or RV batteries	20 W	1.19 A	16.8 V	Dimensions 50 x 42.2 x 5.1 cm (19.7 x 16.6 x 2 in) Weight 6.2 kg (13.6 lb)
SP50-L | 50 W Solar Panel For powering remote systems or systems with large power requirements		Length user specified Termination Spade lugs or prewired connector	CH200 or 18529 Morning Star SunSaver	EnerSys Genesis NP Series (such as the PS200, BP12 BP24), EnerSys Cyclone Series, Concorde Sun Xtender Series (such as the BP84 and PS84), or flooded[c]	50 W[d]	2.9 A	17.5 V	Dimensions 83.9 x 53.7 x 5 cm (33 x 21.1 x 2 in) Weight 6 kg (13 lb)
SP90-L | 90 W Solar Panel For powering remote systems or systems with large power requirements		Length user specified Termination Spade lugs or prewired connector	CH200 or 18529 Morning Star SunSaver	EnerSys Genesis NP Series (such as the PS200, BP12 BP24), EnerSys Cyclone Series, Concorde Sun Xtender Series (such as the BP84 and PS84), or flooded[c]	90 W[e]	5.0 A	17.9 V	Dimensions 120.9 x 53.7 x 5 cm (47.6 x 21.1 x 2 in) Weight 7.7 kg (17.0 lb)

[a]The SP10 and SP20 are **NOT** intended for user-supplied 12 Vdc flooded batteries such as deep cycle marine or RV batteries.

[b]The SP10R and SP20R draw a continuous 2 mA current drain.

[c]The 18529 MorningStar SunSaver Regulator should be used to connect an SP50 or SP90 to a user-supplied, flooded 12 Vdc battery.

[d]The 50 W maximum power for the SP50 assumes one solar panel is used. Two SP50 solar panels can be connected to one 18529 Morning Star SunSaver Regulator to get a maximum power of 100 W.

[e]The 90 W maximum power for the SP90 assumes one solar panel is used. Two SP90 solar panels can be connected to one 18529 Morning Star SunSaver Regulator to get a maximum power of 180 W.