MICROSOLAR™

High efficiency photovoltaic micro solar panels for electronics and battery charging

XUNZEL industrial-grade small photovoltaic solar panels for battery charging, trickle-charging and battery maintenance, with an excellent light and spectral response over wide range of wavelength, suitable in both outdoor, low light and indoor applications.

High efficiency

Optimally designed for efficient, stable and consistent charging of rechargeable batteries in off-grid and backup systems.

Wide range

Wide range of voltages and charging powers. Designs for all types of rechargeable batteries: Pb, NiMH, NiCd, Lithium, Super CAP/EDLC

Plug&Play

Ideal for IoT, IIoT, OoT, integration, motors, robots, mobile.

Compact size

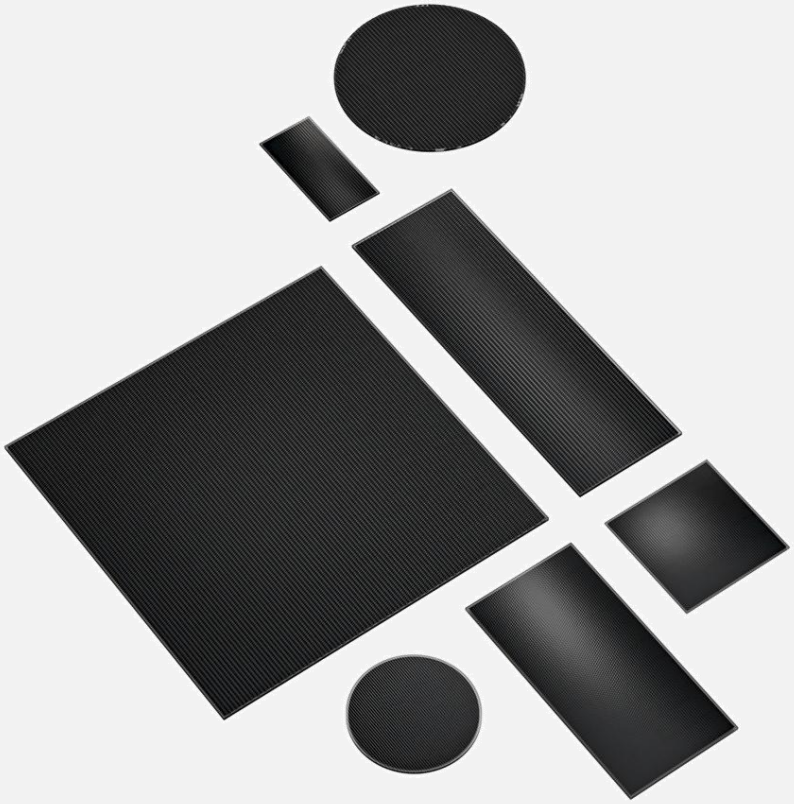
Optimized design. Lightweight. Maximize available space.

Smart and Rugged design

Anti-dust surface to prevent dust from sticking.
Made with materials and components of excellent quality and resistance for a reliable and long service life.
Long-lasting performance, Waterproof, UV resistant, designed for extreme environment.

Flexible Mounting

Frame-less design, light and compact. Easy to integrate into your application. With [option] cable pre-installed.



Industrial grade photovoltaic solar panels

With more than 20 years of experience designing and manufacturing state-of-the-art photovoltaic technology, XUNZEL industrial-grade small solar panels for battery charging, trickle-charging and battery maintenance have an excellent light and spectral response over wide range of wavelength, suitable in both outdoor, low light and indoor applications.

Manufactured with high quality materials to provide long-term, reliable performance in the field.
MICROSOLAR™ Photovoltaic Solar Panels are made with high efficiency solar cells. Robust and ready to be used in all kind of applications, battery charging and powering your electronics.

The design allows connecting several solar panels flexibly in series and/or parallel to perfectly meet the custom-specific application's power requirements.
Designed for industrial applications, prototyping, experiments and learning.

Put the power of solar energy into your creations.

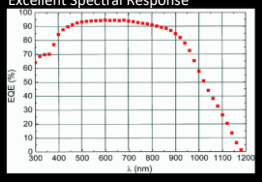
UD9260128M

XUNZEL ENERGY
info@xunzel.com www.xunzel.com

MICROSOLAR™

High efficiency photovoltaic micro solar panels for electronics and battery charging

Excellent Spectral Response



- Designed for optimal battery charging, trickle-charging and maintenance with excellent spectral response over a wide wavelength range and stability.
- Very High Efficiency silicon and thin-film technologies for outdoor, low-light and indoor environments. High power density in a small foot-print. Extremely useful in applications requiring solar power generation in a limited space.
- High quality materials and sealed package, waterproof, chemicals and UV resistant. Mechanically robust, designed for extreme environments. Long life and stable output.
- Frame-less design, light and compact. Easy to integrate into your application. Wired models for ease of integration.
- Discreet anti-vandal design.
- Suitable for rechargeable Lead-acid Pb, Ca, NiCd, NiMH, Lithium batteries and Super-Caps.
- Ideal for IoT, IIoT, OoT, integration, motors, robots, mobile.
- Hi quality. 100% Tested.

XUNZEL ENERGY has been designing and manufacturing, for more than 20 years, custom MICROSOLAR™ solar panels and energy systems to power electronic equipment and charge batteries.

MICROSOLAR™ Systems

Power Solutions for IoT Devices

Stand-alone and backup power systems specially designed for IoT/IIoT, Telecom, Utilities, Industry, Agriculture, Tracking, Monitoring and Sensing, Telemetry, Control, Security and Mobile Markets

Designed and manufactured to deliver reliable and efficient power. Universal. Maintenance free. Complete and Ready to use. Easy to connect.
Built with materials and components of excellent quality and resistance for a long service life.

Wide range of models.
The most extensive range and custom design of photovoltaic solar panels, accessories, mounting solutions, enclosures, solar batteries and solar electronics.

UD9260128M

XUNZEL ENERGY
info@xunzel.com www.xunzel.com

RoHS/REACH COMPLIANT

MICROSOLAR™

High efficiency photovoltaic micro solar panels for electronics and battery charging

xunzel Applied Solar Energy

Technical Specifications

Model	Size	Thickness	Pmax	Vnom	Imax	Voc	Imp	η	Cable
Part Number			Maximum Power	Voltage at mpp	Maximum Current	Maximum Voltage	Current at mpp	Solar Cell Efficiency	Length
	[mm ±0.2]	[mm ±0.2]	[mW]	[V]	[mA]	[V]	[mA]	> 25%	[mm ±]
MS2V5025 MS2V5025S	50 x 25	1.7	200	2.25	110	2.70	76	> 25%	100 w/o*
MS2V50R MS2V50RS	∅50 (round)	1.7	200	2.25	110	2.70	90	> 25%	100 w/o*
MS6V5050 MS6V5050S	50 x 50	1.7	400	5.50	90	6.60	75	> 25%	100 w/o*
MS6V80R MS6V80RS	∅80 (round)	1.7	600	5.50	120	6.60	110	> 25%	150 w/o*
MS6V10050 MS6V10050S	100 x 50	2.0	900	5.50	190	6.60	155	> 25%	150 w/o*
MS6V13080 MS6V13080S	130 x 80	2.2	2000	5.50	420	6.60	364	> 25%	150 w/o*
MS9V80R MS9V80RS	∅80 (round)	1.7	600	9.90	70	11.88	61	> 25%	150 w/o*
MS9V10050 MS9V10050S	100 x 50	2.0	900	9.90	100	11.88	86	> 25%	150 w/o*
MS9V13080 MS9V13080S	130 x 80	2.2	2000	9.90	230	11.88	202	> 25%	150 w/o*
MS9V150150 MS9V150150S	150 x 150	2.2	4000	9.90	460	11.88	410	> 25%	250 w/o*
MS19V15050 MS19V15050S	150 x 50	2.2	1200	19.8	70	23.40	61	> 25%	200 w/o*
MS19V150150 MS19V150150S	150 x 150	2.2	4000	19.8	230	23.40	202	> 25%	250 w/o*

* w/o = without cable. The PCB has two pads available for soldering

Ingress Protection (IP) rating: IP67

Operating Temperature: −40°C ~ 85°C | Storage Temperature : -40°C ~ +90°C

All values measured at Standard Condition: 1 sun (= 1000 W/m²), Air Mass 1.5, 25°C

Our photovoltaic (PV) modules are engineered and manufactured for reliable, high-performance operation in real-world conditions. They are designed and tested in accordance with relevant sections of **IEC 61215**, **IEC 60068**, and **IEC 60529**, including accelerated UV aging, temperature and humidity cycling, damp heat, thermal shock, mechanical shock, impact, vibration, ingress protection, and resistance to exposure from chemicals and oils.

Please feel free to contact us if you require any additional technical information. We have an in-house laboratory and state-of-the-art equipment to perform a wide range of additional, application-specific tests.

XUNZEL ENERGY reserves the right to modify specifications, test conditions, and dimensions without prior notice.

UD9260128M

XUNZEL ENERGY
info@xunzel.com www.xunzel.com

CE UK CA FC RoHS/REACH COMPLIANT

MICROSOLAR™

Front and Back Views
(Not at scale)

2.25V Series

p|n: MS2V5025
Pmax: 200mW
Dim.: 50 x 25 x 1.7mm

p|n: MS2V50R
Pmax: 200mW
Dim.: ∅50 (round) x 1.7mm

5.50V Series

p|n: MS6V5050
Pmax= 400mW
Dim.: 50 x 50 x 1.7mm

p|n: MS6V80R
Pmax=600mW
Dim.: ∅80 (round) x 1.7mm

p|n: MS6V13080
Pmax=2000mW
Dim.: 130 x 80 x 2.2mm

p|n: MS6V10050
Pmax=900mW
Dim.: 100 x 50 x 2.0mm

UD9260128M

XUNZEL ENERGY
info@xunzel.com www.xunzel.com

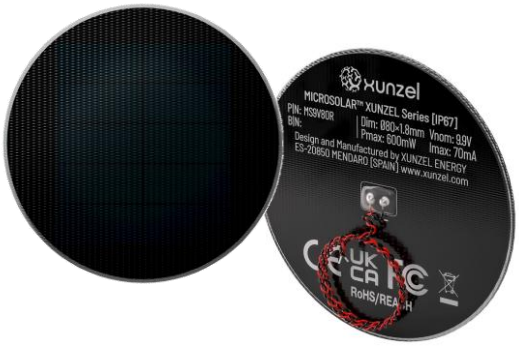
RoHS/REACH COMPLIANT

MICROSOLAR™

Front and Back Views
(Not at scale)

9.90V Series

p|n: MS9V80R
Pmax: 600mW
Dim.: ∅80 (round) x 1.7mm



p|n: MS9V10050
Pmax: 900mW
Dim.: 100 x 50 x 2.0mm

p|n: MS9V13080
Pmax: 2000mW
Dim.: 130 x 80 x 2.2mm

p|n: MS9V150150
Pmax: 4000mW
Dim.: 150 x 150 x 2.2mm

UD9260128M

XUNZEL ENERGY
info@xunzel.com www.xunzel.com

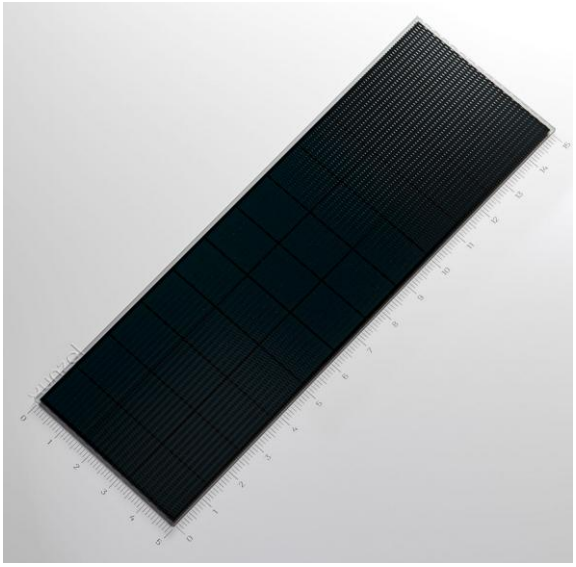
RoHS/REACH COMPLIANT

MICROSOLAR™

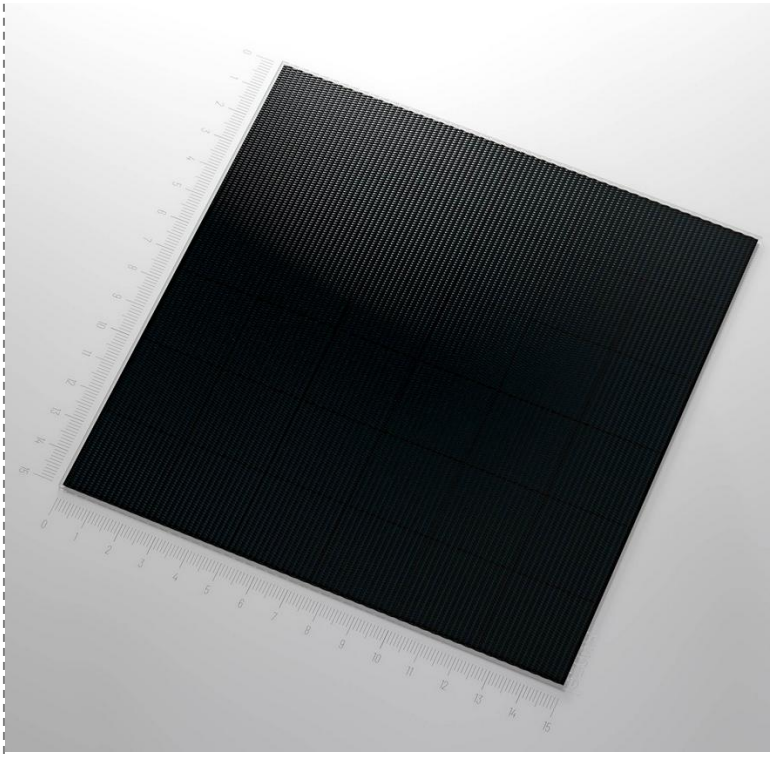
Front and Back Views
(Not at scale)

19.80V Series

p|n: MS19V15050
Pmax: 1200mW
Dim.: 150 x 50 x 2.0mm



p|n: MS19V150150
Pmax: 4000mW
Dim.: 150 x 150 x 2.2mm



UD9260128M

XUNZEL ENERGY
info@xunzel.com www.xunzel.com

RoHS/REACH COMPLIANT