

SUMEC

Phono® Solar

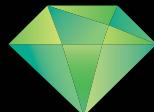
AUSTRALIA

455W

DIAMOND MODULE TECHNOLOGY

TWIN PLUS SERIES

- ✓ 15 Year Product Warranty
- ✓ Outstanding Module Efficiency
- ✓ PID Resistant
- ✓ Better Performance Under Shading Effect
- ✓ Salt Mist Certified to the Highest Severity Level

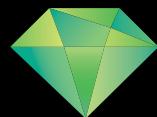


**DIAMOND
MODULE
TECHNOLOGY**

**15 YEAR
PRODUCT
WARRANTY**

BLUE CHIP™
Solar Panel





40+ YEARS OF EXPERIENCE

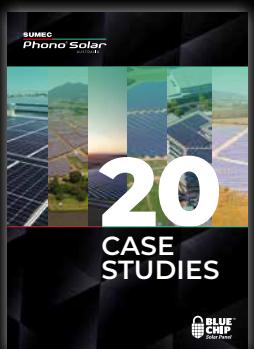
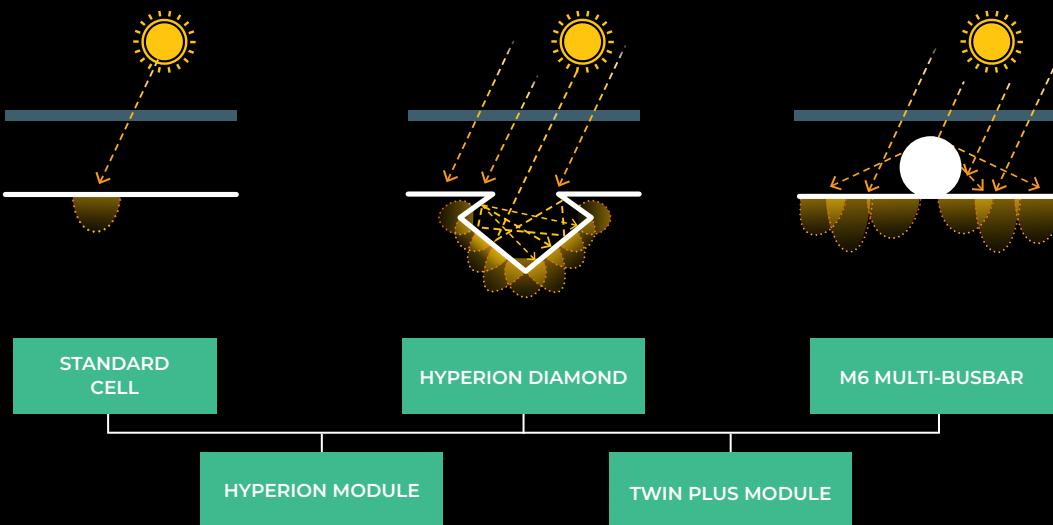
1978	2010	2018	2019	2020	2021-22
Sumec starts business	Phono Solar first sell solar panels in Australia	Phono re-brands to Sumec Phono Solar	Introduction of Market Leading 15 Year Product Warranty	New facility opens for production	Ranked as a PVEL Top Performing Panel for 2021 & 2022
	Diamond Module Technology is pioneered				

“ We continue to invest in our state-of-the-art, manufacturing line and are proud to introduce our latest Diamond Module Technology and leading Warranty to the Australian market. ”

President Zhao, Sumec Phono Solar



ADVANCED DIAMOND MODULE TECHNOLOGY THROUGH THE YEARS



SCAN TO
VIEW
BROCHURE



BLOOMBERG
TIER 1 BRAND



OWNED BY
FORTUNE 500
GLOBAL COMPANY



**2022 TOP
PERFORMING
PANEL**



25
25 YEAR
PERFORMANCE
WARRANTY

MAKE A SECURE INVESTMENT

4 LAYERS OF PROTECTION

In 2013 there were more than 400 Solar Panel Manufacturers approved for install in Australia and today there are fewer than 100.

SUMEC Group was founded over 40 years ago so, we understand a warranty is only as strong as the company behind it.

As a **Blue Chip brand**, Sumec Phono Solar has **longevity, commitment and stability** at every layer of protection. From the Fortune 500 Founding Corporation, through to the experienced Australian Distributor, **you can feel secure in your solar investment** for decades to come.

1 SUMEC GROUP

(a major division of the Sinomach Corporation)

Confidence of Longevity

- Sumec founded in 1978
- Sinomach – Fortune Global 500 Company
- Diverse Manufacturer - eg. Auto parts for BMW, Mercedes and Audi.



2 PHONO SOLAR

Market Leading Technology & Testing

- Founded by Sumec, Phono Solar now has a global presence with Offices and Manufacturing across Europe, Asia, North & South America.
- Bloomberg Tier 1 Brand
- Introduced in Australia in 2010
- Australian Warranty Support and Representation



3 SUPPLY PARTNERS



Australian Technical Solar Distributor

- 100% Australian Grown and Owned
- Established in 2012 with a Solar Retail Background
- In partnership with Phono Solar for over 8 years
- Only distribute high quality, low risk products from reputable manufacturers



4 CERTIFIED INSTALLER

Sumec Phono Solar is the Engineers' Choice

- Premium installers use Blue Chip Panels
- Sumec Phono Solar in conjunction with Supply Partners provide training and support to installers based in Australia and New Zealand
- Clean Energy Council Accredited Installation

CUSTOMER



AUSTRALIAN
OFFICE AND
REPRESENTATION

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TWIN PLUS SERIES

ELECTRICAL TYPICAL VALUES

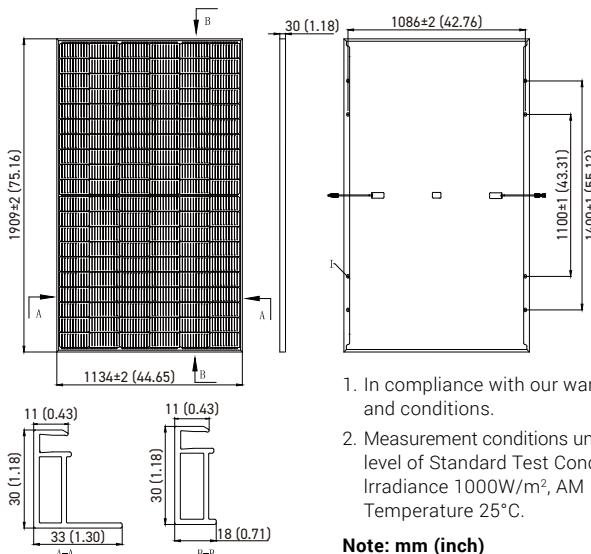
Model	PS455M6-20/UH PS455M6H-20/UH
Cell Type	Monocrystalline 182mm x 91mm
Rated Power (Pmpp) ²	455W
Tolerance	0~+5W
Rated Current (Impp)	13.24
Rated Voltage (Vmpp)	34.37
Short Circuit Current (Isc)	13.82
Open Circuit Voltage (Voc)	41.02
Module Efficiency (%)	21.02
NOCT (Nominal Operation Cell Temperature)	45°C ± 2°C
Voltage Temperature Coefficient	-0.28%/°C
Current Temperature Coefficient	+0.05%/°C
Power Temperature Coefficient	-0.35%/°C

MECHANICAL CHARACTERISTICS

Dimensions	Length: 1909mm, Width: 1134mm Height: 30mm
Weight	25.0kg
Front Glass	3.2mm toughened glass
Frame	Anodised aluminium alloy
Cable	4mm ² (IEC), 1200mm (incl.connector)
Junction Box	IP 68 rated
Connectors	Genuine MC4 (1000V)/ EVO2 (1500V)

PACKING CONFIGURATION

Container	Pallet	20'GP	40'HQ
Pieces per container	36	180	864



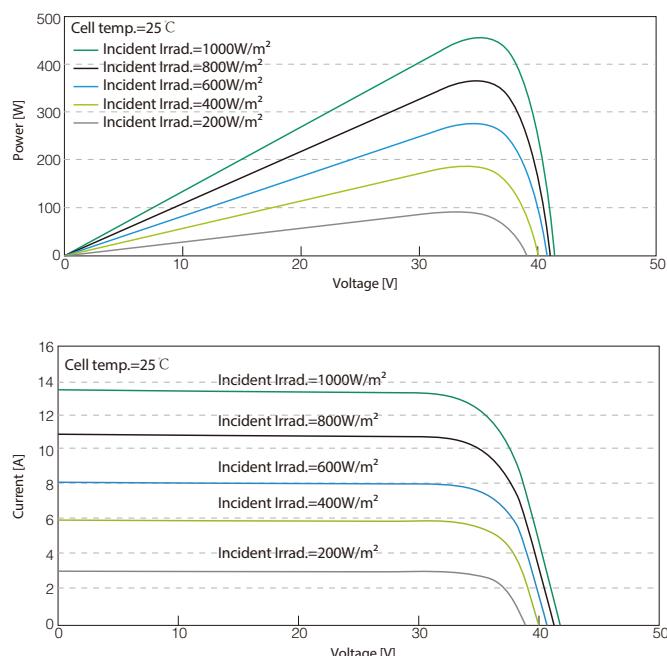
1. In compliance with our warranty terms and conditions.
2. Measurement conditions under irradiance level of Standard Test Conditions (STC): Irradiance 1000W/m², AM 1.5G, Cell Temperature 25°C.

Note: mm (inch)

ABSOLUTE MAXIMUM RATING

Operating Temperature	From -40 to +85°C
Hail Diameter@ 80km/h	Up to 25mm
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Maximum Series Fuse Rating	25A
PV Module Classification	II
Fire Rating (IEC 61730)	C
Maximum System Voltage	DC 1000V/1500V

ELECTRICAL CHARACTERISTICS



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AUSTRALIA

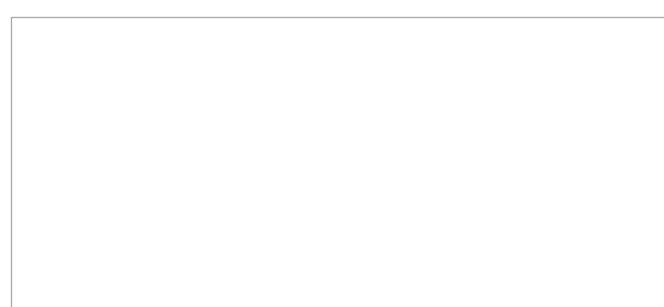


- 15 year product warranty
- 25-year linear performance warranty to 84.8%

1. In compliance with our warranty terms and conditions.

NOTE: This datasheet is not legally binding. Phono Solar reserves the right to make specifications changes without notice.

Further information can be found on our website: www.phonosolar.com.au



Sumec Phono Solar modules are proudly manufactured in China.