

**SUMEC**

**Phono<sup>®</sup> 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

**144  
CELLS**



**DIAMOND  
MODULE  
TECHNOLOGY**

**15 YEAR  
PRODUCT  
WARRANTY**



**BLUE  
CHIP<sup>™</sup>**  
Solar Panel



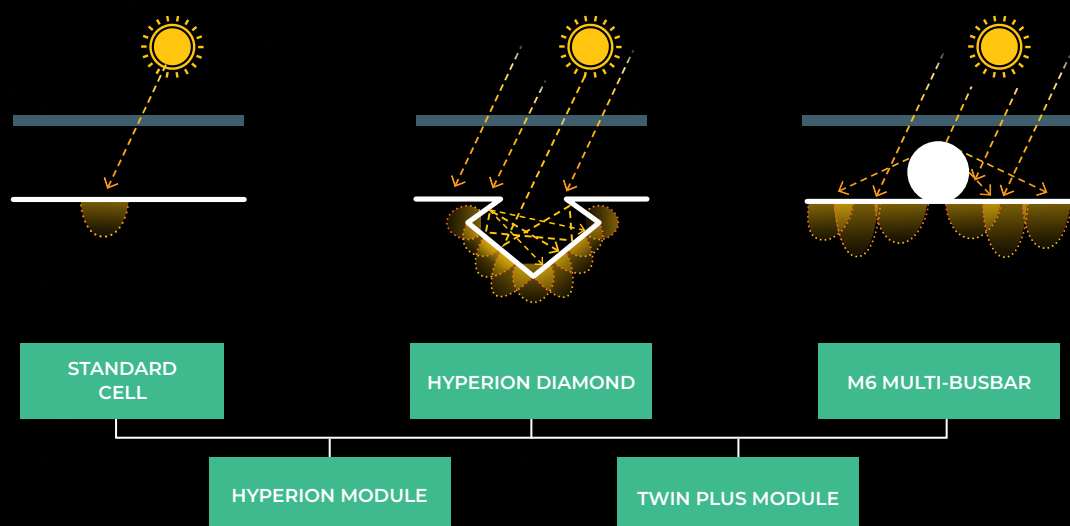
## 40+ YEARS OF EXPERIENCE

1978	2010	2018	2019	2020	2021
Sumec starts business	Phono Solar first sell solar panels in Australia Diamond Module Technology is pioneered	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

“We have invested in a brand new, 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



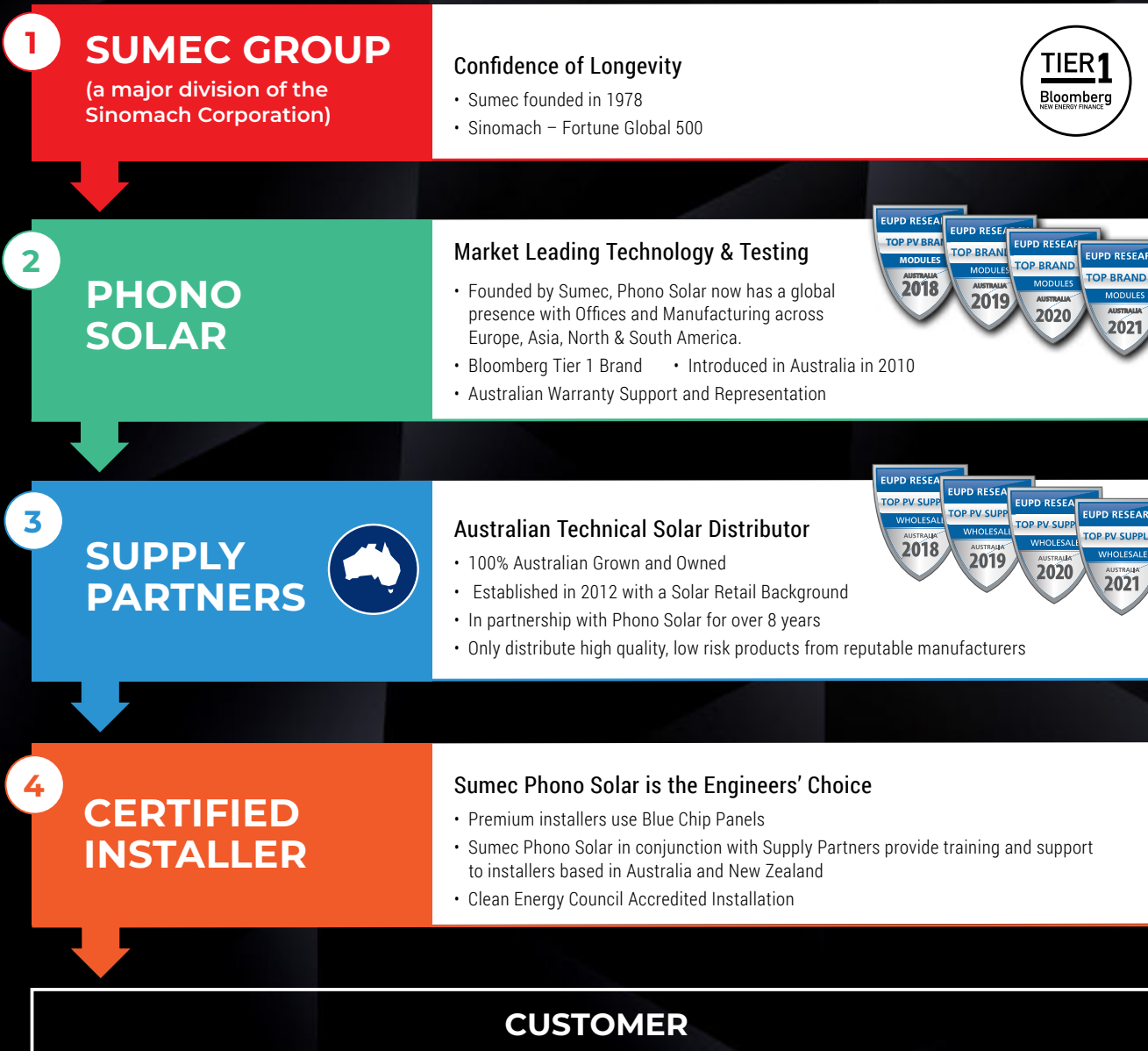
# MAKE A SECURE INVESTMENT

## 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 were founded over 40 years ago. 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.





# TWIN PLUS SERIES

## ELECTRICAL TYPICAL VALUES

Model	<b>PS455M4-24/TH PS455M4H-24/TH</b>
Cell Type	Monocrystalline 166mm x 83mm
Rated Power (P <sub>mpp</sub> ) <sup>2</sup>	<b>455W</b>
Tolerance	0~+5w
Rated Current (I <sub>mpp</sub> )	10.94
Rated Voltage (V <sub>mpp</sub> )	41.60
Short Circuit Current (I <sub>sc</sub> )	11.47
Open Circuit Voltage (V <sub>oc</sub> )	49.37
Module Efficiency (%)	20.80
NOCT (Nominal Operation Cell Temperature)	43°C ± 2°C
Voltage Temperature Coefficient	-0.30%/°C
Current Temperature Coefficient	+0.05%/°C
Power Temperature Coefficient	-0.38%/°C

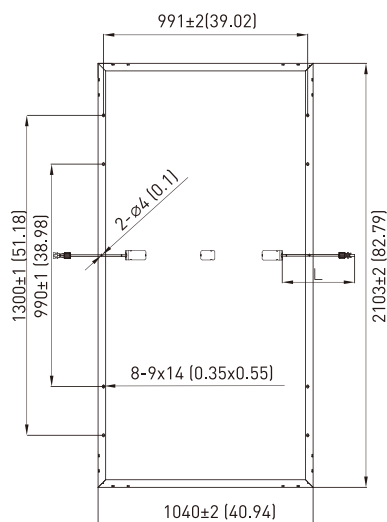
## MECHANICAL CHARACTERISTICS

Dimensions	Length: 2103mm, Width: 1040mm Height: 35mm
Weight	25.0kg
Front Glass	3.2mm toughened glass
Frame	Anodised aluminium alloy
Cable	4mm <sup>2</sup> (IEC), 1250mm (incl.connector)
Junction Box	IP 68 rated
Connectors	Genuine MC4 (1000V) / MC4-EVO 2 (1500V)

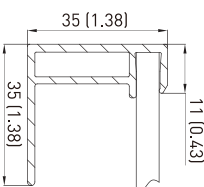
## PACKING CONFIGURATION

Container	Pallet	20'GP	40'HQ
Pieces per container	31	255	682

Voltage [V]



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

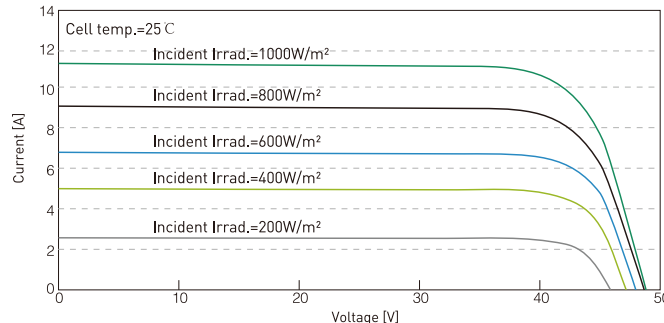
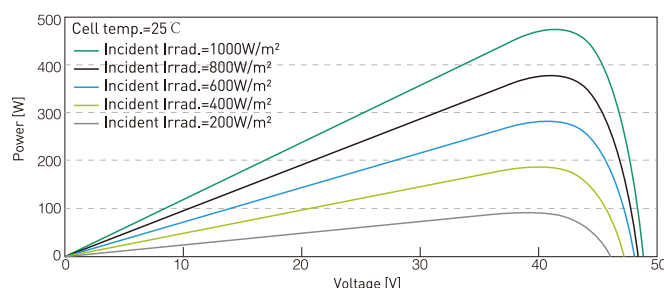


Note:mm (inch)

## 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	20A
PV Module Classification	II
Fire Rating (IEC 61730)	C
Maximum System Voltage	DC 1500V/1000V

## ELECTRICAL CHARACTERISTICS



**SUMEC**  
**Phono Solar**  
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](http://www.phonosolar.com.au)

Sumec Phono Solar modules are proudly manufactured in China.