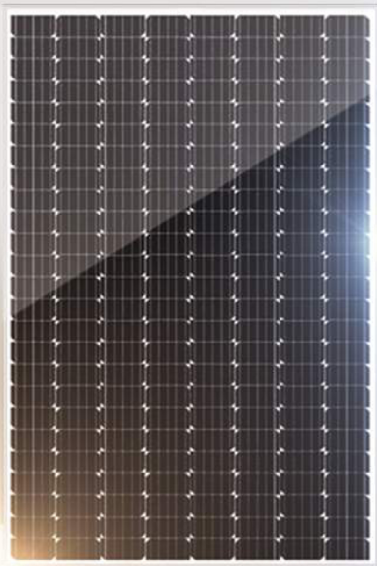


# MONO CRYSTALLINE SOLAR MODULE 475-510 Wp



### TEMPERATURE COEFFICIENTS

VOLTAGE	-0.308 % / °C
CURRENT	0.032 % / °C
POWER	-0.42 % / °C
NOCT AVG	45 °C ±3

### LIMITS

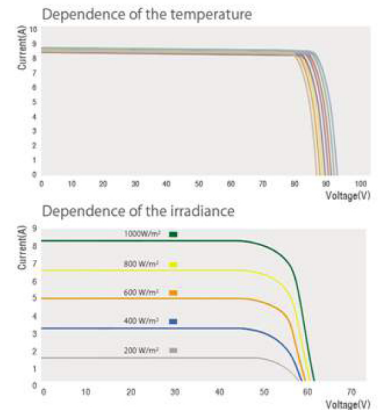
MAX. SYSTEM VOLTAGE  
DC 1.000V

OPERATING MODULE TEMPERATURE  
-40°C TO +90°C

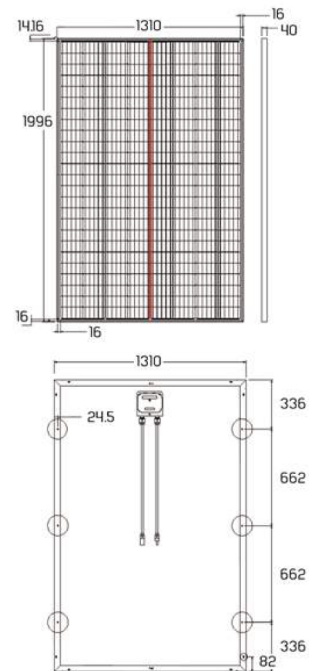
STORM RESISTANCE/STATIC LOAD  
Tested to IEC61215 for loads  
up to 5400Pa (113psf).  
hail and wind resistant

**WARRANTY - 10 YEARS**  
**POWER OUTPUT 90% - 10 YEARS , 80% - 25 YEARS**

### \* I-V Curve



### \* TECHNICAL DRAWINGS



### \* MECHANICAL CHARACTERISTICS

Solar cells	Mono crystalline cells
Front cover	Low iron tempered glass 4.0mm, AR
Back cover	White polyester
Frame	Silver anodized aluminum alloy (40mm)
Output Cables	12 AWG(4mm <sup>2</sup> ) cables with polarized weatherproof connectors, cable length 1.25m (49.21in.)
Junction box	NEMA IP67 rated; 4 internal bypass diodes
Dimensions	1996(78.58in) X 1310(51.57in) X 40(1.57in)
Approximate Weight	36.5kg(80.46lbs)

### \* ELECTRICAL SPECIFICATION

	TSH-S475	TSH-S480	TSH-S490	TSH-S500	TSH-S510
Nominal power[Wp] - Pmpp	475	480	490	500	510
Voltage at nominal power[V] - Vmpp	52.54	52.82	53.38	53.94	54.55
Current at nominal power[A] - Impp	9.05	9.10	9.18	9.27	9.35
Open-circuit voltage[V] - Voc	64.52	65.12	65.56	65.92	66.31
Short-circuit current[A] - Isc	9.62	9.65	9.71	9.77	9.83
Module efficiency level[%]	18.17 %	18.36 %	18.74 %	19.12 %	19.5 %

Performance under standard test conditions (STC) : 1000W/m<sup>2</sup>, 25°C, AM 1.5 / Output tolerance[%] 0~+3%