

# HIGH PERFORMANCE POLYCRYSTALLINE MODULE

**SYM 60-6-270P-290P**

**60 CELL POLYCRYSTALLINE MODULE**

**270-290Wp POWER OUTPUT RANGE**

**1500VDC MAXIMUM SYSTEM VOLTAGE**

**17.7% MAXIMUM EFFICIENCY**



## About Twinsel

Twinsel is a manufacturer of high-performance solar photovoltaic products and provider of total business solutions for residential, commercial and utility-scale power generation. The company, founded in 1986, compels value generation for its chosen global customers. Techno-commercial innovation, underpinned by consummate quality and support, encircle Twinsel's total Solar PV business solutions which are among the most powerful and cost-effective in the industry. With local market presence and strong financial bankability status, we are committed, and able, to building strategic, mutually beneficial collaborations with our partners, as together we capitalise on the rising value of green energy.

## KEY SELIENT FEATURES



**Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing**



**Industry leading lowest thermal co-efficient of power**



**Industry leading 12 years product warranty**



**Excellent low irradiance performance**



**Excellent PID resistance**



**Positive tight power tolerance**



**Dual stage 100% EL Inspection warranting defect-free product**



**Module Imp binning radically reduces string mismatch losses**



**Warranted reliability and stringent quality assurances well beyond certified requirements**



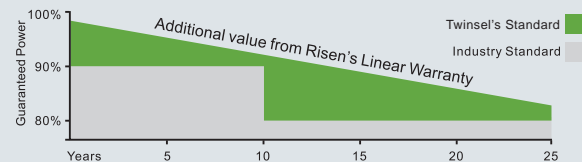
**Certified to withstand severe environmental conditions**

- ◆ Anti-reflective & anti-soiling surface minimise power loss from dirt and dust
- ◆ Severe salt mist, ammonia & blown sand resistance, for seaside, farm and desert environments
- ◆ Excellent mechanical load 2400Pa & snow load 5400Pa resistance



## LINEAR PERFORMANCE WARRANTY

**12 year Product Warranty / 25 year Linear Power Warranty**



**ZHEJIANG TWINSEL ELECTRONIC TECHNOLOGY CO., LTD.**

Add: Tashan Industry Zone, Meilin Street Ninghai County, Ningbo City, China.

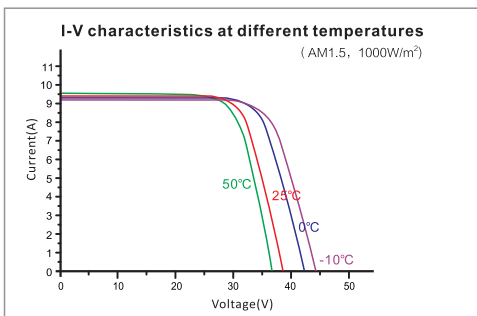
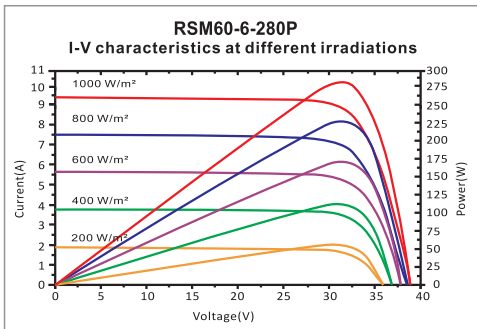
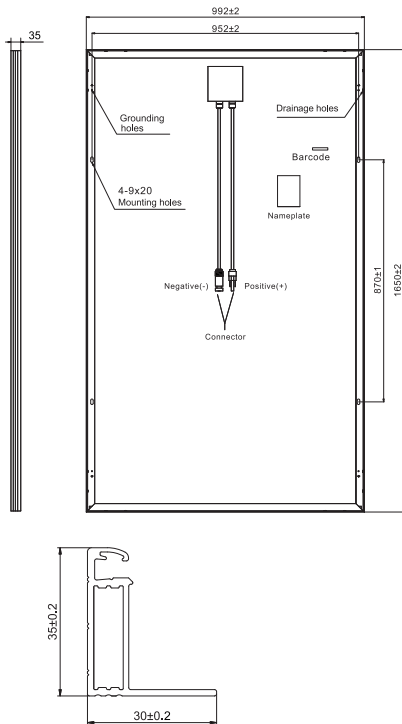
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**Dimensions of PV Module** Unit: mm



**Our Partners:**

**ELECTRICAL DATA (STC)**

Model Number	SYM60-6-270P	SYM60-6-275P	SYM60-6-280P	SYM60-6-285P	SYM60-6-290P
Rated Power in Watts-Pmax(Wp)	270	275	280	285	290
Open Circuit Voltage-Voc(V)	37.90	38.10	38.30	38.40	38.60
Short Circuit Current-Isc(A)	9.20	9.30	9.40	9.50	9.60
Maximum Power Voltage-Vmpp(V)	31.05	31.25	31.50	31.70	31.90
Maximum Power Current-Impp(A)	8.70	8.80	8.90	9.00	9.10
Module Efficiency (%) *	16.5	16.8	17.1	17.4	17.7

STC: Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

\* Module Efficiency (%): Round-off to the nearest number

**ELECTRICAL DATA (NMOT)**

Model Number	SYM60-6-270P	SYM60-6-275P	SYM60-6-280P	SYM60-6-285P	SYM60-6-290P
Maximum Power-Pmax (Wp)	201.4	205.1	209.1	212.8	216.5
Open Circuit Voltage-Voc (V)	34.90	35.00	35.20	35.30	35.50
Short Circuit Current-Isc (A)	7.54	7.63	7.71	7.79	7.87
Maximum Power Voltage-Vmpp (V)	28.40	28.60	28.80	29.00	29.20
Maximum Power Current-Impp (A)	7.09	7.17	7.25	7.34	7.42

NMOT: Irradiance at 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s.

**MECHANICAL DATA**

Solar cells	Polycrystalline, 5BB
Cell configuration	60 cells (6×10)
Module dimensions	1650×992×35mm
Weight	15kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy type 6063T5, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm <sup>2</sup> (12AWG), 900mm length
Connector	Twinsel PV-SY02, IP68

**TEMPERATURE & MAXIMUM RATINGS**

Nominal Module Operating Temperature (NMOT)	45°C±2°C
Temperature Coefficient of Voc	-0.32%/°C
Temperature Coefficient of Isc	0.055%/°C
Temperature Coefficient of Pmax	-0.39%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	20A
Limiting Reverse Current	20A

**PACKAGING CONFIGURATION**

	40ft	20ft
Number of modules per container	840	360
Number of modules per pallet	30	30
Number of pallets per container	28	12
Packaging box dimensions (LxWxH) in mm	1680×1105×1130	1680×1105×1130
Box gross weight[kg]	500	500

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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