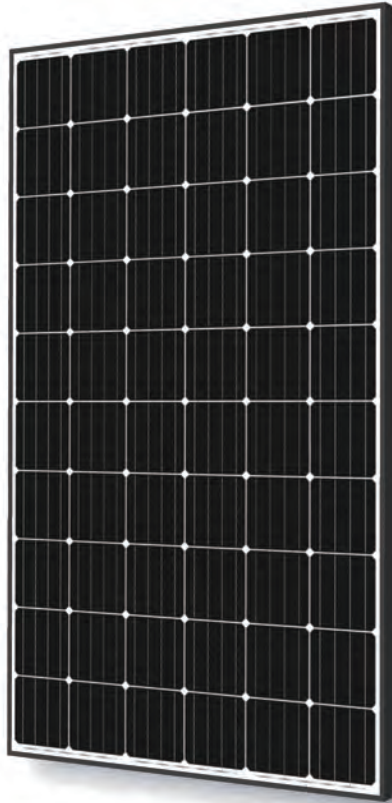


Hipro M290+

60 CELL SERIES



KEY FEATURES

15W

Higher than industry level

10 years

Material & workmanship warranty

PID Free

Certified by TUV Rheinland

25 years

Linear power output warranty

- Higher power output: With passivated backside and BSF technology
- Robust design: Certified to withstand up to 2400 Pa wind load and up to 5400 Pa snow load
- Excellent low light performance on cloudy days, mornings and evenings
- High reliability, strict module BOM selection
- Black/White frame and black/white back sheet

QUALITY WARRANTY

TALESUN guarantees that defects will not appear in materials and workmanship defined by IEC61215, IEC61730 and UL1703 under normal installation, use and maintenance as specified in Talesun's installation manual for 10 years from the warranty starting date.



ABOUT TALESUN

Zhongli Talesun Solar Co., Ltd. is one of the world's largest integrated PV manufacturers. Its standard and high-efficiency product offerings are among the most powerful and cost-effective in the industry. With over 3.5 GW of modules installed globally, we are a leading solar energy company built upon proven product reliability and sustainable performance.

PERFORMANCE WARRANTY

Monocrystalline Solar Cell Modules

- During the first year, TALESUN guarantees the nominal power output of the product will be no less than 97% of the labeled power output.
- From year 2 to year 24, the nominal power decline will be no more than 0.7% in each year; by the end of year 25, the nominal power output will be no less than 80% of the labeled power output.

ELECTRICAL PARAMETERS

Model	Hipro M290+ TP660M		
Maximum Power (Pmax/W)	280	285	290
Operating Voltage (Vmpp/V)	31.8	32.1	32.4
Operating Current (Impp/A)	8.81	8.89	8.96
Open-Circuit Voltage (Voc/V)	38.4	38.6	38.8
Short-Circuit Current (Isc/A)	9.24	9.29	9.34
Module Efficiency $\eta_m(\%)$	17.2	17.6	17.9
Power Tolerance	0~+3%		
Temperature Coefficient	Pmax	-0.41%/C	
	Voc	-0.31%/C	
	Isc	+0.055%/C	
Noct	45±2 C		

* STC: 1000w/ m², 25 C, AM 1.5

OTHER PARAMETERS

Cell Type	Mono Crystalline
Cell Dimensions	156*156mm(6inch)
Cell Arrangement	60(6*10)
Weight	18.5kg(40.8lbs)
Module Dimensions	1640*990*35mm(64.6*39.0*1.4inch)
Cable Length	900mm(35.4inch)
Cable Cross Section Size	4mm ² (0.006sq.in)
Front Glass	3.2mm High Transmission, Tempered Glass
No. of Bypass Diodes	3/6
Packing Configuration (1)	30pcs/Pallet, 840pcs/40hq
Packing Configuration (2)	30pcs+5pcs/Pallet, 910pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP65/IP67

OPERATING CONDITIONS

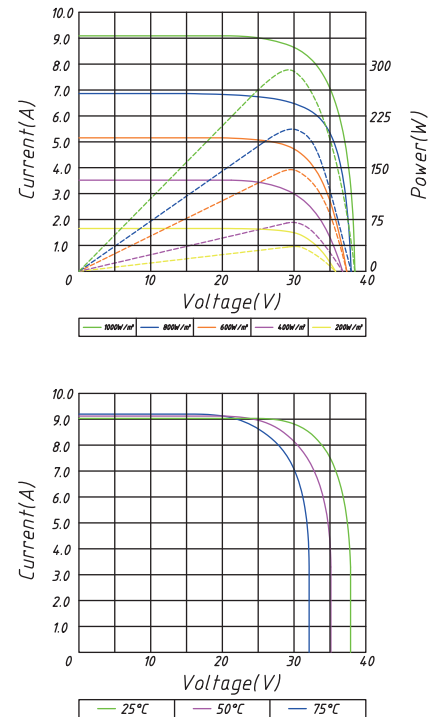
Maximum System Voltage	1000V/DC(IEC)
Operating Temp.	-40 C ~ +85 C
Maximum Series Fuse	15A
Static Loading	5400Pa
Conductivity at Ground	≤ 0.1Ω
Safety Class	II
Resistance	≥ 100MΩ
Connector	MC4 Compatible

ZHONGLI TALESUN SOLAR CO.,LTD.

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I-V CURVE

Hipro Pm(W)285



TECHNICAL DRAWINGS

