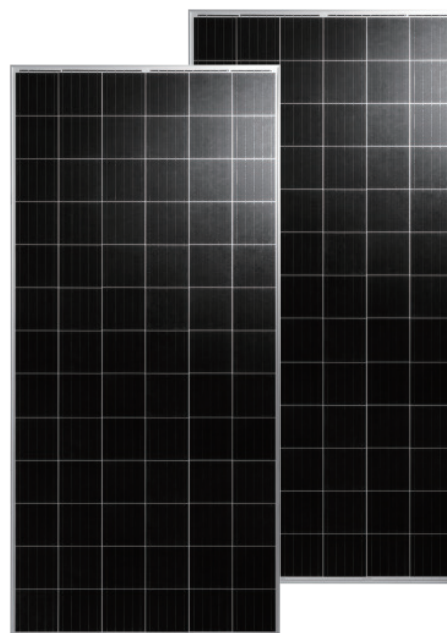


# HIPRO

TP678M  
TP678M(H) **78-cell**

**410 - 430W**

mono perc



## KEY FEATURES

**Anti  
PID**

### Excellent Anti-PID performance

2 times of industry standard Anti-PID test by TUV SUD



### IP68 junction box

High waterproof level



### Lower temperature coefficients

Enhance power generation

## SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 1703
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

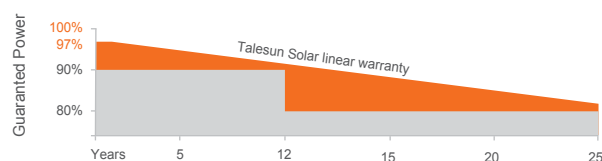


## PERFORMANCE WARRANTY

**12** years  
Quality assurance

**25** years  
Power output guarantee

■ Talesun standard  
■ Industry standard



## ELECTRICAL PARAMETERS

### Performance at STC (Power Tolerance 0 ~ +3%)

Maximum Power (Pmax/W)	410	415	420	425	430
Operating Voltage (Vmpp/V)	42.7	42.9	43.1	43.3	43.5
Operating Current (Impp/A)	9.61	9.68	9.75	9.82	9.89
Open-Circuit Voltage (Voc/V)	52.2	52.4	52.6	52.8	53.0
Short-Circuit Current (Isc/A)	10.17	10.24	10.31	10.38	10.45
Module Efficiency $\eta_m(\%)$	19.1	19.4	19.6	19.8	20.1

### Performance at NMOT

Maximum Power (Pmax/W)	306.1	309.8	313.5	317.2	320.9
Operating Voltage (Vmpp/V)	39.8	39.9	40.1	40.3	40.5
Operating Current (Impp/A)	7.70	7.76	7.81	7.87	7.93
Open-Circuit Voltage (Voc/V)	48.6	48.8	49.0	49.1	49.3
Short-Circuit Current (Isc/A)	8.21	8.27	8.32	8.38	8.44

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s

## MECHANICAL SPECIFICATION

Cell Type	Mono-Crystalline Silicon (5Busbar)
Cell Dimensions	158.75*158.75mm (6inches)
Cell Arrangement	78 (6*13)
Weight	24.5kg (54.0lbs)
Module Dimensions	2140*1002*35mm (84.25*39.45*1.38inches)
Cable Length	900mm (42.24inches)
Cable Cross Section Size	4mm <sup>2</sup> (0.006inches <sup>2</sup> )
Front Glass	3.2mm High Transmission, Tempered Glass
No. of Bypass Diodes	3/6
Packing Configuration (1)	30pcs/carton, 660pcs/40hq
Packing Configuration (2)	30+4pcs/carton, 704pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP68

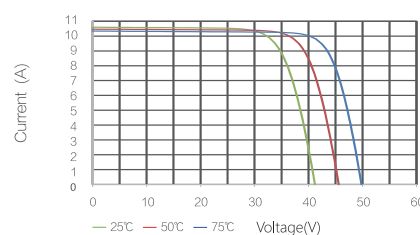
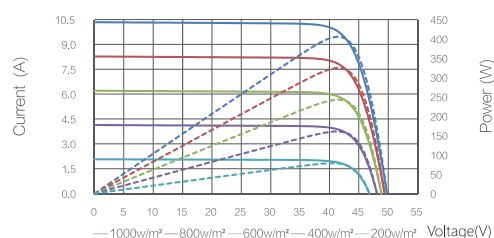
## OPERATING CONDITIONS

Maximum System Voltage	1000V/1500V/DC(IEC)
Operating Temperature	-40°C ~ +85°C
Maximum Series Fuse	20A
Static Loading	5400pa
Conductivity at Ground	≤0.1Ω
Safety Class	II
Resistance	≥100MΩ
Connector	MC4 Compatible

## TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.36%/°C
Temperature Coefficient Voc	-0.26%/°C
Temperature Coefficient Isc	+0.043%/°C
NMOT	43±2°C

## I-V CURVE



## TECHNICAL DRAWINGS

