



PV Module



25 Years Performance Warranty

Our solar panels come with a 25 year performance guarantee, providing peace of mind and ensuring reliable, long-lasting performance for your home.



Strong Mechanical Load

Our solar panels are designed to withstand strong mechanical loads, ensuring long-lasting and reliable performance even in harsh weather conditions.



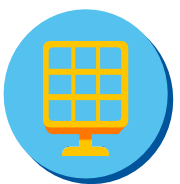
Anti-Hotspot Capability

Ensuring optimal energy production and increased panel lifespan.



High Efficiency

Our solar panels have a high efficiency rate of up to 22%, converting more sunlight into energy and providing a cost effective and environmentally friendly solution for your energy needs.



Strong Frame

Built to withstand extreme weather conditions and ensure long-lasting durability for your solar energy system.



1500V DC System

System capable of 1500 V DC.

Technical Specifications

Performance

Model Number	AS440B-54M-H8N		AS445B-54M-H8N		AS450B-54M-H8N	
Test Conditions	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (W)	440	332.1	445	335.9	450	339.7
Short-circuit Current (A)	14.41	11.70	14.54	11.81	14.63	11.88
Open-circuit Voltage (V)	38.86	36.81	39.01	36.95	39.16	37.09
Maximum Power Current (A)	13.63	11.06	13.76	11.16	13.85	11.23
Maximum Power Voltage (V)	32.29	30.02	32.34	30.09	32.50	30.24
Module Efficiency (%)	22.5		22.8		23.0	
Max. over-current protection rating (A)			25			
Power Tolerance (W)			0 ~ 5			
Measuring Uncertainty of Pm (%)			±5			
Maximum System Voltage (V)			1500			

General

Junction Box Frame	IP68		
Frame	Anodised Aluminium		
Cable	Customised Length		
Fire Class Rating	Class C according to UL 790		
Connector(Model/Brand)	PV-ZPJ030A/40th Institute		
Operating Temperature (°C)	-40 to +85		
Snow Load (pa)	5400		
Standards	IEC 61215 IEC 61730 ISO9001		
Dimensions (mm)	1722x1134x30	1722x1134x30	1722x1134x30
Weight (kg)	20.3	20.3	20.3

Temperature Characteristics

NMOT (°C)	45 ± 2
Temp Coefficient of VOC (%/ °C)	-0.25
Temp Coefficient of ISC (%/ °C)	0.046
Temp Coefficient of Pmax (%/ °C)	-0.30

- STC (Standard Testing Conditions): 1000 W/m² Irradiance, 25°C Cell Temperature, AM 1.5.
- NMOT (Normal Module Operation Temperature): 800 W/m² Irradiance, 20°C Ambient Temperature, Wind Speed 1 m/s.
- 10 years product warranty, 25 years performance warranty. Within 25 years from the date of shipment, under standard test conditions (irradiance 1000W/m², spectrum AM1.5, temperature 25 ±2°C), if the output power of any panel is lower than 80% of the rated power of the panel, Tempo will repair or replace the panel.