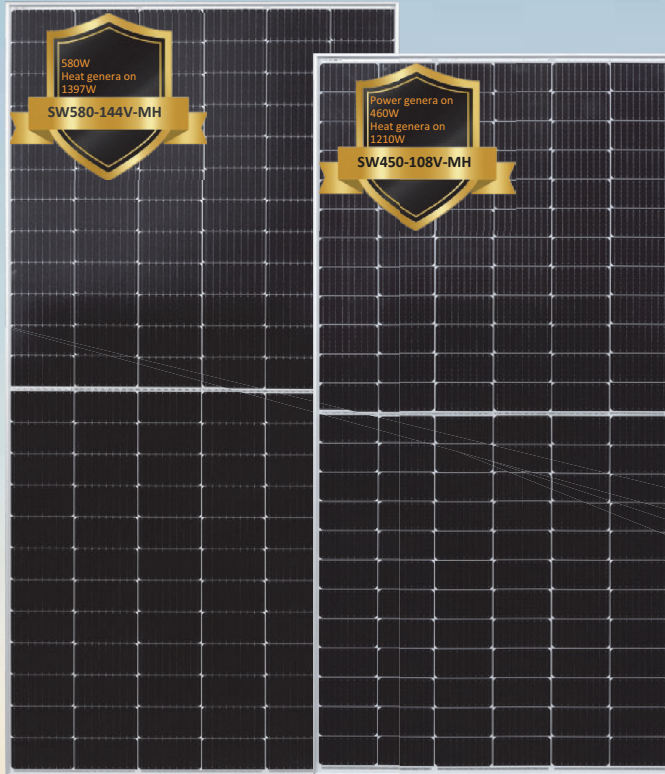


Hybrid PVT



Electricity generation



Front side

N-type TOPCon half cut mono-crystalline

Hot water production



Rear side

Cooling of the panel and reuse of waste heat in the form of hot water generated by a patented heat exchanger

WARRANTY



12 years process quality assurance

30 years 87.4% power output guarantee

QUALITY & SAFETY

IEC61215/IEC61730

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

ISO14064: Greenhouse Gases Emissions

Verification ISO45001: Occupational Health and Safety Management System ISO14067

COMPATIBLE PANEL FOR APPLICATION



DHW



Floor heating



Heating&Cooling

IDEA SOLUTION FOR



Hospital



Residential



Hotel



Commercial



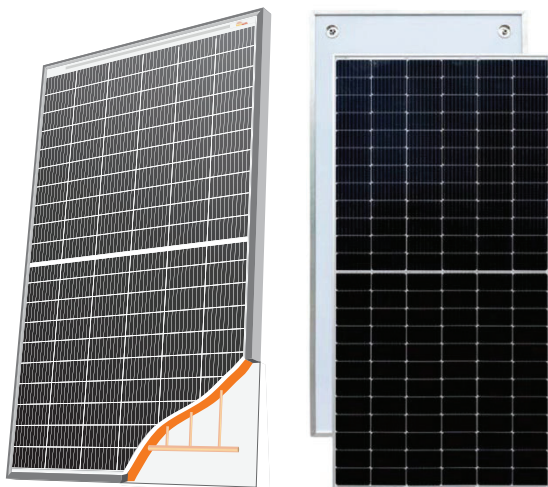
School



Pool

Hybrid PVT

Engineering Drawings



Photovoltaic characteristics

Model Type	SW460	SW580	SW670
Height	2094±1	2279±1	2384±1
Width	1038±1	1134±1	1303±1
Thickness	41±1		
Insulated			
Empty / full weight	37.5/38.5kg	43/44kg	49/51kg
Number of cells		144	132
Cell type	Mono-9BB	TopCon	
Connectors	MC4/MC4 compatible		
Cable length	1000mm		
Maximum load	5400 Pa(snow)/2400 Pa (Wind)		
Frame / Backsheet	Anodised aluminium		

Photovoltaic characteristics

Model Type	SW450	SW580	SW670
Nominal power	450W	580W	670W
Output power tolerance	0~+3W	0~+3W	0~+5W
Module efficiency	22.05%	22.45%	21.57%
Rated voltage(Vmpp)	33.06	42.87	38.2
Rated current(Imp)	13.61	13.53	17.55
Open circuit voltage(Voc)	39.73±3%	51.43±3%	46.10
Short-circuit current(Isc)	14.22±4%	14.30±3%	18.62
Voltage temperature coefficient(μVoc)	-0.26%/°C	-0.285%/°C	-0.340%/°C
Current temperature coefficient(μIsc)	0.046%/°C	+0.045%/°C	-0.250%/°C
Power temperature coefficient(μPmp)	-0.310%/°C	-0.350%/°C	0.040%/°C
Maximum system voltage	1500V	1500V	1500V
NMOT	45+/-2°C	45+/-2°C	45+/-2°C
Application class	Class II	Class II	Class II

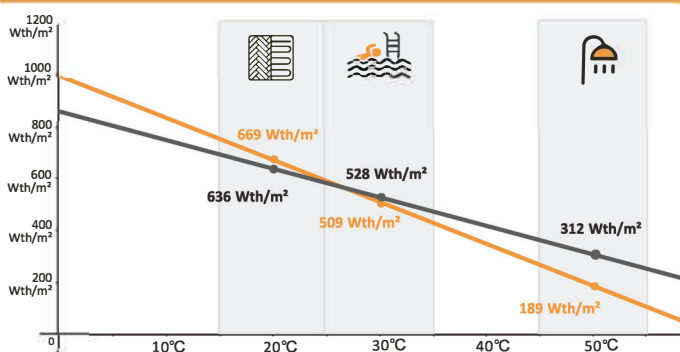
STC conditions (AM 1.5-1000 W/M² - 25°C)
Measurement tolerance: +/-3%

Thermal characteristics

Model Type	SW450	SW580	SW670
Thermal power	1210W	1397W	1676W
Heat exchanger area	2.17m ²	2.54m ²	3.08m ²
Heat exchanger volume	1.0L	1.1L	1.3L
Max operating pressure	0.8mpa	0.8mpa	0.8mpa
Flow rate	0.4L/s	0.4L/s	0.8L/s
Hydraulic inlet / outlet	DN 15	DN 15	Dn15
Insulated			
Stagnation temperature	75.6°C	75.6°C	75.6°C
Optical efficiency a ₀	58.2%	58.2%	58.2%
Coefficient a ₁	10.8W/K/m ²	10.8W/K/m ²	10.8W/K/m ²
Coefficient a ₂	0 W/(m ² .K ²)	0 W/(m ² .K ²)	0 W/(m ² .K ²)
Operating temperature	-40°C~+85°C	-40°C~+85°C	-40°C~+85°C

Thermal power calculated with wind u=0 m/s, DT=0, G=1000W/m²
The coefficients a₀, a₁, and a₂ result from EN 9806:2017 certification tests for solar collectors without glazing carried out by KIWA for a wind speed u=1m/s: a₀=n₀-c₆*u'; a₁=c₁+c₃*u'; u'=u-3

Thermal power output as a function of the temperature of the water in the panel and by application



Performances derived from values a₀, a₁ (wind u=1m/s) in STC conditions (T=25°C, G=1000W/M²)