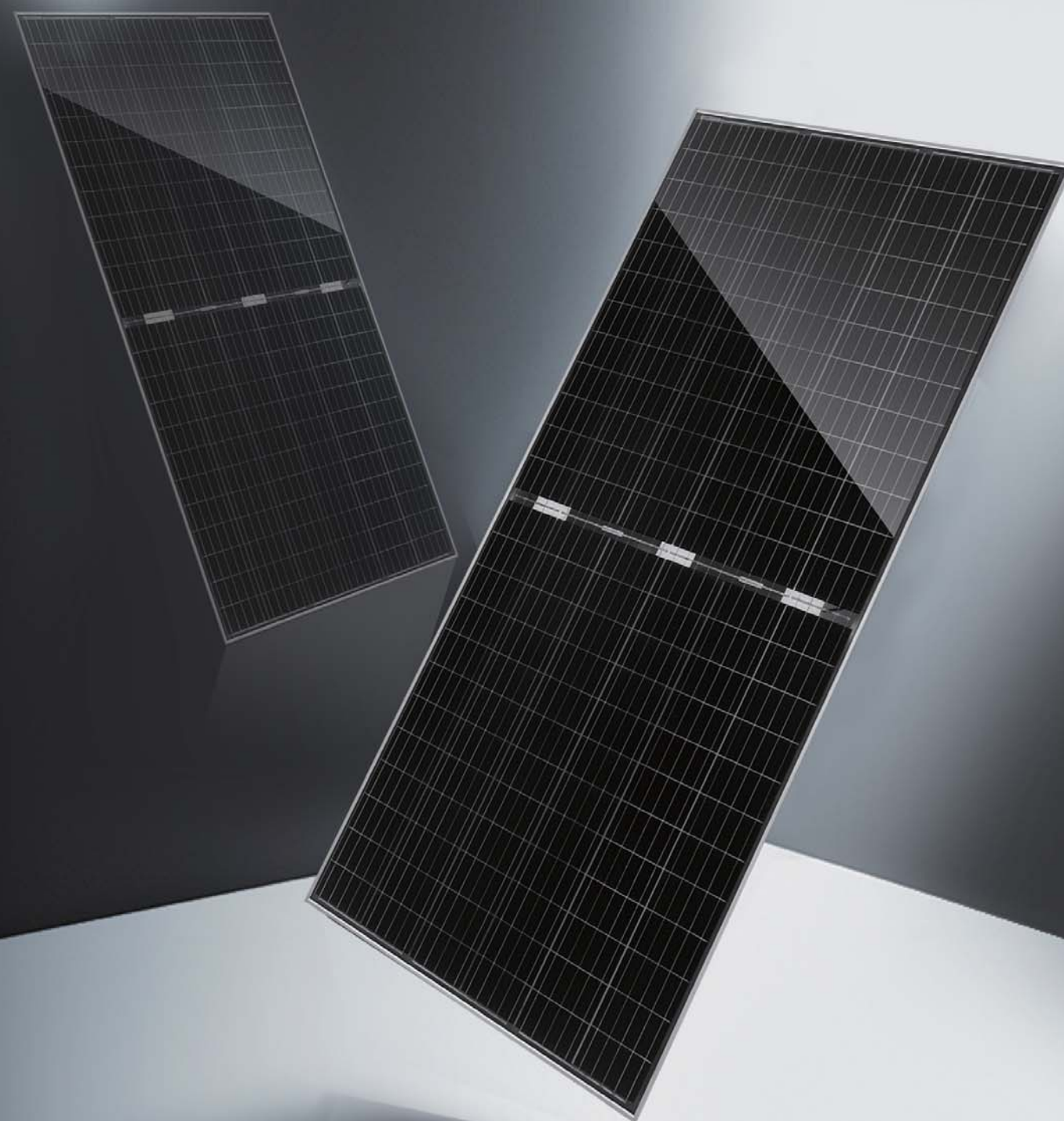
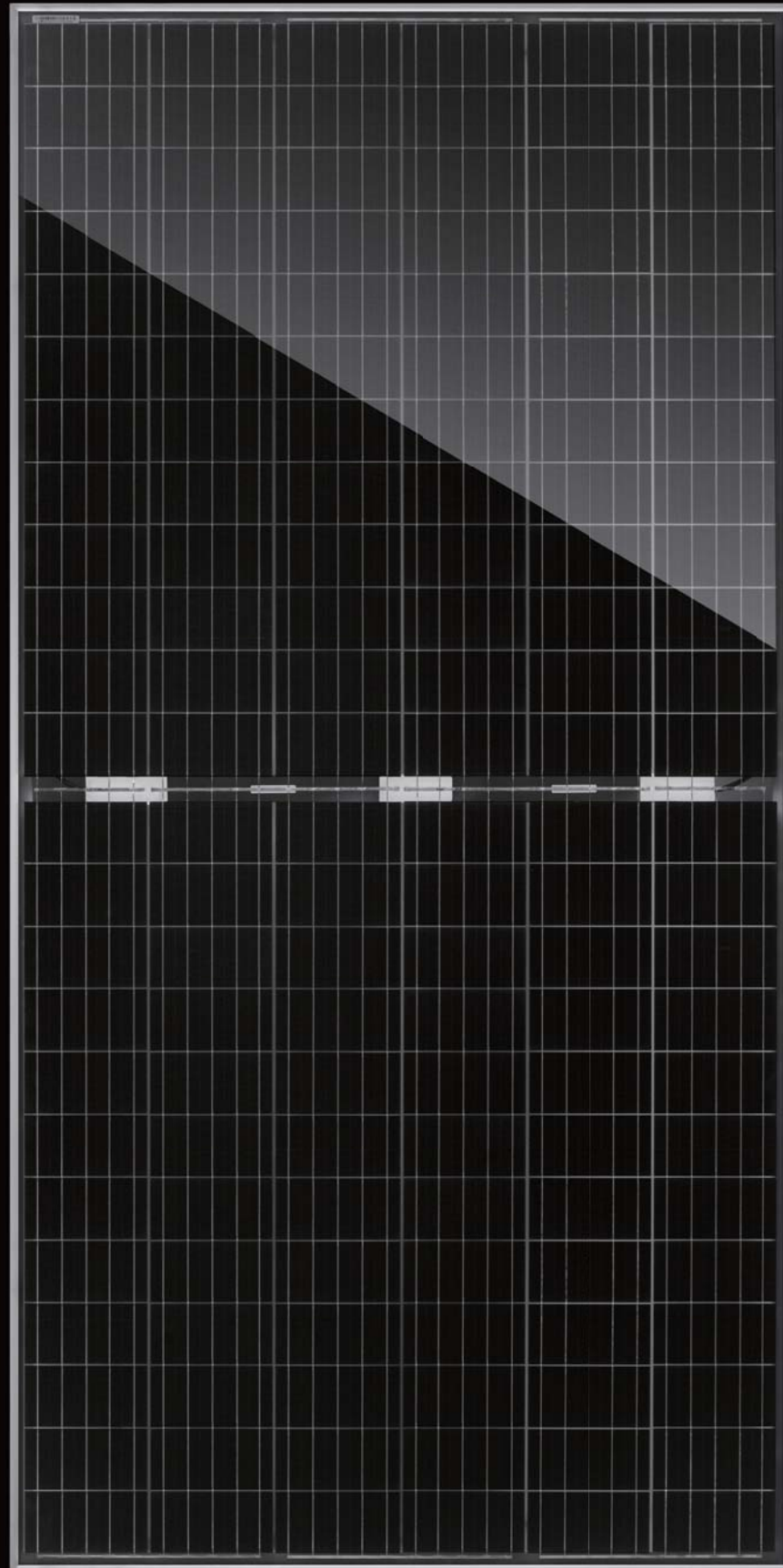


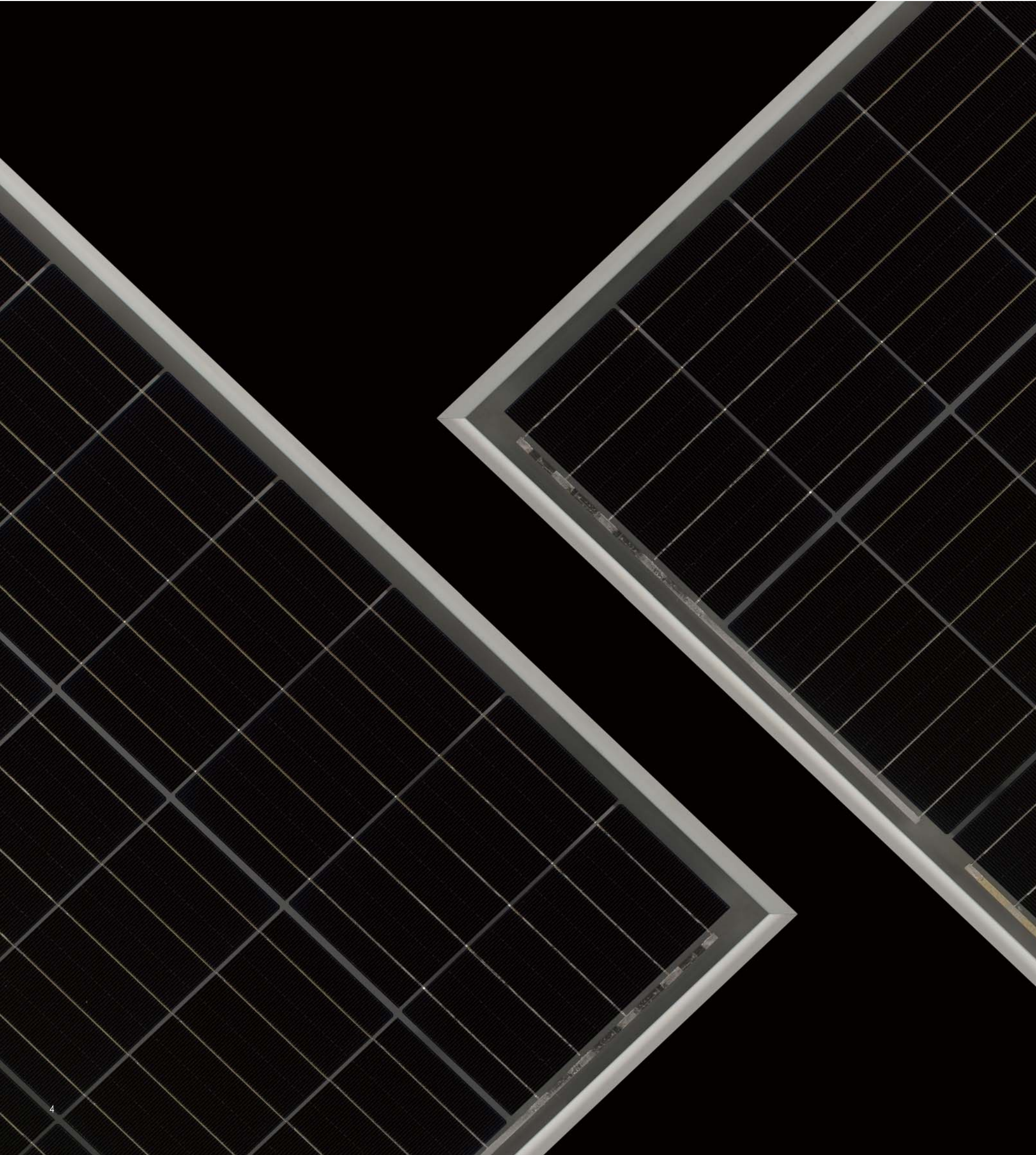
Swan Bifacial Module





Bifacial Energy Generation

Up to 25% energy gain from the rear-side



More Power

Up to 500W
(front and rear side)



Better Structural Strength

Less prone to bending and cracking during transportation and installation

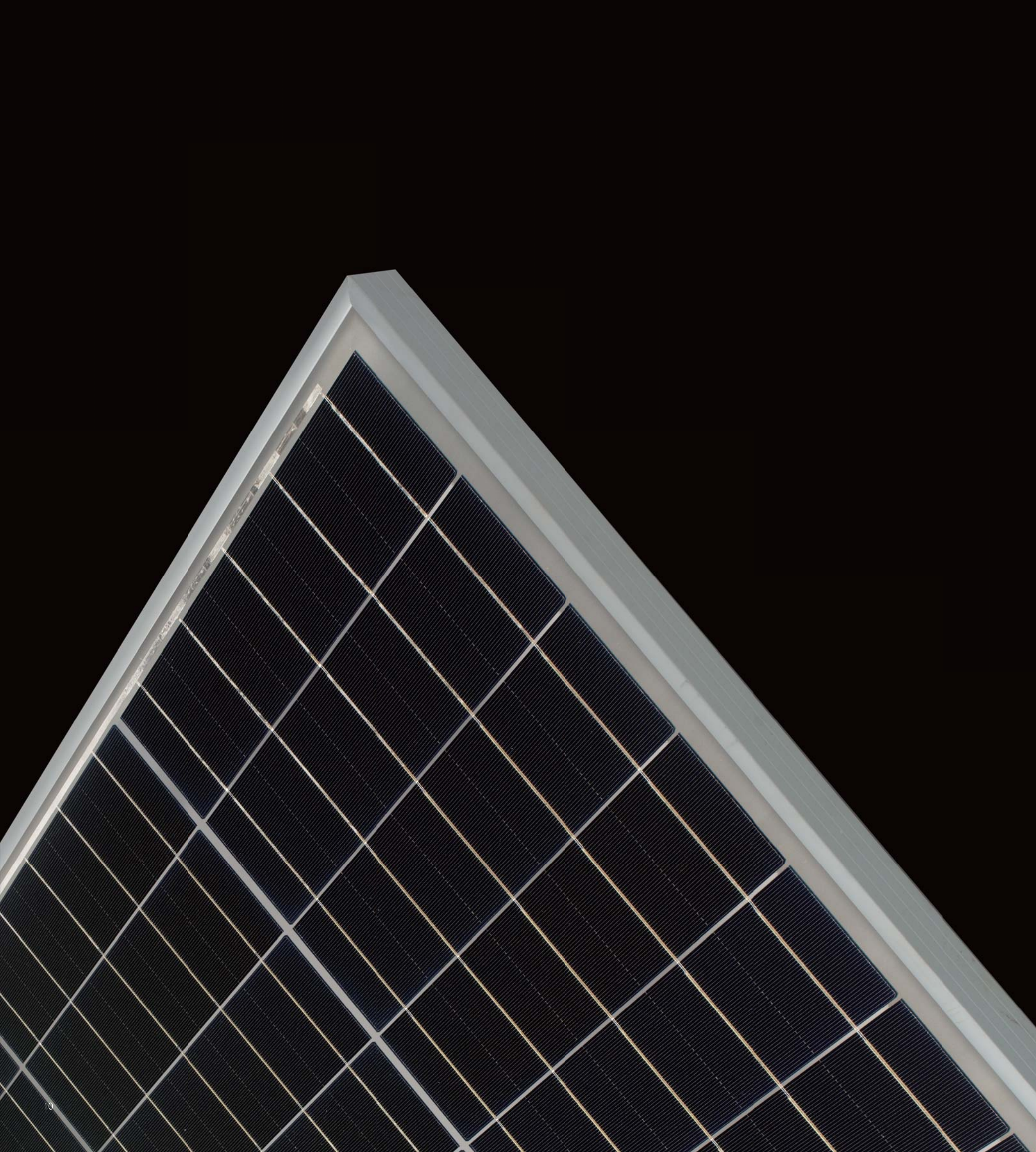


Light-Weight, Easy to Install

Decrease of labor costs
by 20% (related to module
installation)

Reduction of BOS cost
by 3%

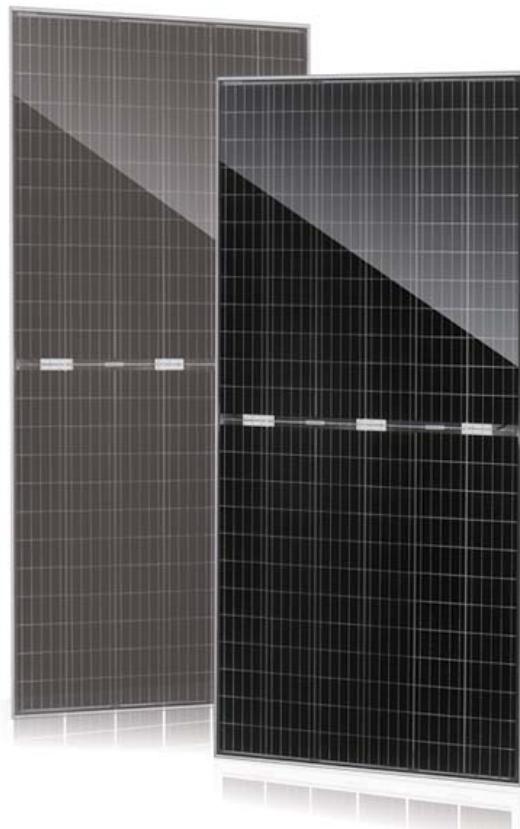
Minimizing LCOE and
maximizing IRR



Enhanced Reliability

30-year PV module
performance warranty

JinkoSolar Swan Bifacial Module



Product Profile

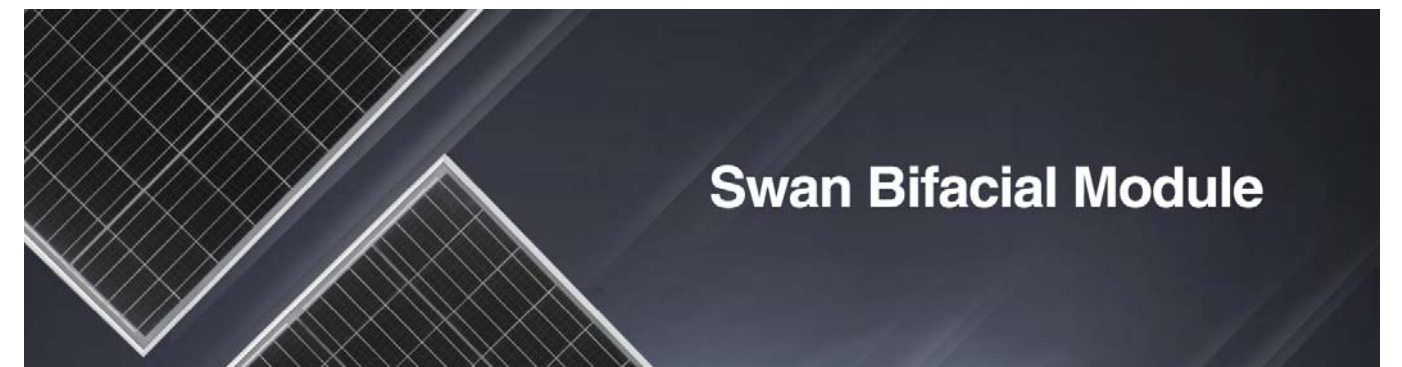
Jinko's bifacial module with transparent backsheet has been developed out of the necessity to support the energy market transition from feed-in tariffs and governmental subsidies towards IPP/PPA schemes and grid parity scenario, which requires maximizing kWh yield and PV plant performance while limiting complexity. Bifacial technology is at present the solution that allows a step change in LCOE reduction.

Swan module achieves the same power output and rear-side power gain as with a dual-glass bifacial module, combining the benefits and extra yield of bifacial technology and the simplicity and easy installation of standard-glass backsheet modules. It reduces BOS costs thanks to its lighter weight and easier installation method which is identical to traditional glass-backsheet, framed modules.

Technological Advancement

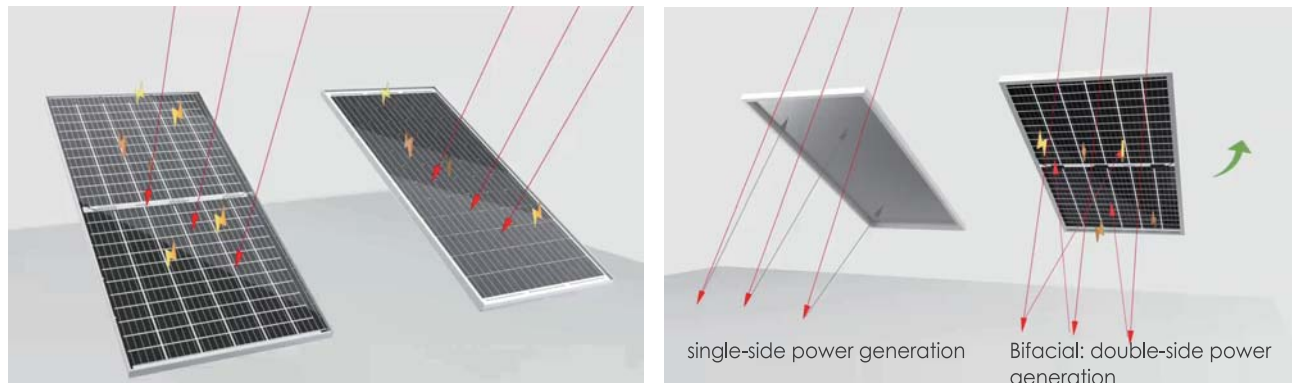
The p-type bifacial big cells module with DuPont™ Clear Tedlar® technology is produced for the first time in the market by Jinko and represents the union between bifacial technological advancement and standard module structure simplicity. Swan uses high-efficiency Jinko Solar high performance Mono big cell technology which enables bifacial module to reach high power output. Swan module production is highly compatible with standard production processes, thus GW-scale capacity is achievable at competitive manufacturing costs.

Cheetah bifacial module with 158.75mm cell size can reach up to 400Wp front side, also combined with Jinko half-cell technology, which reduces power loss and the possibility of hot spots, enabling to improve the module power and reliability. Bifacial with transparent backsheet assures lightweight modules like traditional glass-backsheet laminates and the framed structure simplifies their handling and installation, while mesh clear backsheet improves the internal reflection in the glass-cell-backsheet interlayered structure.



Technological Benefits to Ensure High IRR

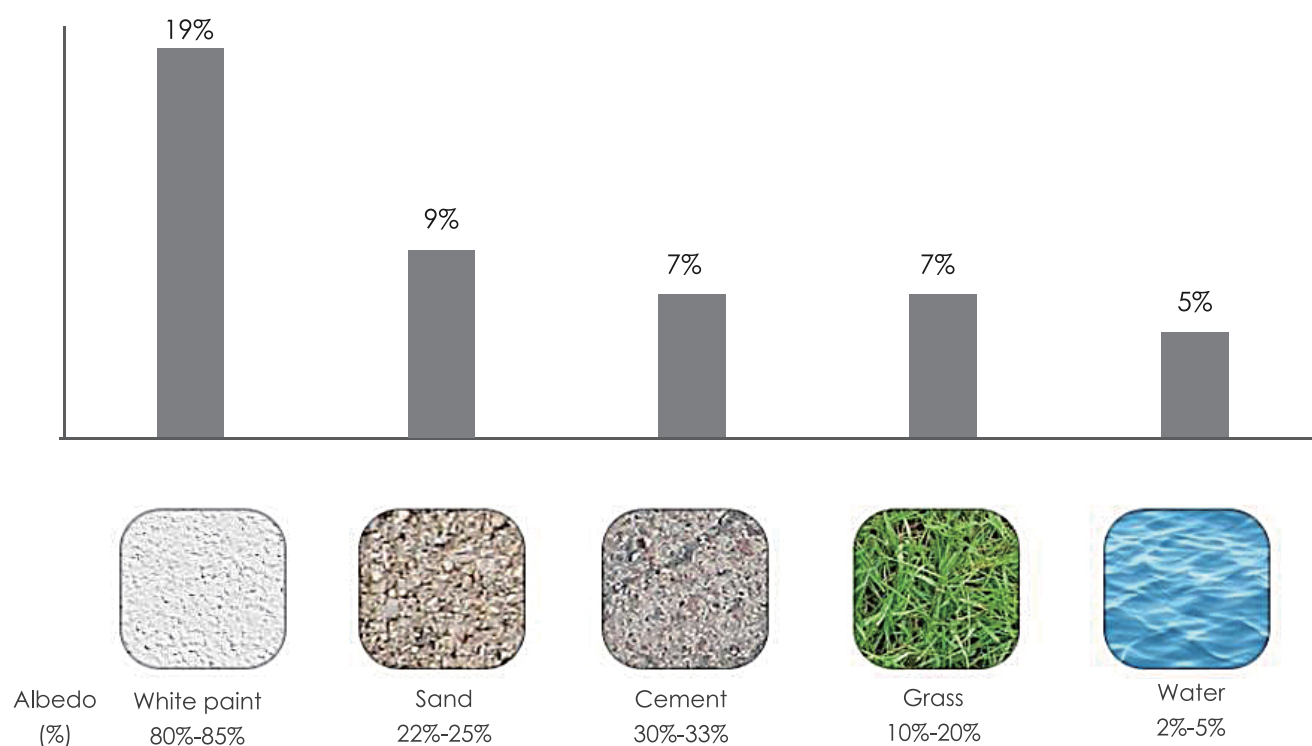
1. Bifacial energy generation



Up to 25% power gain depending on albedo and PV system design

Real Energy Generation Gain

Energy Generation Gain (%)



2. Lower LCOE

- > 3% BOS cost savings ,
- > 20% reduction of labor cost related to module installation



Bifacial module with transparent backsheet



Bifacial module with dual glass



Saving labor cost related to module installation by over 20% using bifacial modules with transparent backsheet!

-> 15% mounting structure cost saving

Bifacial with transparent backsheet



- Fewer supporting structures
- Compatible with the system of monofacial modules;
- Saving more than 15% mounting construction cost

Bifacial with dual glass

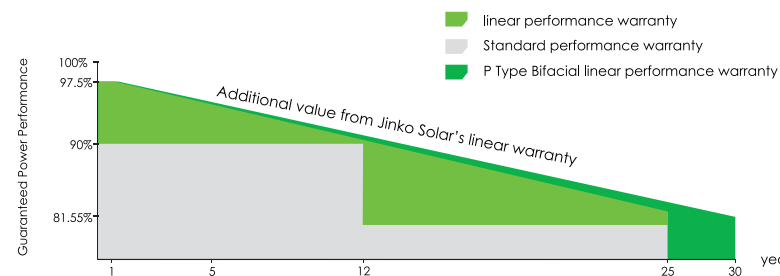


- More supporting structures
- Incompatible with the system of monofacial modules;
- Stronger load-bearing structure is requested

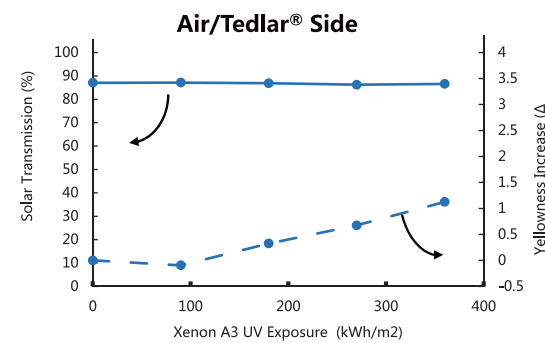
3. Enhanced Reliability of DuPont Clear Tedlar® Backsheet

LINEAR PERFORMANCE WARRANTY

12 Year Product Warranty • 30 Year Linear Power Warranty
0.55% Annual Degradation Over 30 years



30-year PV module performance warranty .(high and stable visible-light transmission rate around 90%, after 300 kWh/m2 UV exposure)

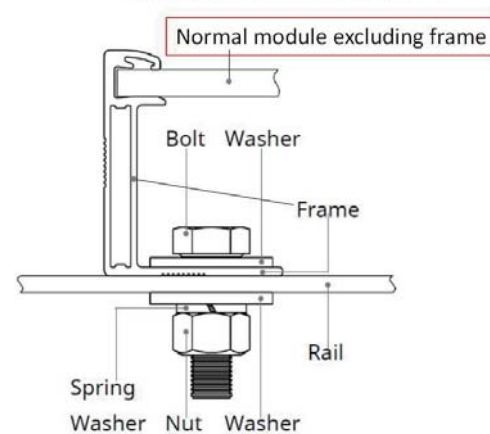


4. Frame Design - Higher structure strength

Frame Design → Common installation method



Module with aluminum frame



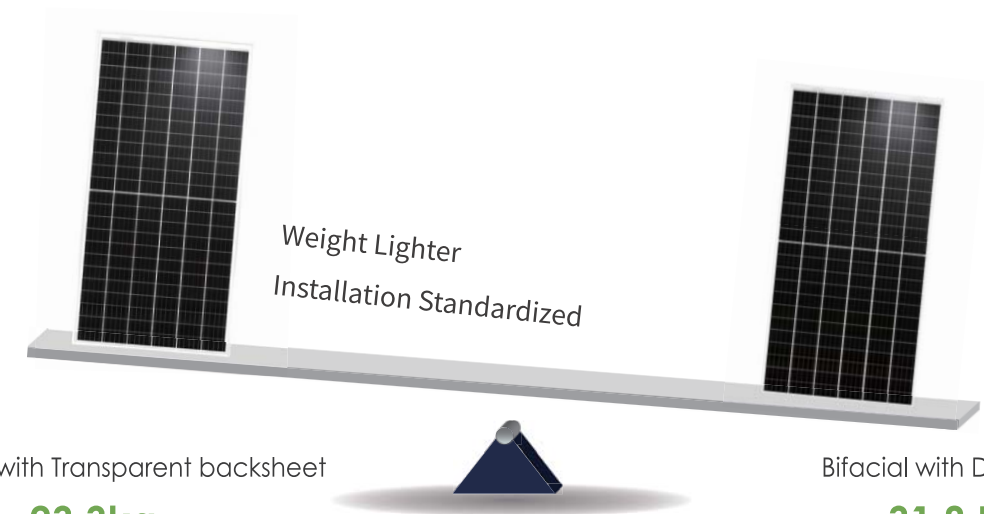
Installation convenience

Labor Cost

Mounting Construction Cost

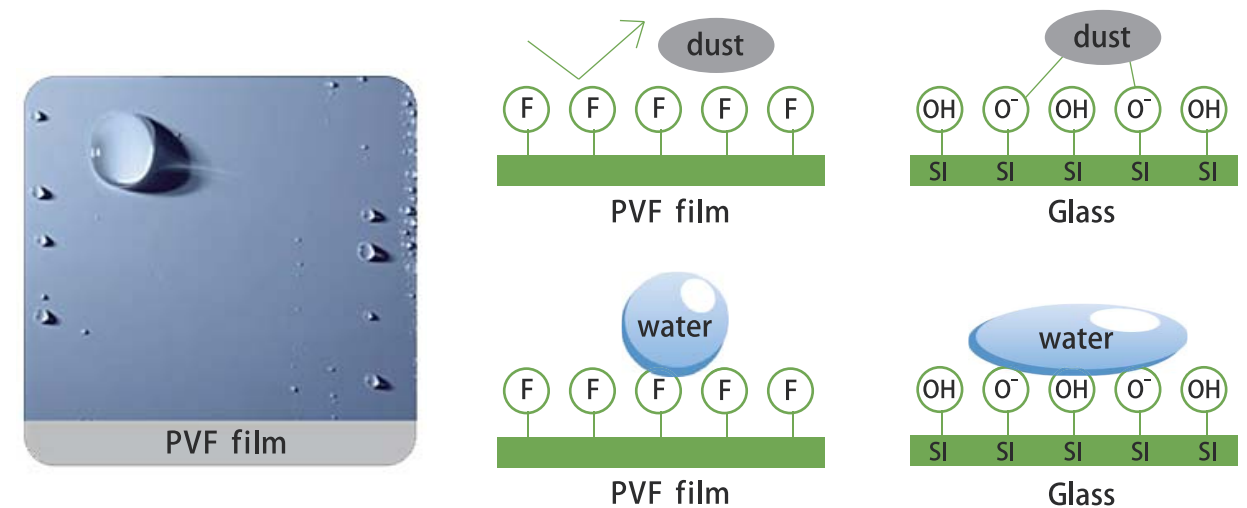
Framed modules are less prone to bending and cracking during transportation and installation than frameless ones.

5. Light-weight , easy to install



6. Superior stain resistance

The hydrophobic surface of the transparent DuPont Tedlar film backsheet outer layer, offers excellent anti-staining performance, making cleaning of the modules easier, and reducing O&M costs and reducing water waste.



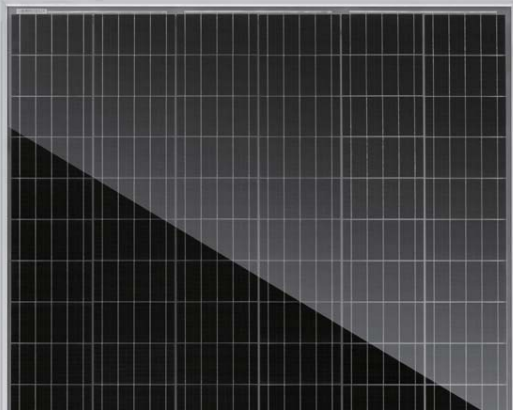
Swan Bifacial HC 60M 320-340 Watt

MONOCRYSTALLINE MODULE

Positive power tolerance of 0~+3%

ISO9001:2015、ISO14001:2015、OHSAS18001
certified factory.

IEC61215(2016), IEC61730(2016), certified products.



KEY FEATURES



5 Busbar Solar Cell

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.



PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for mass production.



Higher Lifetime Power Yield:

0.55% annual power degradation
30 year linear power warranty



Light-weight design:

Light-weight design using transparent backsheet for easy installation and low BOS cost.



Higher power output:

Module power increases 5-25% generally (per different reflective condition)
lower LCOE and higher IRR

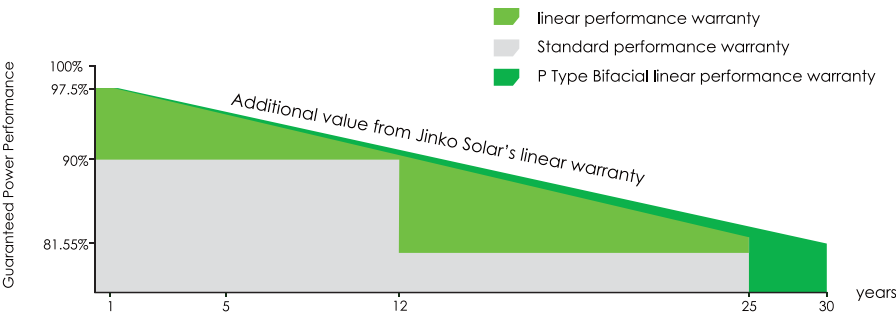


Better low-light performance:

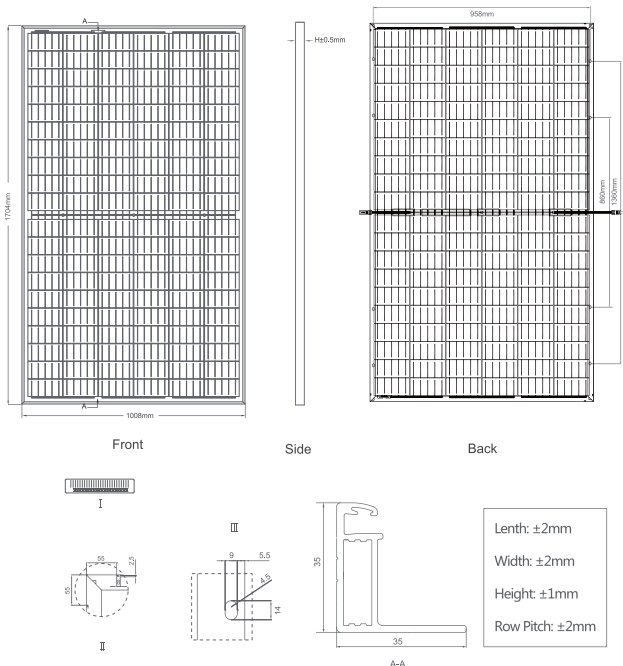
Excellent performance in low-light environments
(e.g. early morning, dusk, and cloud, etc.)

LINEAR PERFORMANCE WARRANTY

12 Year Product Warranty • 30 Year Linear Power Warranty
0.55% Annual Degradation Over 30 years



Engineering Drawings

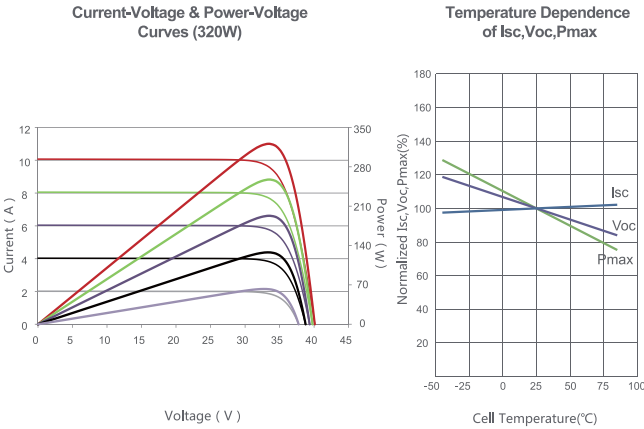


Packaging Configuration

(Two pallets = One stack)

31pcs/pallets, 62pcs/stack, 806pcs/ 40'HQ Container

Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	Mono PERC 158.75×158.75mm
No.of cells	120 (6×20)
Dimensions	1704×1008×35mm (67.09×39.69×1.38 inch)
Weight	19.5kg (43.0 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	TUV 1×4.0mm² (+): 250mm, (-): 150mm or Customized Length

SPECIFICATIONS

Module Type	JKM320M-60H-TV		JKM325M-60H-TV		JKM330M-60H-TV		JKM335M-60H-TV		JKM340M-60H-TV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	320Wp	238Wp	325Wp	241Wp	330Wp	245Wp	335Wp	249Wp	340Wp	252Wp
Maximum Power Voltage (Vmp)	32.90V	30.93V	33.10V	31.13V	33.24V	31.33V	33.40V	31.48V	33.62V	31.63V
Maximum Power Current (Imp)	9.73A	7.68A	9.82A	7.75A	9.93A	7.82A	10.03A	7.90A	10.11A	7.98A
Open-circuit Voltage (Voc)	40.10V	37.77V	40.30V	37.96V	40.39V	38.04V	40.46V	38.11V	40.60V	38.24V
Short-circuit Current (Isc)	10.07A	8.13A	10.15A	8.20A	10.25A	8.28A	10.34A	8.35A	10.43A	8.42A
Module Efficiency STC (%)	18.62%		18.91%		19.20%		19.49%		19.79%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	25A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.35%/°C									
Temperature coefficients of Voc	-0.29%/°C									
Temperature coefficients of Isc	0.048%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Refer. Bifacial Factor	70±5%									

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

		336Wp	341Wp	347Wp	352Wp	357Wp
5%	Maximum Power (Pmax)	336Wp	341Wp	347Wp	352Wp	357Wp
	Module Efficiency STC (%)	19.55%	19.86%	20.16%	20.47%	20.78%
15%	Maximum Power (Pmax)	368Wp	374Wp	380Wp	385Wp	391Wp
	Module Efficiency STC (%)	21.41%	21.75%	22.08%	22.42%	22.76%
25%	Maximum Power (Pmax)	400Wp	406Wp	413Wp	419Wp	425Wp
	Module Efficiency STC (%)	23.27%	23.64%	24.00%	24.37%	24.74%

* STC: ☀ Irradiance 1000W/m² 📏 Cell Temperature 25°C ☁ AM=1.5
NOCT: ☀ Irradiance 800W/m² 📏 Ambient Temperature 20°C ☁ AM=1.5 🌀 Wind Speed 1m/s
* Power measurement tolerance: ± 3%

The company reserves the final right for explanation on any of the information presented hereby. JKM320-340M-60H-TV-F35-A3-EN



Swan Bifacial HC

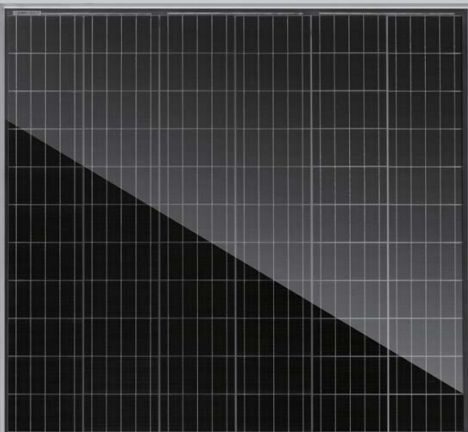
72M 385-405 Watt

MONOCRYSTALLINE MODULE

Positive power tolerance of 0~+3%

ISO9001:2015、ISO14001:2015、OHSAS18001
certified factory.

IEC61215(2016), IEC61730(2016), certified products.



KEY FEATURES



5 Busbar Solar Cell

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.



PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for mass production.



Higher Lifetime Power Yield:

0.55% annual power degradation
30 year linear power warranty



Light-weight design:

Light-weight design using transparent backsheet for easy installation and low BOS cost.



Higher power output:

Module power increases 5-25% generally (per different reflective condition)
lower LCOE and higher IRR

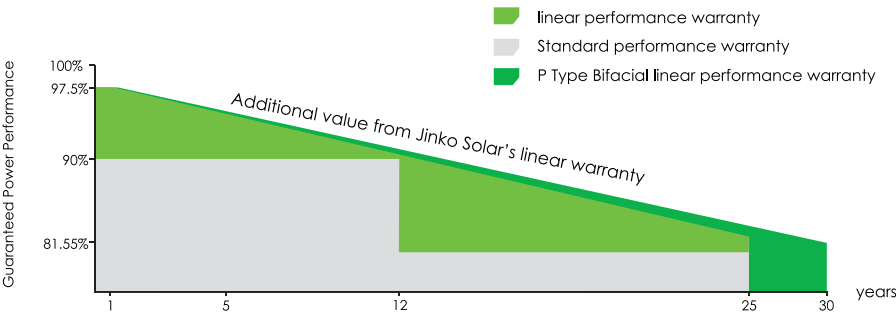


Better low-light performance:

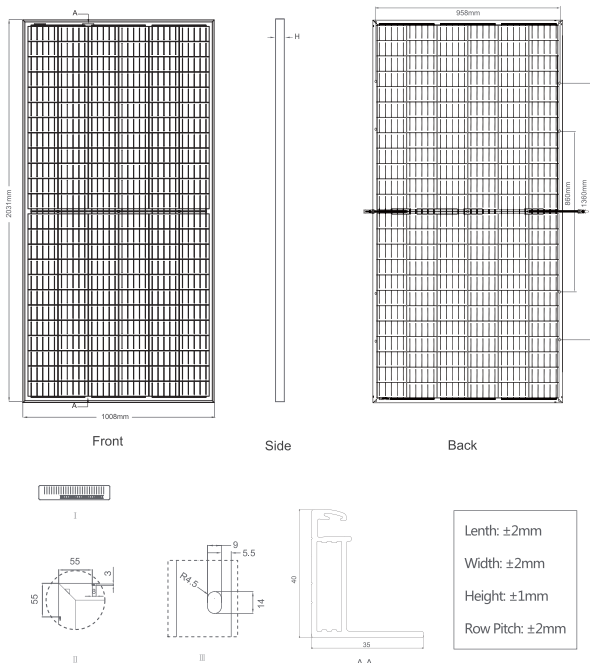
Excellent performance in low-light environments
(e.g. early morning, dusk, and cloud, etc.)

LINEAR PERFORMANCE WARRANTY

12 Year Product Warranty • 30 Year Linear Power Warranty
0.55% Annual Degradation Over 30 years



Engineering Drawings

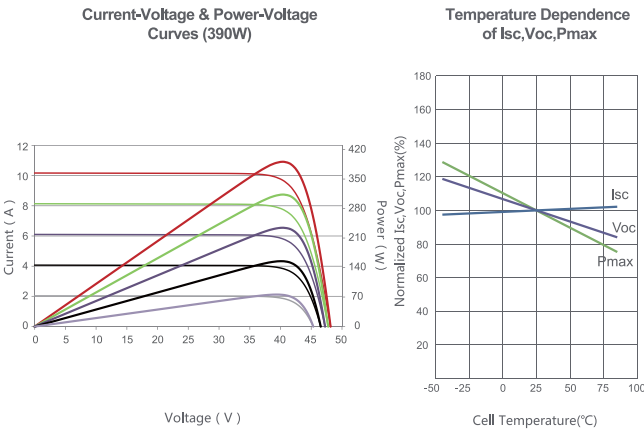


Packaging Configuration

(Two pallets = One stack)

27pcs/pallets, 54pcs/stack, 594pcs/ 40'HQ Container

Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	Mono PERC 158.75×158.75mm
No.of cells	144 (6×24)
Dimensions	2031×1008×40mm (79.96×39.69×1.57 inch)
Weight	23.3 kg (51.3 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	TUV 1×4.0mm² (+): 250mm, (-): 150 mm or Customized Length

SPECIFICATIONS

Module Type	JKM385M-72H-TV		JKM390M-72H-TV		JKM395M-72H-TV		JKM400M-72H-TV		JKM405M-72H-TV	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	385Wp	286Wp	390Wp	290Wp	395Wp	293Wp	400Wp	297Wp	405Wp	301Wp
Maximum Power Voltage (Vmp)	39.50V	36.88V	39.62V	37.22V	39.83V	37.55V	40.01V	37.64V	40.19V	37.77V
Maximum Power Current (Imp)	9.76A	7.75A	9.84A	7.78A	9.92A	7.81A	10.00A	7.89A	10.08A	7.96A
Open-circuit Voltage (Voc)	48.10V	45.30V	48.14V	45.34V	48.26V	45.45V	48.35V	45.54V	48.45V	45.63V
Short-circuit Current (Isc)	10.08A	8.14A	10.17A	8.21A	10.23A	8.26A	10.32A	8.34A	10.42A	8.41A
Module Efficiency STC (%)	18.81%		19.05%		19.29%		19.54%		19.78%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	25A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.35%/°C									
Temperature coefficients of Voc	-0.29%/°C									
Temperature coefficients of Isc	0.048%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Refer. Bifacial Factor	70±5%									

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

		404Wp	410Wp	415Wp	420Wp	425Wp
5%	Maximum Power (Pmax)	404Wp	410Wp	415Wp	420Wp	425Wp
	Module Efficiency STC (%)	19.75%	20.00%	20.26%	20.52%	20.77%
15%	Maximum Power (Pmax)	443Wp	449Wp	454Wp	460Wp	466Wp
	Module Efficiency STC (%)	21.63%	21.91%	22.19%	22.47%	22.75%
25%	Maximum Power (Pmax)	481Wp	488Wp	494Wp	500Wp	506Wp
	Module Efficiency STC (%)	23.51%	23.81%	24.12%	24.42%	24.73%

* STC: ☀ Irradiance 1000W/m² 📏 Cell Temperature 25°C ☁ AM=1.5
NOCT: ☀ Irradiance 800W/m² 📏 Ambient Temperature 20°C ☁ AM=1.5 🌀 Wind Speed 1m/s
* Power measurement tolerance: ± 3%

The company reserves the final right for explanation on any of the information presented hereby. JKM385-405M-72H-TV-F40-A3-EN

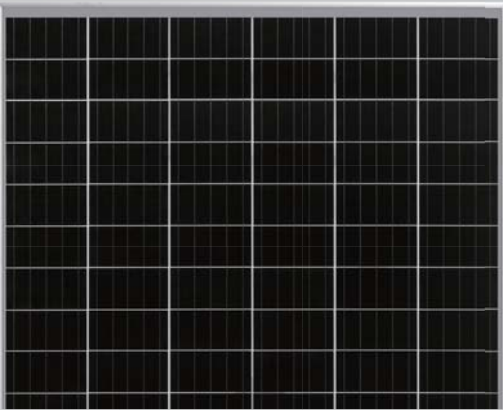
Swan Bifacial 72H 385-405 Watt

MONOCRYSTALLINE MODULE

Positive power tolerance of 0~+3%

ISO9001:2015、ISO14001:2015、OHSAS18001
certified factory.

IEC61215、IEC61730、UL1703 certified products.



KEY FEATURES



5 Busbar Solar Cell

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.



PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for mass production.



Higher Lifetime Power Yield

0.5% annual power degradation
30 year linear power warranty



Saving BOS Cost

Designed for high voltage systems of up to 1500 VDC, saving BOS cost



Higher power output

Module power increases 5-25% generally (per different reflective condition)
lower LCOE and higher IRR



Better low-light performance

Excellent performance in low-light environments
(e.g. early morning, dusk, and cloud, etc.)

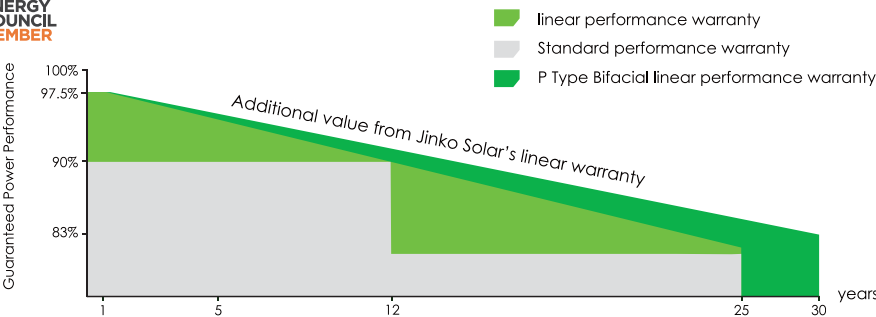


Strengthened Mechanical Support

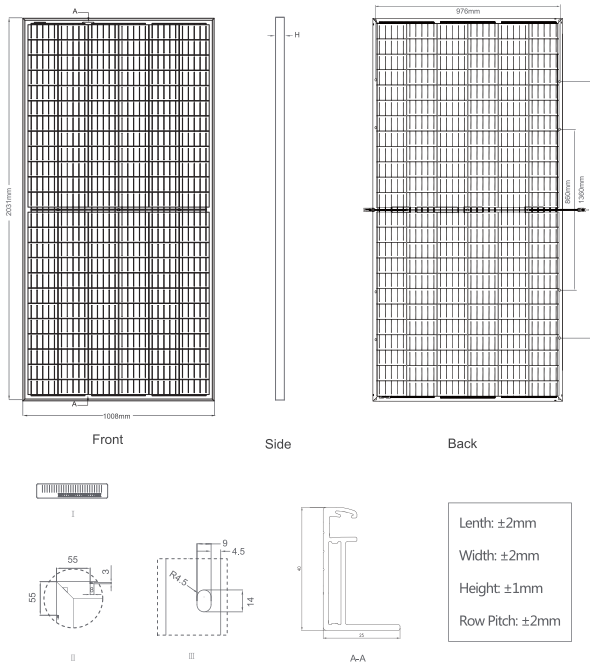
5400 Pa snow load, 2400 Pa wind load

LINEAR PERFORMANCE WARRANTY

12 Year Product Warranty • 30 Year Linear Power Warranty
0.5% Annual Degradation Over 30 years



Engineering Drawings

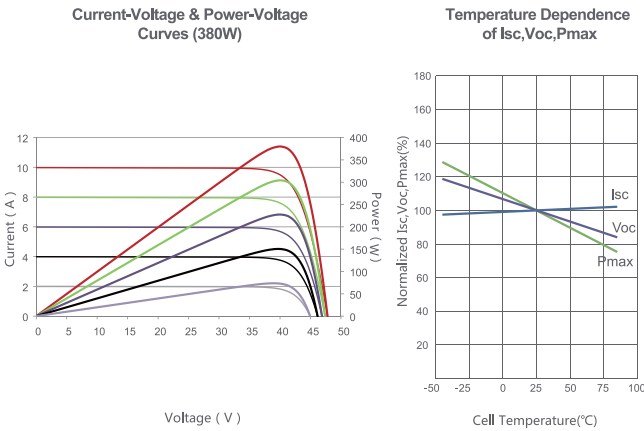


Packaging Configuration

(Two pallets = One stack)

26pcs/pallets, 52pcs/stack, 572pcs/ 40'HQ Container

Electrical Performance & Temperature Dependence



Mechanical Characteristics

Cell Type	Mono PERC 158.75×158.75mm
No.of cells	144 (6×24)
Dimensions	2031×1008×40mm (79.96×39.69×1.57 inch)
Weight	31.8kg (70.11 lbs)
Front Glass	2.5mm, Anti-Reflection Coating
Back Glass	2.5mm heat strengthened glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	TUV 1×4.0mm² (+): 250mm, (-): 150mm or cust omized length

SPECIFICATIONS

Module Type	JKM385M-72H-BDVP		JKM390M-72H-BDVP		JKM395M-72H-BDVP		JKM400M-72H-BDVP		JKM405M-72H-BDVP	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	385Wp	285Wp	390Wp	289Wp	395Wp	293Wp	400Wp	296Wp	405Wp	300Wp
Maximum Power Voltage (Vmp)	40.3V	36.6V	40.6V	36.8V	40.8V	37.0V	41.0V	37.2V	41.2V	37.4V
Maximum Power Current (Imp)	9.56A	7.80A	9.62A	7.86A	9.69A	7.92A	9.76A	7.97A	9.83A	8.03A
Open-circuit Voltage (Voc)	48.1V	44.2V	48.3V	44.4V	48.5V	44.6V	48.8V	44.8V	49.0V	45.0V
Short-circuit Current (Isc)	10.04A	8.13A	10.11A	8.18A	10.17A	8.24A	10.24A	8.29A	10.30A	8.34A
Module Efficiency STC (%)	18.81%		19.05%		19.29%		19.54%		19.78%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	20A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.36%/°C									
Temperature coefficients of Voc	-0.29%/°C									
Temperature coefficients of Isc	0.048%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									
Refer. Bifacial Factor	70±5%									

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

5%	Maximum Power (Pmax)	404Wp	410Wp	415Wp	420Wp	425Wp
	Module Efficiency STC (%)	19.75%	20.00%	20.26%	20.52%	20.77%
15%	Maximum Power (Pmax)	443Wp	449Wp	454Wp	460Wp	466Wp
	Module Efficiency STC (%)	21.63%	21.91%	22.19%	22.47%	22.75%
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* STC: ☀ Irradiance 1000W/m² 📏 Cell Temperature 25°C ☁ AM=1.5
NOCT: ☀ Irradiance 800W/m² 📏 Ambient Temperature 20°C ☁ AM=1.5 🌀 Wind Speed 1m/s
* Power measurement tolerance: ± 3%

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SWAN DG JKM385-405M-72H-BDVP-F40-A3-EN