



®

HT-SAAE

CATALOG



2024

HT Solar Energy J.S.C was established in 2016, Istanbul, Türkiye as subcompany of HT-SAAE which established in 1998 and listed on Shanghai Stock Exchange as state owned company. HT Solar operates in area of 32.000 m² with approximately 500 employees with annual solar module production capacity of 2 GW Istanbul, Türkiye Factory.

HT Solar Energy supplies solar modules to USA, Türkiye, Europe, and the Middle East markets as a member of PV Cycle and was included in ISO 500 and Fortune Türkiye 500 lists for many years (Top 500 companies in Türkiye).

HT-SAAE has been recognized for many years as a 'Tier 1' module manufacturer by Bloomberg New Energy Finance (BNEF). Also, the last published BNEF bankability report showed that HT-Solar increase its PV module bankability all around the world.

HT-SAAE has been chosen as a 'Top Performer Manufacturer' by PV Evolution Labs (PVEL) since 2020 Module Reliability Scorecard, making it the only solar module manufacturer from Türkiye with solar panels produced in Istanbul.

Since its inception, HT Solar has supplied solar modules globally more than 10 GW. Having with strong financial status, high capacity and high quality production, HT Solar continues to supply solar modules to United States and many projects all over the world.



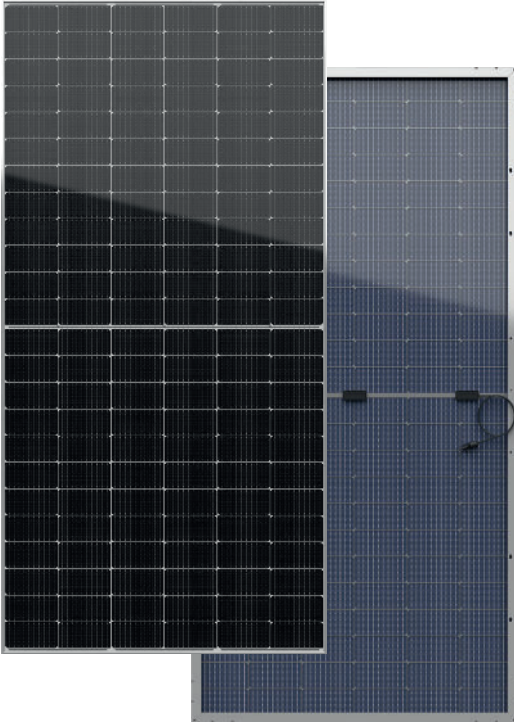
MULTIWAY+

HT72-166M-F Transparent

High Efficiency Low LID and Bifacial cell with Half-cut Technology
Big Size : Cell 166mm×83mm Monocrystalline

445W / 450W

455W / 460W / 465W



Half cut cell technology can reduce the internal power loss and improve component overall power. Excellent heat dissipation avoids hot spot production.



9BB The optimized number and width of main gate lines, Maximize the light receiving area of components and reduce component power consumption



Designed for high voltage systems of up to 1500 VDC, increasing the string length of solar systems and saving on BOS costs



Entire module certified to with stand extreme wind (2400 Pa) and snow loads (5400 Pa)



All the modules are sorted and packaged by amperage, reducing mismatch losses and maximizing system output.

12Ys

products

30Ys

warranty on power output

PID

PID resistant

5W

positive tolerance 0/+5W guaranteed

EL

microcrack resistant high performance Transparent backsheet structure enhance reliability, triple EL tested of high quality control.

Comprehensive and First-rate Certification System

IEC61215: 2021. IEC61730: 2023. UL61730: 2017. IEC62804: 2015
ISO9001 ISO14001 and ISO45001



■ Module Efficiency
21.4%

■ No.of Cells
144 (6 × 24)

■ Weight
23.5kg

■ Dimensions
2094mm × 1038mm × 35mm

Electrical Characteristics

Module	HT72-166M-F				
Maximum Power at STC (Pmax)	445W	450W	455W	460W	465W
Open - Circuit Voltage (Voc)	49.9V	50.0V	50.1V	50.2V	50.3V
Short - Circuit Current (Isc)	11.72A	11.83A	11.96A	12.06A	12.16A
Optimum Operating Voltage (Vmp)	41.0V	41.1V	41.4V	41.5V	41.6V
Optimum Operating Current (Imp)	10.86A	10.96A	10.99A	11.09A	11.18A
Module efficiency	20.5%	20.7%	20.9%	21.2%	21.4%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	20A				
Operating Temperature	-40 °C to +85 °C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

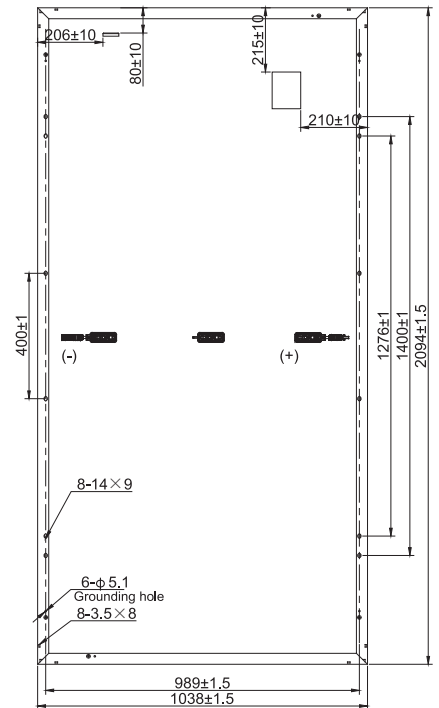
Module	HT72-166M - F (Bifaciality 70±5%)				
Maximum Power	329W	333W	337W	342W	346W
Open - Circuit Voltage (Voc)	47.1V	47.2V	47.3V	47.4V	47.5V
Short - Circuit Current (Isc)	9.44A	9.55A	9.66A	9.76A	9.87A
Maximum Power Voltage (Vmp)	38.7V	38.8V	38.9V	39.00V	39.1V
Maximum Circuit Current (Imp)	8.50A	8.58A	8.66A	8.74A	8.82A
NMOT	45±2 °C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 166 × 83mm
No.of Cells	144 (6 × 24)
Dimensions	2094mm × 1038mm × 35mm
Weight	23.5kg
Front Glass	High transmission tempered glass; thickness; 3.2mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+) 400mm (-) 400mm / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	31pcs / box, 737pcs / 40'HQ container

Engineering Drawing



Temperature Characteristics

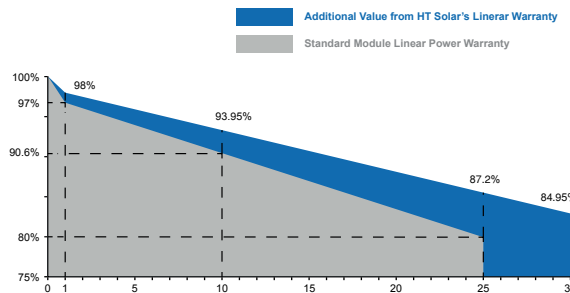
Temperature Coefficient of Pmax	-0.326%/°C
Temperature Coefficient of Voc	-0.258%/°C
Temperature Coefficient of Isc	+0.051%/°C

Warranty

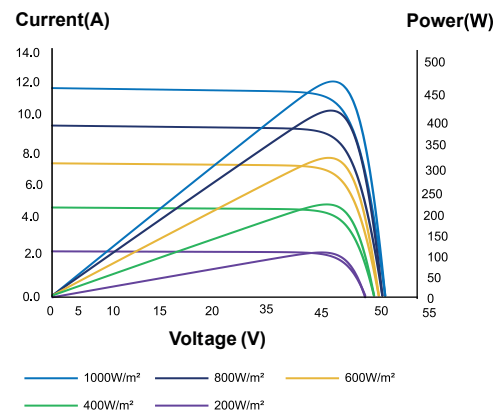
12- years
product warranty

30- years
warranty on power output

Specific information is referred to
the product quality guarantee



IV Curves



The module recycling should be carried out by the professional institutions at the end of module life cycle

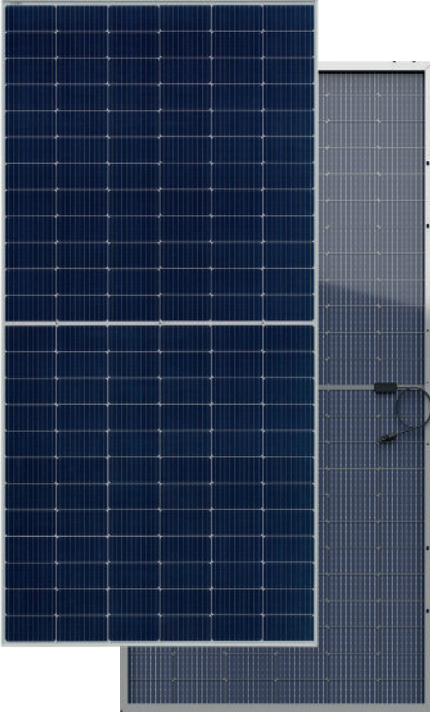
MULTIWAY+

HT72-18X Transparent

High Efficiency Low LID and PERC cell with Half-cut Technology
Big Size : Cell 182mm × 91mm Monocrystalline

540W / 545W

550W / 555W / 560W



Half cut cell technology can reduce the internal power loss and improve component overall power. Excellent heat dissipation avoids hot spot production.



10BB The optimized number and width of main gate lines, Maximize the light receiving area of components and reduce component power consumption



Designed for high voltage systems of up to 1500 VDC, increasing the string length of solar systems and saving on BOS costs



Entire module certified to with stand extreme wind (2400 Pa) and snow loads (5400 Pa)



All the modules are sorted and packaged by amperage, reducing mismatch losses and maximizing system output.

12Ys

products

30Ys

warranty on power output

PID

PID resistant

5W

positive tolerance 0/+5W guaranteed

EL

microcrack resistant high performance Transparent backsheet structure enhance reliability, triple EL tested of high quality control.

■ Module Efficiency
21.7%

■ No.of Cells
144 (6 × 24)

■ Weight
27.5±0.5kg

■ Dimensions
2278mm × 1134mm × 35mm

Comprehensive and First-rate Certification System

IEC61215: 2021 . IEC61730: 2023 . UL61730: 2017 . IEC62804: 2015
ISO9001 . ISO14001 . and . ISO45001



Electrical Characteristics

Module	HT72-18X				
Maximum Power at STC (Pmax)	540W	545W	550W	555W	560W
Open - Circuit Voltage (Voc)	49.50V	49.65V	49.80V	49.95V	50.10V
Short - Circuit Current (Isc)	13.90A	13.95A	14.00A	14.07A	14.14A
Optimum Operating Voltage (Vmp)	41.65V	41.80V	41.95V	42.10V	45.25V
Optimum Operating Current (Imp)	12.97A	13.05A	13.12A	13.20A	13.27A
Module efficiency	20.9%	21.1%	21.3%	21.5%	21.7%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40 C to +85 C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

Module	HT72-18X (Bifaciality 75±5%)				
Maximum Power	402W	405W	409W	413W	417W
Open - Circuit Voltage (Voc)	46.92V	47.06V	47.20V	47.34V	47.48V
Short - Circuit Current (Isc)	11.22A	11.26A	11.30A	11.36A	11.41A
Maximum Power Voltage (Vmp)	39.48V	39.62V	39.76V	39.90V	40.04V
Maximum Circuit Current (Imp)	10.18A	10.22A	10.29A	10.35A	10.41A
NMOT	45±2 C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 91mm
No.of Cells	144 (6 × 24)
Dimensions	2278mm × 1134mm × 35mm
Weight	27.5±0.5kg
Front Glass	High transmission tempered glass; thickness; 3.2mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+)400mm, (-)400mm / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	36pcs / box,720pcs / 40'HQ container

Temperature Characteristics

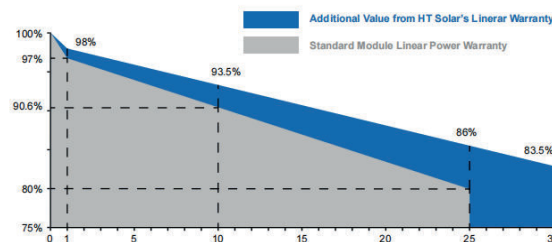
Temperature Coefficient of Pmax	-0.326%/°C
Temperature Coefficient of Voc	-0.258%/°C
Temperature Coefficient of Isc	+0.051%/°C

Warranty

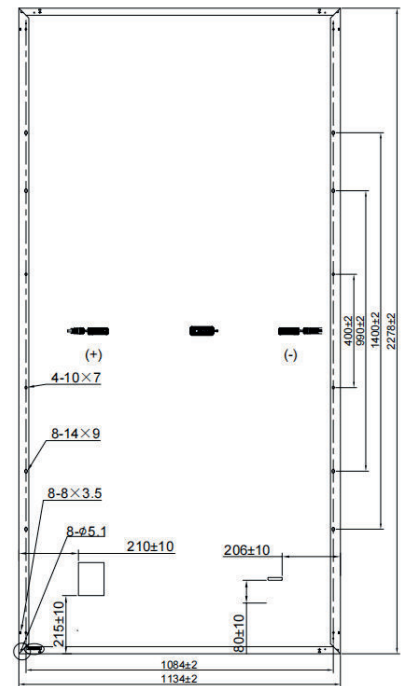
12 - years
product warranty

30 - years
warranty on power output

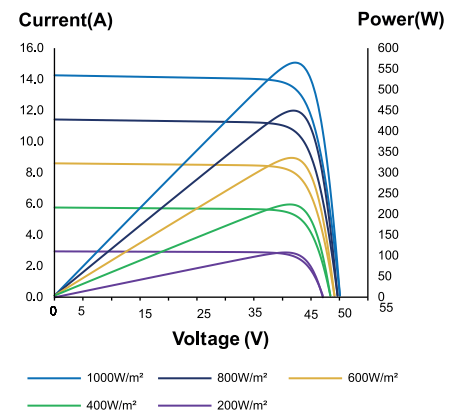
Specific information is referred to
the product quality guarantee



Engineering Drawing



IV Curves



The module recycling should be carried out by the professional institutions at the end of module life cycle

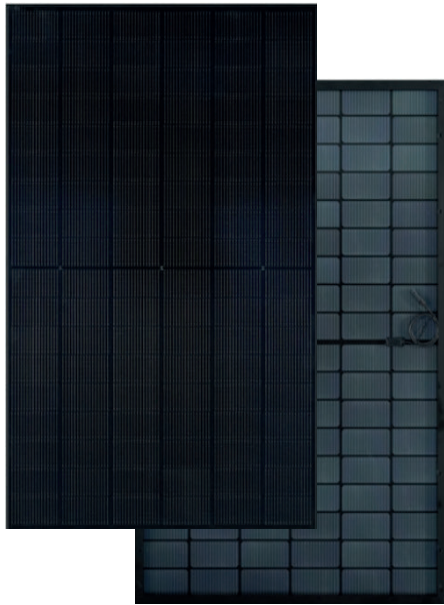
Jupiter

HT54-18X(ND)-F Double Glass

High Efficiency Lower LID and TOPCon cell with Half-cut Technology
Big Size : Cell 182mm × 91.875mm Monocrystalline

430W / 435W

440W / 445W / 450W



10-30% Additional Power Generation

10-30% additional power generation comparing with conventional P-type module



Lower LID (Light Induced Degradation)

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance



Lower LCOE

Higher power output and lower BOS cost



Better Weak Illumination Response

Higher power output even under low-light environment



Better Temperature Coefficient

Higher power generation under normal working conditions



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal)

■ Module Efficiency
23.0%

■ No. of Cells
108(6 × 18)

■ Weight
24.0±0.5kg

■ Dimensions
1722mm × 1134mm × 30mm

Comprehensive and First-rate Certification System

IEC61215: 2021 . IEC61730: 2023 . UL61730: 2017 . IEC62804: 2015
ISO9001 . ISO14001 . and . ISO45001



Electrical Characteristics

Module	HT54-18X(ND)-F				
Maximum Power at STC (Pmax)	430W	435W	440W	445W	450W
Open - Circuit Voltage (Voc)	38.3V	38.4V	38.6V	38.7V	38.9V
Short - Circuit Current (Isc)	14.23A	14.31A	14.39A	14.47A	14.55A
Optimum Operating Voltage (Vmp)	31.9V	32.0V	32.2V	32.3V	32.5V
Optimum Operating Current (Imp)	13.50A	13.60A	13.80A	13.81A	13.83A
Module efficiency	22.0%	22.3%	22.5%	22.8%	23.0%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40 °C to +85 °C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

Module	HT54-18X(ND)-F (Bifaciality 85±5%)				
Maximum Power	327W	331W	335W	339W	343W
Open - Circuit Voltage (Voc)	36.8V	36.9V	37.1V	37.2V	37.4V
Short - Circuit Current (Isc)	11.47A	11.53A	11.59A	11.65A	11.71A
Optimum Operating Voltage (Vmp)	30.7V	30.9V	31.1V	31.3V	31.5V
Optimum Operating Current (Imp)	10.65A	10.71A	10.77A	10.83A	10.89A
NMOT	45±2 °C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 91.875mm
No. of Cells	108(6 × 18)
Dimensions	1722mm × 1134mm × 30mm
Weight	24.0±0.5kg
Glass(Front/Back)	High transmission tempered glass; thickness; 2.0mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+)400mm, (-)400mm / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	36pcs / box, 936pcs / 40'HQ container

Temperature Characteristics

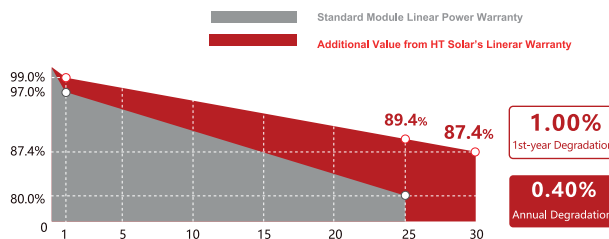
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.23%/°C
Temperature Coefficient of Isc	+0.046%/°C

Warranty

15 - years
product warranty

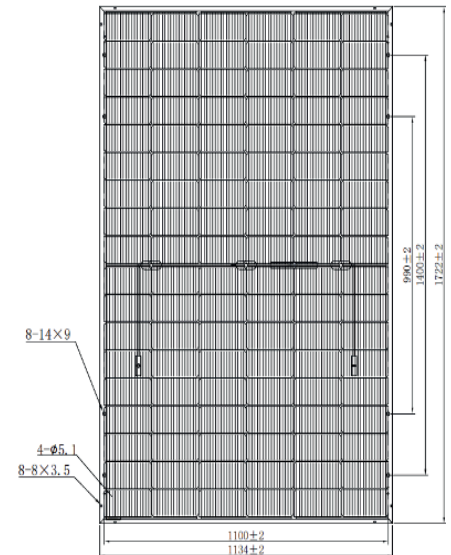
30 - years
warranty on power output

Specific information is referred to the product quality guarantee

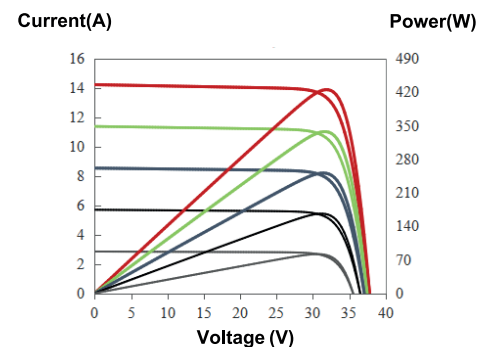


The module recycling should be carried out by the professional institutions at the end of module life cycle

Engineering Drawing



IV Curves



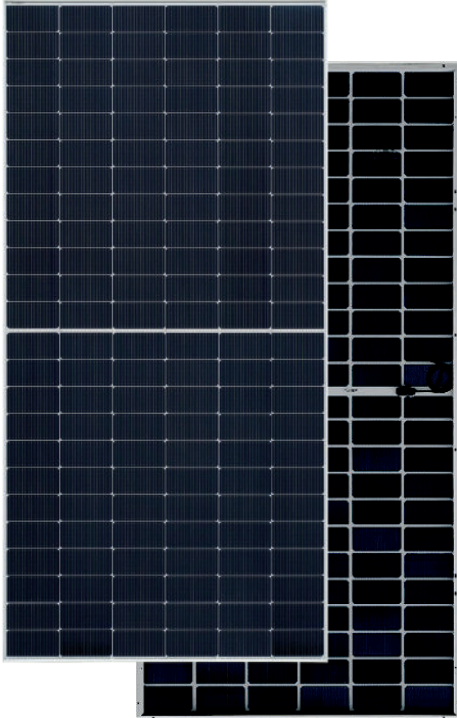
Jupiter

HT72-18X (ND)-F Double Glass

High Efficiency Lower LID and TOPCON cell with Half-cut Technology
Big Size : Cell 182mm × 91.875mm Monocrystalline

570W / 575W

580W / 585W / 590W



10-30% Additional Power Generation

10-30% additional power generation comparing with conventional P-type module



Lower LID (Light Induced Degradation)

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance



Lower LCOE

Higher power output and lower BOS cost



Better Weak Illumination Response

Higher power output even under low-light environment



Better Temperature Coefficient

Higher power generation under normal working conditions



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal)

■ Module Efficiency
22.8%

■ No. of Cells
144(6 × 24)

■ Weight
32.5±0.5kg

■ Dimensions
2278mm × 1134mm × 35mm

Comprehensive and First-rate Certification System

IEC61215: 2021 . IEC61730: 2023 . UL61730: 2017 . IEC62804: 2015
ISO9001 . ISO14001 . and . ISO45001



Electrical Characteristics

Module	HT72-18X(ND)-F				
Maximum Power at STC (Pmax)	570W	575W	580W	585W	590W
Open - Circuit Voltage (Voc)	50.90V	51.10V	51.30V	51.50V	51.70V
Short - Circuit Current (Isc)	14.23A	14.31A	14.39A	14.47A	14.55A
Optimum Operating Voltage (Vmp)	42.7V	42.9V	43.1V	43.3V	43.4V
Optimum Operating Current (Imp)	13.37A	13.41A	13.47A	13.53A	13.60A
Module efficiency	22.1%	22.3%	22.5%	22.6%	22.8%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40 C to +85 C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

Module	HT72-18X(ND)-F (Bifaciality 85±5%)				
Maximum Power	433W	437W	441W	445W	449W
Open - Circuit Voltage (Voc)	48.9V	49.1V	49.2V	49.4V	49.6V
Short - Circuit Current (Isc)	11.47A	11.53A	11.60A	11.66A	11.73A
Optimum Operating Voltage (Vmp)	41.0V	41.2V	41.4V	41.6V	41.7V
Optimum Operating Current (Imp)	10.56A	10.61A	10.65A	10.70A	10.77A
NMOT	45±2 C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 91.875mm
No.of Cells	144(6 × 24)
Dimensions	2278 × 1134mm × 35mm
Weight	32.5±0.5kg
Glass(Front/Back)	High transmission tempered glass; thickness;2.0mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+)400mm, (-)400mm / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	31pcs / box,620pcs / 40'HQ container

Temperature Characteristics

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.23%/°C
Temperature Coefficient of Isc	+0.046%/°C

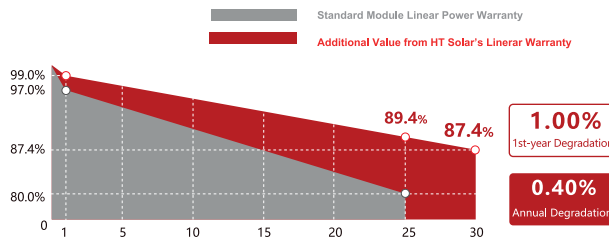
Warranty

15 - years
product warranty

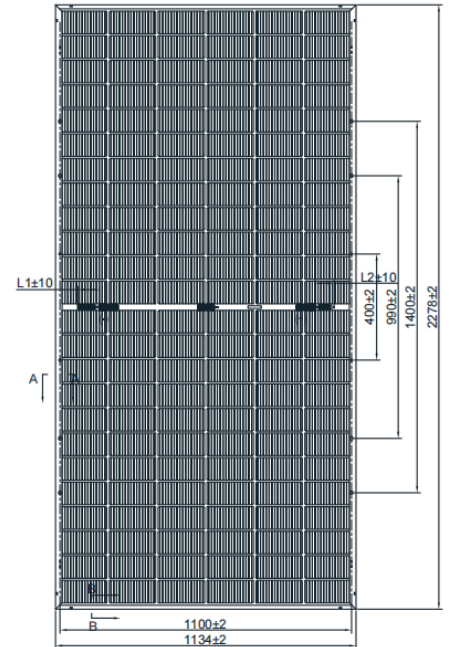
30- years
warranty on power output

Specific information is referred to the product quality guarantee

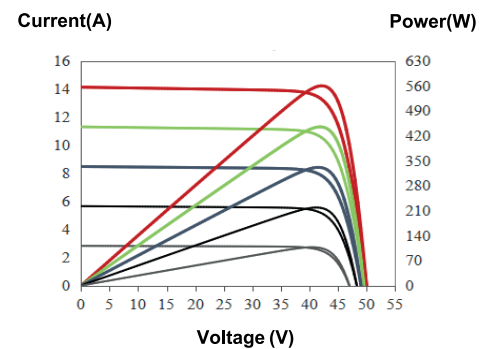
The module recycling should be carried out by the professional institutions at the end of module life cycle



Engineering Drawing



IV Curves



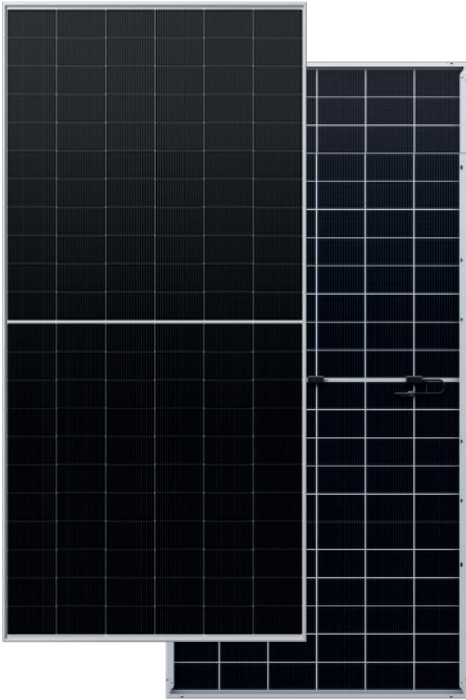
Jupiter Pro

HT66-18X+(ND)-F Double Glass

High Efficiency Lower LID and TOPCon cell with Half-cut Technology
Big Size : Cell 182mm × 105mm Monocrystalline

625W / 630W

635W / 640W / 645W



10-30% Additional Power Generation

10-30% additional power generation comparing with conventional P-type module



Lower LID (Light Induced Degradation)

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance



Lower LCOE

Higher power output and lower BOS cost



Better Weak Illumination Response

Higher power output even under low-light environment



Better Temperature Coefficient

Higher power generation under normal working conditions



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal)

■ Module Efficiency
23.9%

■ No. of Cells
132(6 × 22)

■ Weight
33.7±0.5kg

■ Dimensions
2382mm×1134mm×30mm

Comprehensive and First-rate Certification System

IEC61215: 2021 . IEC61730: 2023 . UL61730: 2017 . IEC62804: 2015
ISO9001 . ISO14001 . and . ISO45001



Jupiter Pro

Better Choice For Higher Efficiency!



Electrical Characteristics

Module	HT66-18X+(ND)-F				
Maximum Power at STC (Pmax)	625W	630W	635W	640W	645W
Open - Circuit Voltage (Voc)	49.30V	49.50V	49.70V	49.90V	50.10V
Short - Circuit Current (Isc)	16.14A	16.21A	16.27A	16.23A	16.40A
Optimum Operating Voltage (Vmp)	41.05V	41.20V	41.35V	41.50V	41.65V
Optimum Operating Current (Imp)	15.23A	15.30A	15.36A	15.43A	15.49A
Module efficiency	23.1%	23.3%	23.5%	23.7%	23.9%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	35A				
Operating Temperature	-40 °C to +85 °C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

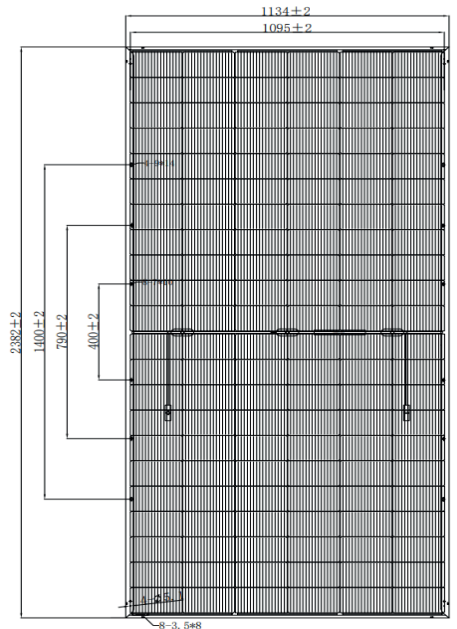
Module	HT66-18X+(ND)-F(Bifaciality 85±5%)				
Maximum Power	471.9W	475.8W	479.4W	483.1W	486.9W
Open - Circuit Voltage (Voc)	46.5V	46.6V	46.8V	47.00V	47.2V
Short - Circuit Current (Isc)	13.03A	13.09A	13.14A	13.19A	13.24A
Optimum Operating Voltage (Vmp)	38.4V	38.5V	38.7V	38.9V	39.0V
Optimum Operating Current (Imp)	12.29A	12.36A	12.39A	12.42A	12.49A
NMOT	45±2 °C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 105mm
No.of Cells	132(6 × 22)
Dimensions	2382mm × 1134mm × 30mm
Weight	33.7±0.5kg
Glass(Front/Back)	High transmission coated tempered glass; thickness; 2.0mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+) 400mm (-) 400mm / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	36pcs/box: 720pcs/40'HQ Container

Engineering Drawing



Temperature Characteristics

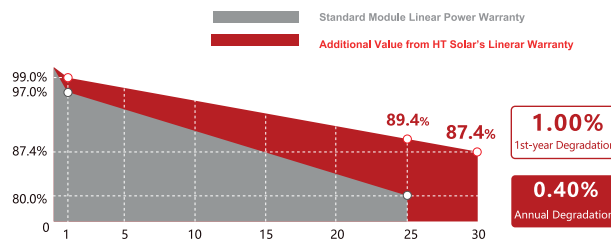
Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C

Warranty

15 - years
product warranty

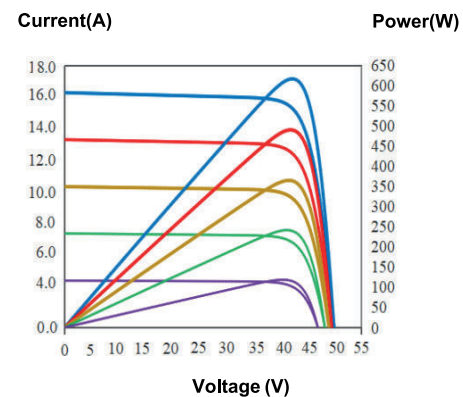
30 - years
warranty on power output

Specific information is referred to
the product quality guarantee



The module recycling should be carried out by the professional institutions at the end of module life cycle

IV Curves



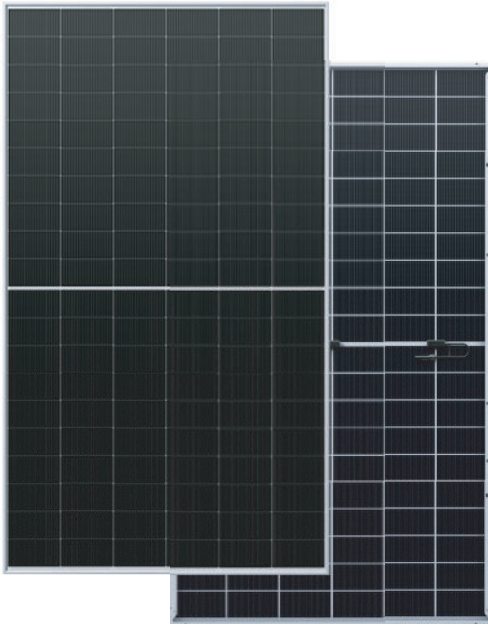
Jupiter Max

HT60-210(ND)-F Double Glass

High Efficiency Lower LID and TOPCon cell with Half-cut Technology
Big Size : Cell 210mm × 105mm Monocrystalline

640W / 645W

650W / 655W / 660W



10-30% Additional Power Generation

10-30% additional power generation comparing with conventional P-type module



Lower LID (Light Induced Degradation)

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance



Lower LCOE

Higher power output and lower BOS cost



Better Weak Illumination Response

Higher power output even under low-light environment



Better Temperature Coefficient

Higher power generation under normal working conditions



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal)

■ Module Efficiency
23.4%

■ No. of Cells
120(6×20)

■ Weight
34.9±0.5kg

■ Dimensions
2172mm×1303mm×35mm

Comprehensive and First-rate Certification System

IEC61215: 2021 . IEC61730: 2023 . UL61730: 2017 . IEC62804: 2015
ISO9001 . ISO14001 . and . ISO45001



Jupiter Max

Better Choice For Higher Efficiency!



Electrical Characteristics

Module	HT60-210 (ND)-F				
Maximum Power at STC (Pmax)	640W	645W	650W	655W	660W
Open - Circuit Voltage (Voc)	44.0V	44.2V	44.4V	44.6V	44.8V
Short - Circuit Current (Isc)	18.40A	18.45A	18.50A	18.55A	18.60A
Optimum Operating Voltage (Vmp)	36.9V	37.1V	37.3V	37.5V	37.7V
Optimum Operating Current (Imp)	17.35A	17.39A	17.43A	17.47A	17.51A
Module efficiency	22.6%	22.8%	23.0%	23.2%	23.4%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	35A				
Operating Temperature	-40 C to +85 C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

Module	HT60-210 (ND)-F(Bifaciality 85±5%)				
Maximum Power	485W	489W	493W	497W	500.5W
Open - Circuit Voltage (Voc)	41.4V	41.6V	41.8V	42.0V	42.2V
Short - Circuit Current (Isc)	14.81A	14.85A	14.89A	14.93A	14.97A
Optimum Operating Voltage (Vmp)	34.3V	34.5V	34.7V	34.9V	35.1V
Optimum Operating Current (Imp)	14.14A	14.17A	14.20A	14.23A	14.26A
NMOT	45±2 C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 210 × 105mm
No.of Cells	120(6 × 20)
Dimensions	2172mm × 1303mm × 35mm
Weight	34.9±0.5kg
Glass(Front/Back)	High transmission tempered glass; thickness; 2.0mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+)400mm (-)400mm / length can be customized
Connectors	MC4/MC4 Compatible
Packaging Configuration	31pcs / box,558pcs / 40'HQ container

Temperature Characteristics

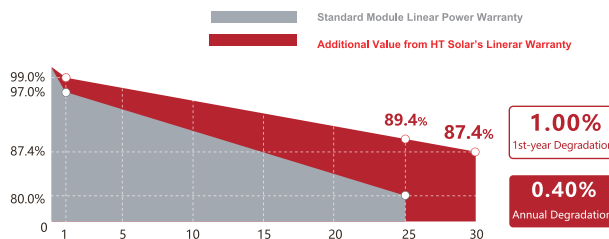
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.046%/°C

Warranty

15 - years
product warranty

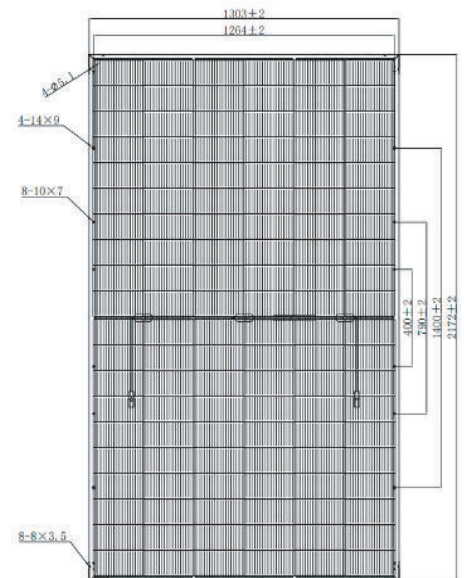
30 - years
warranty on power output

Specific information is referred to the product quality guarantee

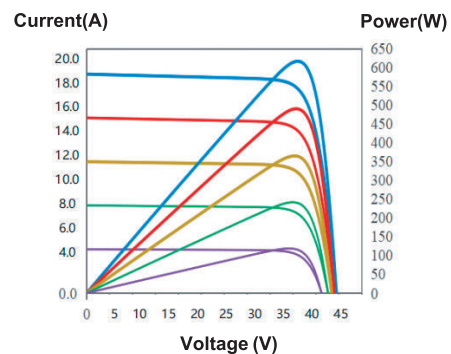


The module recycling should be carried out by the professional institutions at the end of module life cycle

Engineering Drawing



IV Curves



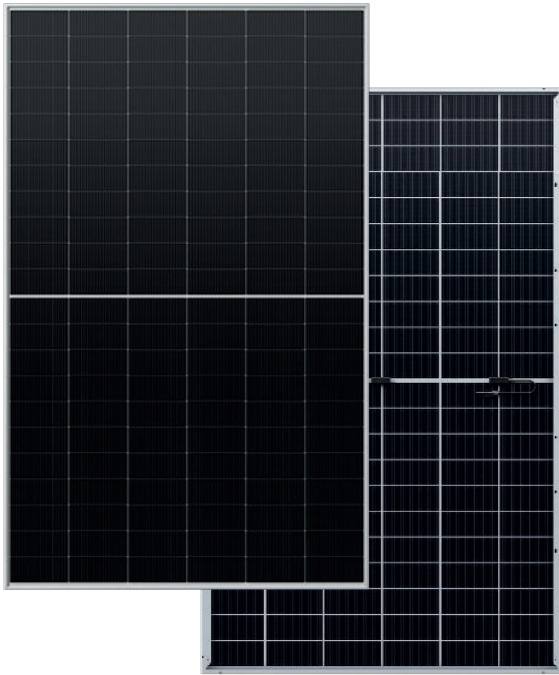
Jupiter Max

HT66-210(ND)-FD Double Glass

High Efficiency Lower LID and TOPCon cell with Half-cut Technology
Big Size : Cell 210mm × 105mm Monocrystalline

710W / 715W

720W / 725W / 730W



10-30% Additional Power Generation

10-30% additional power generation comparing with conventional P-type module



Lower LID (Light Induced Degradation)

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance



Lower LCOE

Higher power output and lower BOS cost



Better Weak Illumination Response

Higher power output even under low-light environment



Better Temperature Coefficient

Higher power generation under normal working conditions



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

■ Module Efficiency
23.5%

■ No. of Cells
132(6 × 22)

■ Weight
38.5±0.5kg

■ Dimensions
2384mm×1303mm×35mm

Comprehensive and First-rate Certification System

IEC61215: 2021 . IEC61730: 2023 . UL61730: 2017 . IEC62804: 2015
ISO9001 . ISO14001 . and . ISO45001



Jupiter Max

Better Choice For Higher Efficiency!



Electrical Characteristics

Module	HT66-210(ND)-F				
Maximum Power at STC (Pmax)	710W	715W	720W	725W	730W
Open - Circuit Voltage (Voc)	48.6V	48.8V	49.0V	49.2V	49.4V
Short - Circuit Current (Isc)	18.48A	18.53A	18.57A	18.62A	18.66A
Optimum Operating Voltage (Vmp)	40.8V	41.0V	41.2V	41.4V	41.6V
Optimum Operating Current (Imp)	17.41A	17.45A	17.48A	17.52A	17.55A
Module efficiency	22.9%	23.0%	23.2%	23.3%	23.5%
Power Tolerance	0 ~ + 3%				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	35A				
Operating Temperature	-40 C to +85 C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

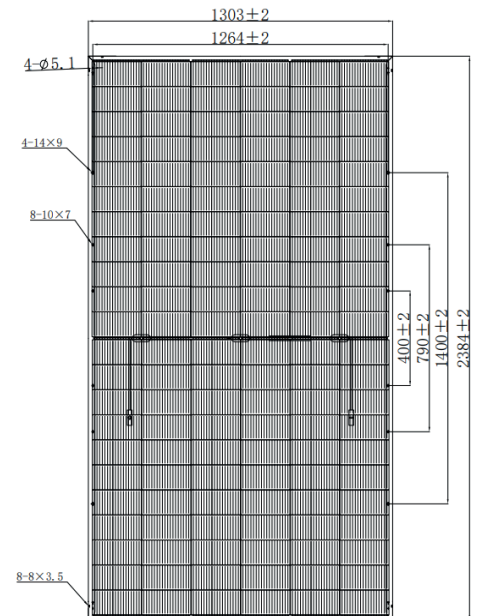
Module	HT66-210(ND)-F (Bifaciality 85±5%)				
Maximum Power	542W	546W	550W	554W	558W
Open - Circuit Voltage (Voc)	46.4V	46.6V	46.8V	47.0A	47.2A
Short - Circuit Current (Isc)	14.83A	14.87A	14.91A	14.95A	14.99A
Optimum Operating Voltage (Vmp)	38.4V	38.6V	38.8V	39.0V	39.2V
Optimum Operating Current (Imp)	14.11A	14.14A	14.17A	14.20A	14.23A
NMOT	45±2 C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 210 × 105mm
No.of Cells	132(6 × 22)
Dimensions	2384mm × 1303mm × 35mm
Weight	38.5±0.5kg
Glass(Front/Back)	High transmission tempered glass; thickness; 2.0mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; (+)400mm (-)400mm / length can be customized
Connectors	MC4/MC4 Compatible
Packaging Configuration	31pcs / box, 558pcs / 40'HQ container

Engineering Drawing



Temperature Characteristics

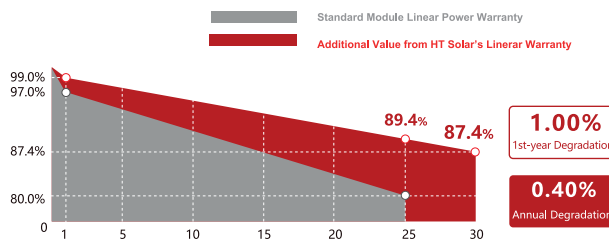
Temperature Coefficient of Pmax	-0.30%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.046%/°C

Warranty

15 - years
product warranty

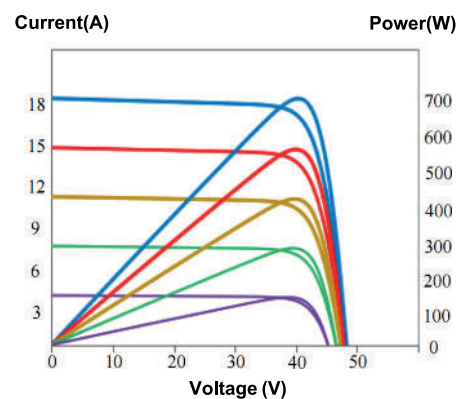
30 -year s
warranty on power output

Specific information is referred to
the product quality guarantee



The module recycling should be carried out by the professional institutions at the end of module life cycle

IV Curves



Jupiter Flex

HT60-18X(NLm)

High Efficiency Low LID and TOPCon cell with Half-cut Technology
Big Size : Cell 182mm × 91mm Monocrystalline

440W / 445W

450W / 455W / 460W



- Module Efficiency
21.1%
- No.of Cells
120(6 × 20)
- Weight
6.3±0.5Kg
- Dimensions
1927mm × 1131mm × 3mm

Fast-Installation

Through "Quick-Bonding" installation, LTF requires no penetration, reduces time on roof and saves installation costs.

Safety

Integration with underlying installation surface, ensuring the waterproof performance and safety performance of the roof.

Ultra-light

Glass free module weighs 6.3kg, 70% lighter than conventional glass modules.

Flexibility

The biggest advantage of flexible photovoltaic modules is that they can be bent and folded, which allows them to adapt to more application scenarios.

Comprehensive and First-rate Certification System

IEC61215: 2016. IEC61730: 2016 Latest Standard ISO14001 and ISO45001, meeting the highest international standards Strict quality control



Jupiter Flex

Better Choice For Higher Efficiency!



Electrical Characteristics

Module	HT60-18X (NLm)				
Maximum Power at STC (Pmax)	440W	445W	450W	455W	460W
Open - Circuit Voltage (Voc)	41.03V	41.18V	41.33V	41.48V	41.63V
Short - Circuit Current (Isc)	13.76A	13.83A	13.90A	13.97A	14.04A
Optimum Operating Voltage (Vmp)	34.48V	34.63V	34.78V	34.93V	35.08V
Optimum Operating Current (Imp)	12.76A	12.85A	12.93A	13.02A	13.11A
Module efficiency	20.2%	20.4%	20.6%	20.8%	21.1%
Power Tolerance	0 ~ + 5W				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40 °C to +85 °C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

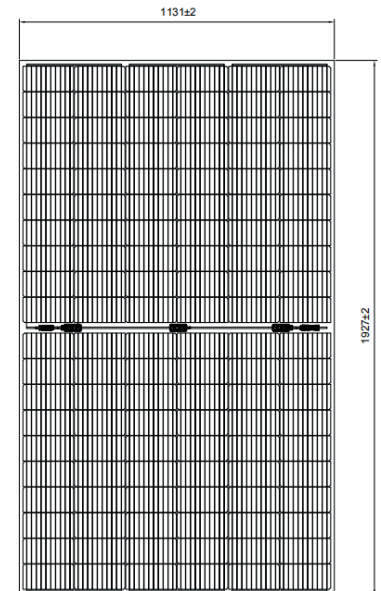
Module	HT60-18X (NLm)				
Maximum Power	329.3W	332.9W	336.6W	340.3W	344.1W
Open - Circuit Voltage (Voc)	48.4V	48.48V	48.59V	48.69V	48.78V
Short - Circuit Current (Isc)	8.75A	8.83A	8.91A	9.00A	9.09A
Optimum Operating Voltage (Vmp)	40.10V	40.24V	40.33V	40.41V	40.50V
Optimum Operating Current (Imp)	8.21A	8.27A	8.35A	8.42A	8.49A
NMOT	45±2 °C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 91mm
No.of Cells	120(6 × 20)
Dimensions	1927mm × 1131mm × 3 mm
Weight	6.3±0.5kg
Frame	Framless
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; 400mm (+,-) / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	58pcs/box,1276pcs / 40'HQcontainer

Engineering Drawing



Temperature Characteristics

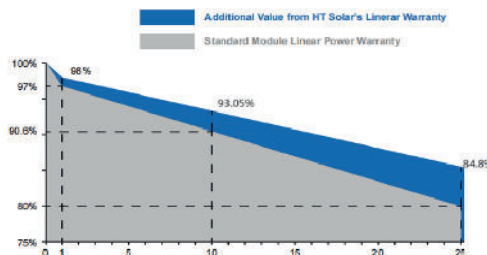
Temperature Coefficient of Pmax	-0.31%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C

Warranty

12 - years
product warranty

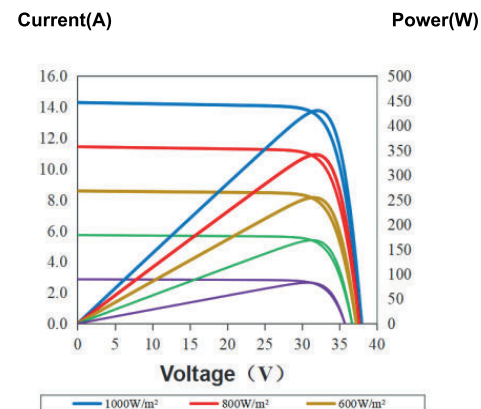
25 - years
warranty on power output

Specific information is referred to the product quality guarantee



The module recycling should be carried out by the professional institutions at the end of module life cycle

IV Curves



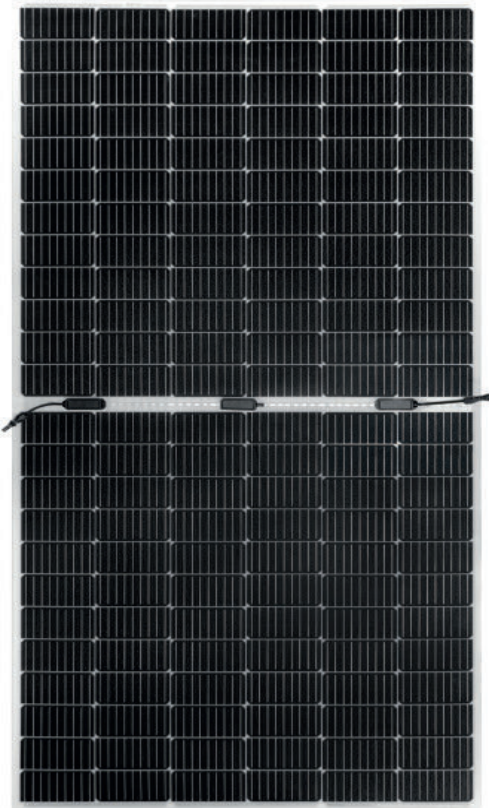
Jupiter Flex

HT72-18X(NLm)

High Efficiency Low LID and TOPCon cell with Half-cut Technology
Big Size : Cell 182mm × 91mm Monocrystalline

535W / 540W

545W / 550W / 555W



- Module Efficiency
21.4%
- No.of Cells
144(6 × 24)
- Weight
7.5±0.5Kg
- Dimensions
2297mm × 1131mm × 3mm

Fast-Installation

Through "Quick-Bonding" installation, LTF requires no penetration, reduces time on roof and saves installation costs.

Safety

Integration with underlying installation surface, ensuring the waterproof performance and safety performance of the roof.

Ultra-light

Glass free module weighs 7.5kg, 70% lighter than conventional glass modules.

Flexibility

The biggest advantage of flexible photovoltaic modules is that they can be bent and folded, which allows them to adapt to more application scenarios.

Comprehensive and First-rate Certification System

IEC61215: 2016, IEC61730: 2016 Latest Standard ISO14001 and ISO45001, meeting the highest international standards Strict quality control



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Electrical Characteristics

Module	HT72-18X (NLm)				
Maximum Power at STC (Pmax)	535W	540W	545W	550W	555W
Open - Circuit Voltage (Voc)	49.50V	49.70V	49.90V	50.10V	50.30V
Short - Circuit Current (Isc)	13.67A	13.75A	13.83A	13.91A	13.99A
Optimum Operating Voltage (Vmp)	41.3V	41.5V	41.7V	41.9V	42.1V
Optimum Operating Current (Imp)	12.96A	13.02A	13.07A	13.13A	13.19A
Module efficiency	20.6%	20.8%	21.0%	21.2%	21.4%
Power Tolerance	0 ~ + 5W				
Maximum System Voltage	1500V DC (UL / IEC)				
Maximum Series Fuse Rating	25A				
Operating Temperature	-40 °C to +85 °C				

* STC: Irradiance 1000W/m², module temperature 25, AM=1.5
Optional black frame or white frame module according to customer requirements

NMOT

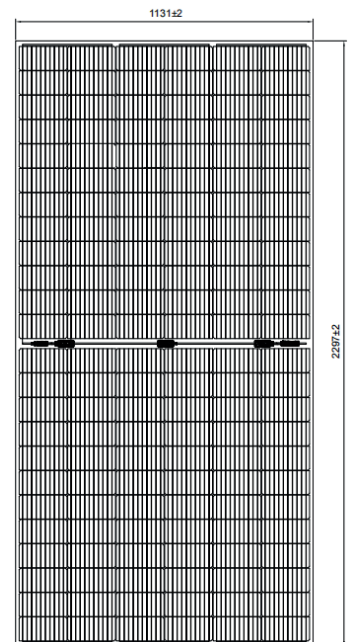
Module	HT72-18X (NLm)				
Maximum Power	394.6W	398.5W	402.0W	405.8W	409.4W
Open - Circuit Voltage (Voc)	46.58V	46.68V	46.77V	46.87V	46.96V
Short - Circuit Current (Isc)	11.11A	11.18A	11.27A	11.35A	11.43A
Optimum Operating Voltage (Vmp)	38.60V	38.70V	38.80V	38.90V	39.00V
Optimum Operating Current (Imp)	10.22A	10.30A	10.36A	10.43A	10.50A
NMOT	45±2 °C				

* NMOT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s

Mechanical Characteristics

Solar Cells	Monocrystalline 182 × 91mm
No.of Cells	144(6 × 24)
Dimensions	2297mm × 1131mm × 3 mm
Weight	7.5±0.5kg
Frame	Framless
Junction Box	IP68
Cable	4mm ² (UL / IEC) length; 400mm (+,-) / length can be customized
Connectors	MC4/MC4 compatible
Packaging Configuration	58pcs/box, 1160pcs / 40'HQcontainer

Engineering Drawing



Temperature Characteristics

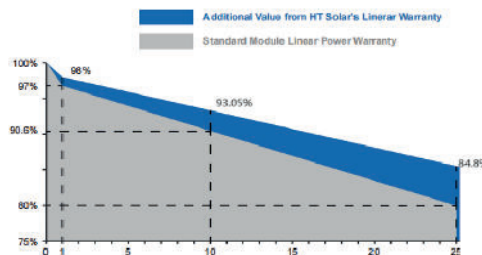
Temperature Coefficient of Pmax	-0.31%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C

Warranty

12 - years
product warranty

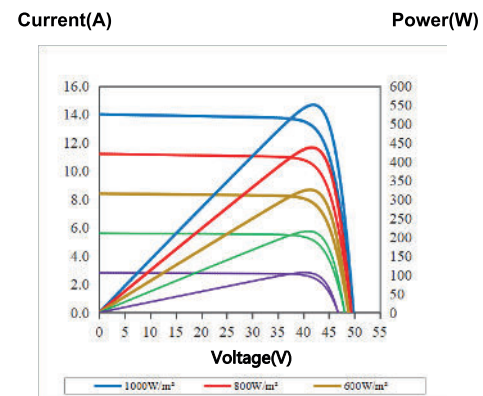
25 - years
warranty on power output

Specific information is referred to the product quality guarantee



The module recycling should be carried out by the professional institutions at the end of module life cycle

IV Curves



REFERENCES



OHIO
240 MWp

Module: HT72-18X - 550-545W
Completion Date: 2023



PUERTO RICO
117 MWp

Module: HT72-18X-550W
Completion Date: 2023



GEORGIA
112 MWp

Module: HT72-18X- 545W
Completion Date: 2024



PENNSYLVANIA
106 MWp

Module: HT72-18X-550W
Completion Date: 2023



ARKANSAS
150 MWp

HT72-18X-545W & 550W
Completion Date: 2024



MONTANA
103 MWp

Module: HT72 - 18 X - 540W & 545W
Completion Date: 2023



GEORGIA
100 MWp

Module: HT72-18X - 550W
Completion Date: 2024



SOUTH DAKOTA
99 MWp

Module: HT72 - 18 X - 540W & 545W
Completion Date: 2023



MINNESOTA
55 MWp

Module: HT72-166M-450W
Completion Date: 2024



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CREATING THE FUTURE BY HEART