



**XN32TF-P1** PHOTOVOLTAIC MODULES

# XN32SERIES HALF-CUT PV MODULES

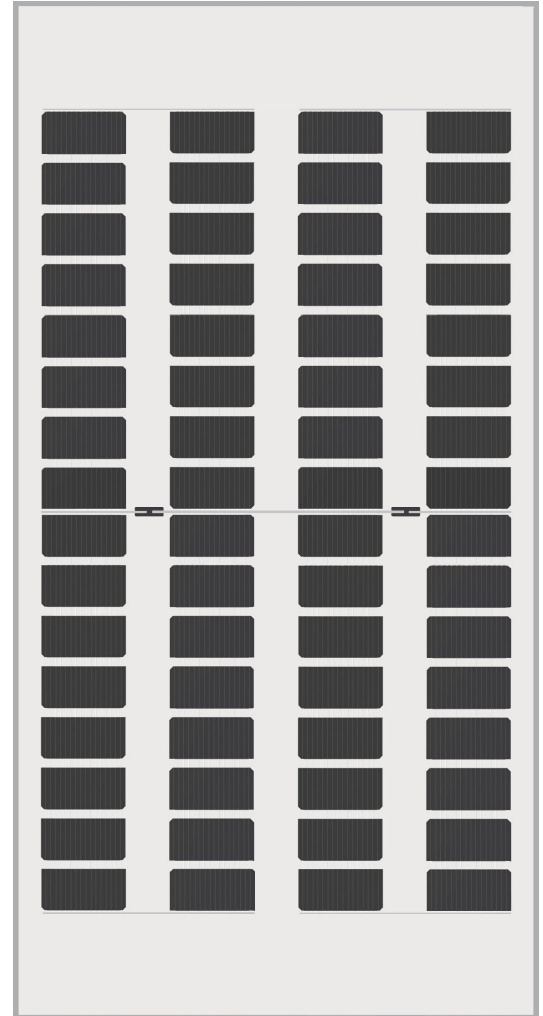
PEAK POWER: 250-260 Wp

## FEATURES INCLUDE:

- 32 N-Topcon cells comprised by double layers of glasses.
- Positive power tolerance of 0~+3% improves system performance.
- Industry-leading module efficiency: maximum efficiency of 10.06%.
- Tested up to 5400Pa for maximum load resistance.
- Verified resistance against PID effects.
- Progressive Power Warranty guarantees 87.4% of rated power at 30 years.
- Manufactured globally with world-class quality standards

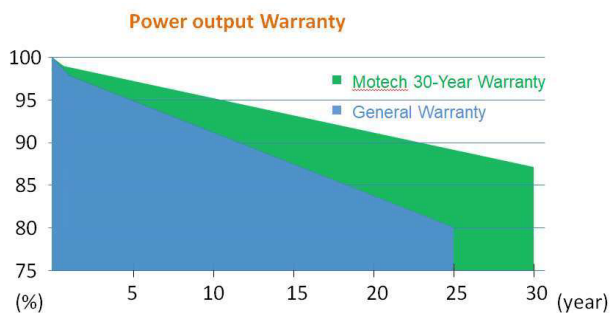
## QUALITY, RELIABILITY, AND KWH YIELD

MOTECH modules are powered by industry acknowledged high performance, reliable silicon cells. 20 years of experience in solar module engineering and design, along with rigorous durability and performance tests, ensure reliable lifetime performance and maximum kWh yield.



## 30-YEAR PROGRESSIVE WARRANTY\*

- 30-year progressive power warranty
- 12-year warranty on materials and workmanship



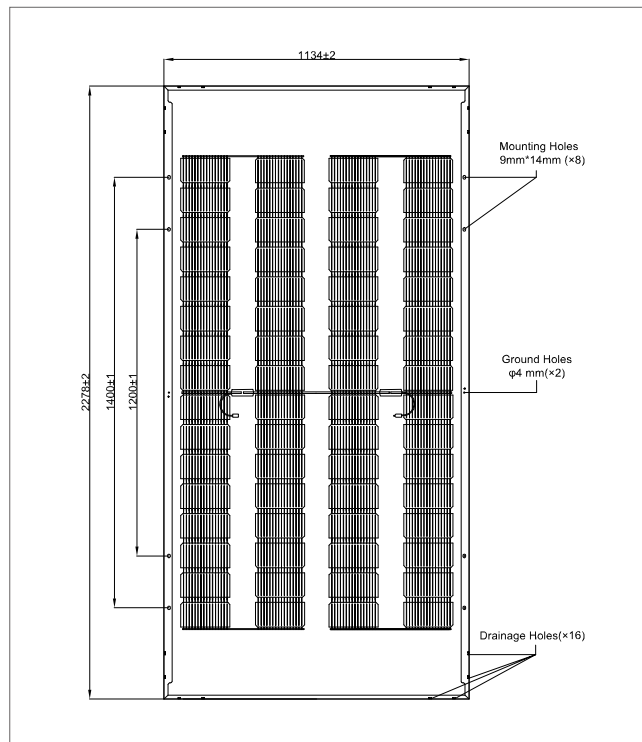
## CERTIFICATIONS & STANDARDS\*





## XN32TF-P1 PHOTOVOLTAIC MODULES

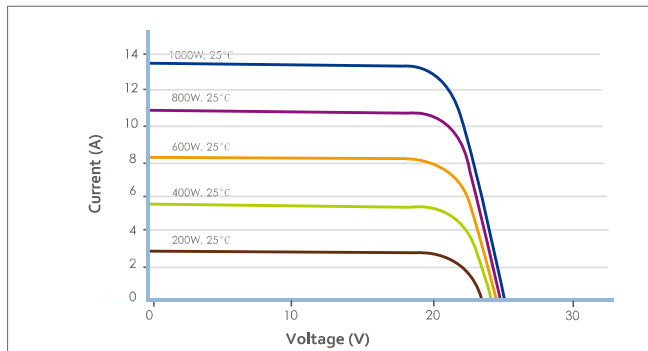
### PHYSICAL CHARACTERISTICS



### PHYSICAL DESIGN PROPERTIES

Dimension	2278×1134×30mm
Weight	31.6kg±5%
Front Glass	2.0 mm Semi-tempered Coated PV Glass
Back Glass	2.0 mm Glazed Glass
Junction Box	Protection class IP68
Output Cables	Φ4.0mm <sup>2</sup> , 500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	57.89%

### IV CURVE



### ELECTRICAL PERFORMANCE

#### XN32TF-P1-250

#### XN32TF-P1-255

#### XN32TF-P1-260

Electrical Performance @ STC (Power Measurement Uncertainty±3%)			
Maximum Power Pmax[Wp]	250	255	260
Max. Power Voltage Vmpp(V)	19.64	19.94	20.17
Max. Power Current Impp(A)	12.73	12.79	12.90
Open Circuit Voltage Voc(V)	22.8	23.0	23.3
Short Circuit Current Isc(A)	13.41	13.47	13.56
Module Efficiency (%)	9.68%	9.87%	10.06%

Power Gain (Electrical Performance @ STC) (Power Measurement Uncertainty±3%)			
5%	Pmax[Wp]	262	267
	Module Efficiency (%)	10.14%	10.34%
15%	Pmax[Wp]	287	293
	Module Efficiency (%)	11.11%	11.34%
25%	Pmax[Wp]	312	318
	Module Efficiency (%)	12.08%	12.31%

### ELECTRICAL PERFORMANCE PARAMETERS

Isc Temperature Coefficient	$\alpha$ (%/°C)	+0.045	Maximum Series Fuse Rating	30A
Voc Temperature Coefficient	$\beta$ (%/°C)	-0.25	Max. System Voltage (IEC)	1500V
Pmax Temperature Coefficient	$\gamma$ (%/°C)	-0.29	Nominal Operating Cell Temp.(NOCT)	45°C ± 2°C

IV parameters are rated at Standard Test Conditions (Irradiance of 1000 W/m<sup>2</sup>, AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m<sup>2</sup>, 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

Motech reserves the rights of final interpretation and revision on this datasheet.



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**XN36TF-P1** PHOTOVOLTAIC MODULES

# XN36 SERIES HALF-CUT PV MODULES

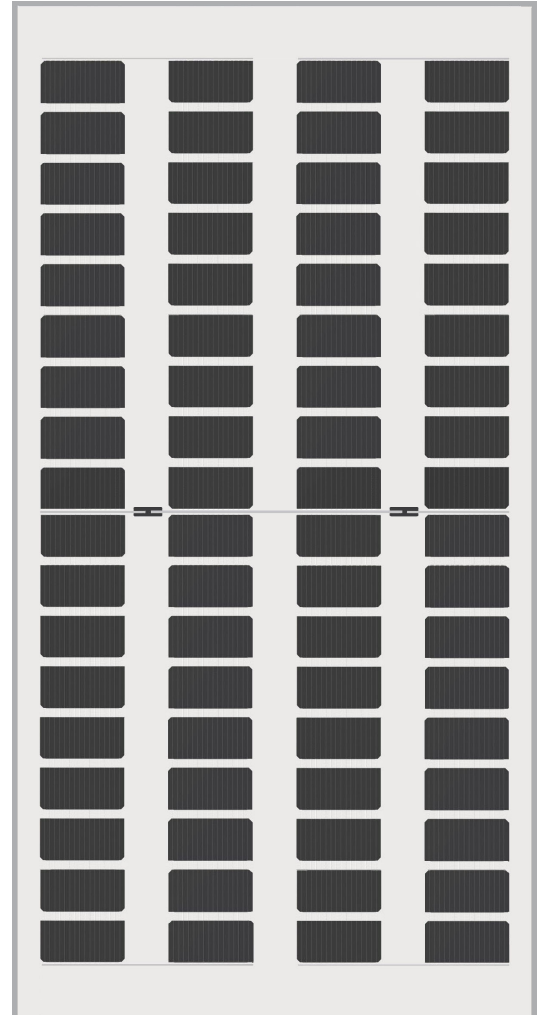
PEAK POWER: 280-290 Wp

## FEATURES INCLUDE:

- 36 N-Topcon cells comprised by double layers of glasses.
- Positive power tolerance of 0~+3% improves system performance.
- Industry-leading module efficiency: maximum efficiency of 11.23%.
- Tested up to 5400Pa for maximum load resistance.
- Verified resistance against PID effects.
- Progressive Power Warranty guarantees 87.4% of rated power at 30 years.
- Manufactured globally with world-class quality standards

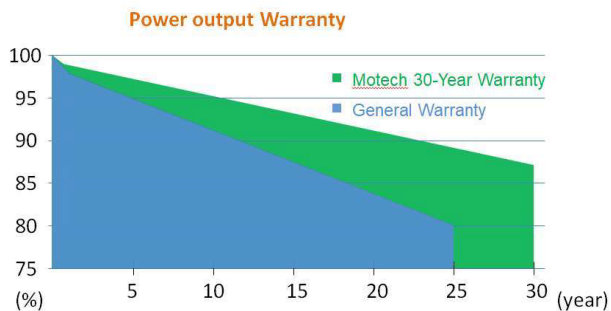
## QUALITY, RELIABILITY, AND KWH YIELD

MOTECH modules are powered by industry acknowledged high performance, reliable silicon cells. 20 years of experience in solar module engineering and design, along with rigorous durability and performance tests, ensure reliable lifetime performance and maximum kWh yield.



## 30-YEAR PROGRESSIVE WARRANTY\*

- 30-year progressive power warranty
- 12-year warranty on materials and workmanship



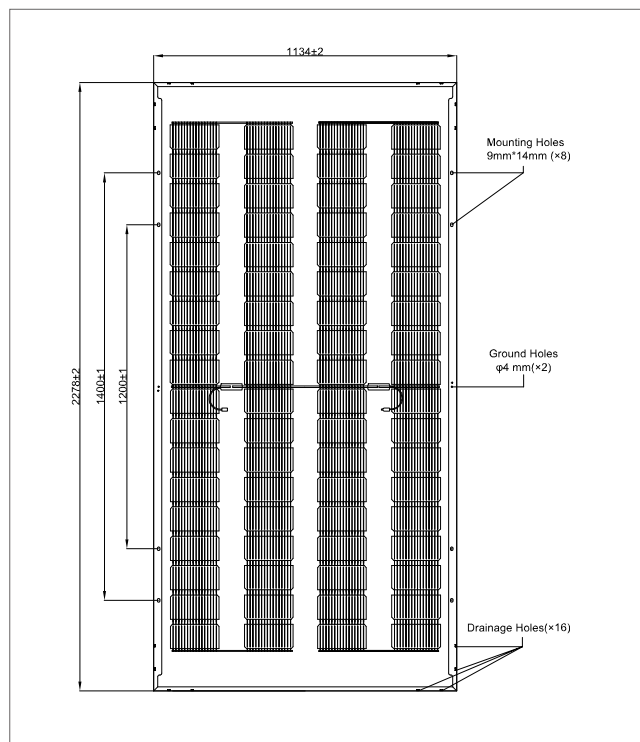
## CERTIFICATIONS & STANDARDS\*





## XN36TF-P1 PHOTOVOLTAIC MODULES

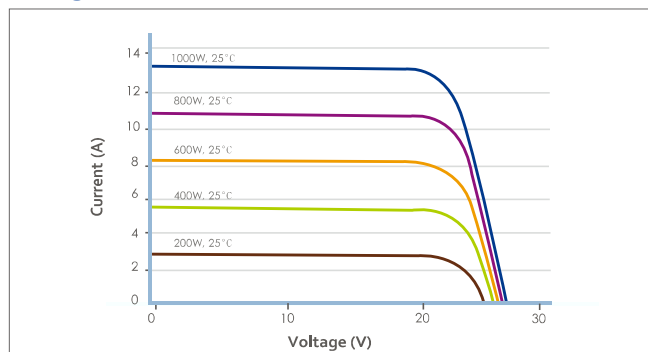
### PHYSICAL CHARACTERISTICS



### PHYSICAL DESIGN PROPERTIES

Dimension	2278×1134×30mm
Weight	31.6kg±5%
Front Glass	2.0 mm Semi-tempered Coated PV Glass
Back Glass	2.0 mm Glazed Glass
Junction Box	Protection class IP68
Output Cables	Φ4.0mm <sup>2</sup> , 500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	52.62%

### IV CURVE



### ELECTRICAL PERFORMANCE

#### XN36TF-P1-280

#### XN36TF-P1-285

#### XN36TF-P1-290

Electrical Performance @ STC (Power Measurement Uncertainty±3%)				
Maximum Power Pmax[Wp]		280	285	290
Max. Power Voltage	Vmpp(V)	22.02	22.32	22.57
Max. Power Current	Imp(A)	12.72	12.77	12.85
Open Circuit Voltage	Voc(V)	25.5	25.8	26.1
Short Circuit Current	Isc(A)	13.38	13.44	13.52
Module Efficiency (%)		10.84%	11.03%	11.23%

Power Gain (Electrical Performance @ STC) (Power Measurement Uncertainty±3%)				
5%	Pmax[Wp]	294	299	304
	Module Efficiency (%)	11.38%	11.57%	11.77%
15%	Pmax[Wp]	322	327	333
	Module Efficiency (%)	12.46%	12.66%	12.89%
25%	Pmax[Wp]	350	356	362
	Module Efficiency (%)	13.55%	13.78%	14.01%

### ELECTRICAL PERFORMANCE PARAMETERS

Isc Temperature Coefficient	α (%/°C)	+0.045	Maximum Series Fuse Rating	30A
Voc Temperature Coefficient	β (%/°C)	-0.25	Max. System Voltage (IEC)	1500V
Pmax Temperature Coefficient	γ (%/°C)	-0.29	Nominal Operating Cell Temp.(NOCT)	45°C ± 2°C

IV parameters are rated at Standard Test Conditions (Irradiance of 1000 W/m<sup>2</sup>, AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m<sup>2</sup>, 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

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**XN40TF-P1** PHOTOVOLTAIC MODULES

# XN40 SERIES HALF-CUT PV MODULES

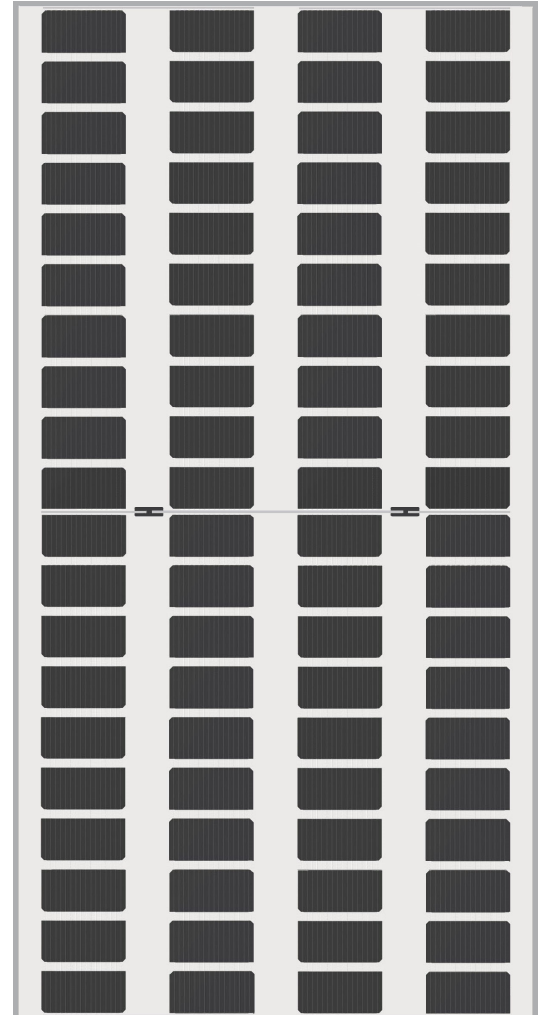
PEAK POWER: 315-325 Wp

## FEATURES INCLUDE:

- 40 N-Topcon cells comprised by double layers of glasses.
- Positive power tolerance of 0~+3% improves system performance.
- Industry-leading module efficiency: maximum efficiency of 12.58%.
- Tested up to 5400Pa for maximum load resistance.
- Verified resistance against PID effects.
- Progressive Power Warranty guarantees 87.4% of rated power at 30 years.
- Manufactured globally with world-class quality standards

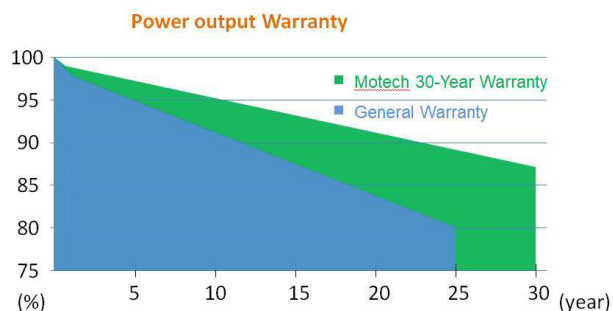
## QUALITY, RELIABILITY, AND KWH YIELD

MOTECH modules are powered by industry acknowledged high performance, reliable silicon cells. 20 years of experience in solar module engineering and design, along with rigorous durability and performance tests, ensure reliable lifetime performance and maximum kWh yield.



## 30-YEAR PROGRESSIVE WARRANTY\*

- 30-year progressive power warranty
- 12-year warranty on materials and workmanship



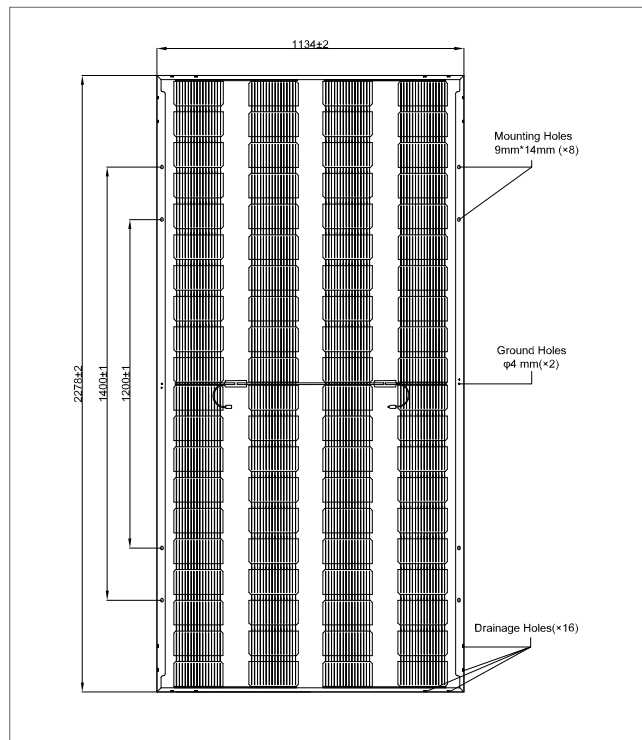
## CERTIFICATIONS & STANDARDS\*





## XN40TF-P1 PHOTOVOLTAIC MODULES

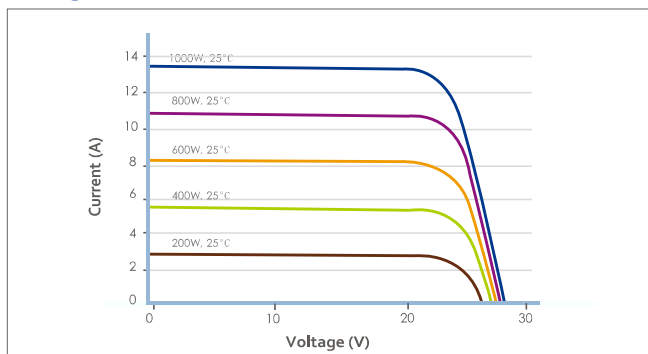
### PHYSICAL CHARACTERISTICS



### PHYSICAL DESIGN PROPERTIES

Dimension	2278×1134×30mm
Weight	31.6kg±5%
Front Glass	2.0 mm Semi-tempered Coated PV Glass
Back Glass	2.0 mm Glazed Glass
Junction Box	Protection class IP68
Output Cables	Φ4.0mm <sup>2</sup> , 500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	47.36%

### IV CURVE



### ELECTRICAL PERFORMANCE

#### XN40TF-P1-315

#### XN40TF-P1-320

#### XN40TF-P1-325

Electrical Performance @ STC (Power Measurement Uncertainty±3%)				
Maximum Power Pmax[Wp]		315	320	325
Max. Power Voltage	Vmpp(V)	24.69	24.99	25.22
Max. Power Current	Imp(A)	12.76	12.81	12.89
Open Circuit Voltage	Voc(V)	28.6	28.9	29.1
Short Circuit Current	Isc(A)	13.43	13.49	13.56
Module Efficiency (%)		12.19%	12.39%	12.58%

Power Gain (Electrical Performance @ STC) 「Power Measurement Uncertainty±3%」				
5%	Pmax[Wp]	330	336	341
	Module Efficiency (%)	12.77%	13.01%	13.20%
15%	Pmax[Wp]	362	368	373
	Module Efficiency (%)	14.01%	14.25%	14.44%
25%	Pmax[Wp]	393	400	406
	Module Efficiency (%)	15.21%	15.48%	15.72%

### ELECTRICAL PERFORMANCE PARAMETERS

Isc Temperature Coefficient	α (%/°C)	+0.045	Maximum Series Fuse Rating	30A
Voc Temperature Coefficient	β (%/°C)	-0.25	Max. System Voltage (IEC)	1500V
Pmax Temperature Coefficient	γ (%/°C)	-0.29	Nominal Operating Cell Temp.(NOCT)	45°C ± 2°C

IV parameters are rated at Standard Test Conditions (Irradiance of 1000 W/m<sup>2</sup>, AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m<sup>2</sup>, 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

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M31-2404-007-A



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**XN44TF-P1** PHOTOVOLTAIC MODULES

# XN44 SERIES HALF-CUT PV MODULES

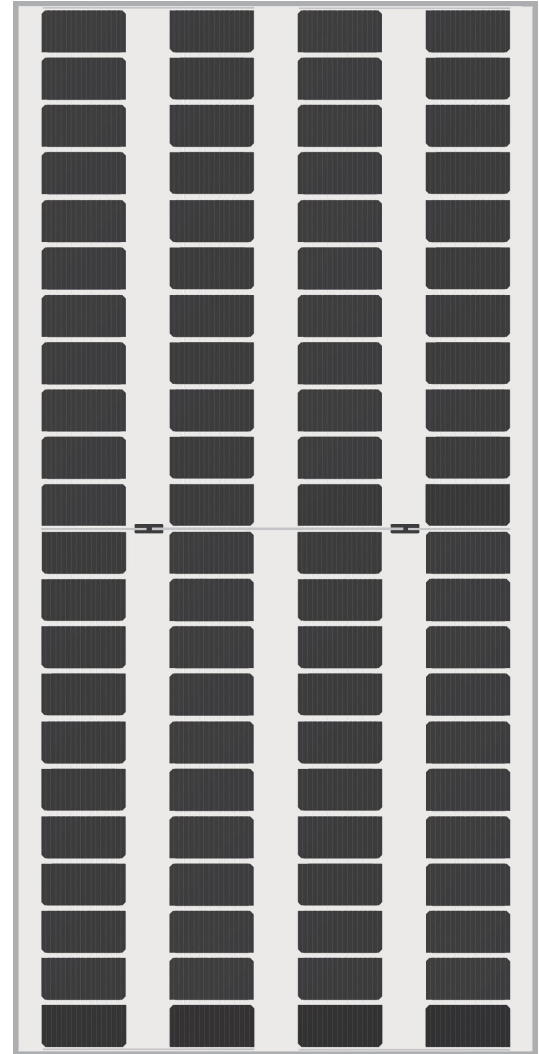
PEAK POWER: 345-355 Wp

## FEATURES INCLUDE:

- 44 N-Topcon cells comprised by double layers of glasses.
- Positive power tolerance of 0~+3% improves system performance.
- Industry-leading module efficiency: maximum efficiency of 13.74%.
- Tested up to 5400Pa for maximum load resistance.
- Verified resistance against PID effects.
- Progressive Power Warranty guarantees 87.4% of rated power at 30 years.
- Manufactured globally with world-class quality standards

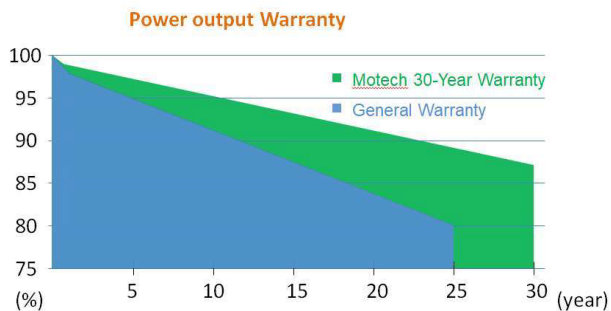
## QUALITY, RELIABILITY, AND KWH YIELD

MOTECH modules are powered by industry acknowledged high performance, reliable silicon cells. 20 years of experience in solar module engineering and design, along with rigorous durability and performance tests, ensure reliable lifetime performance and maximum kWh yield.



## 30-YEAR PROGRESSIVE WARRANTY\*

- 30-year progressive power warranty
- 12-year warranty on materials and workmanship

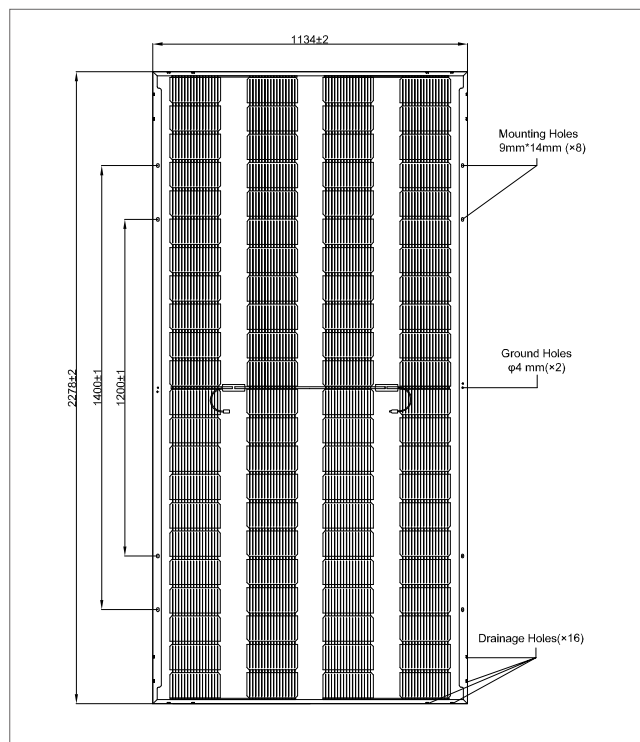


## CERTIFICATIONS & STANDARDS\*





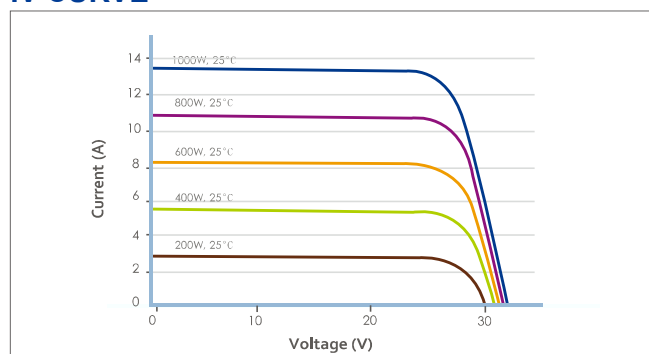
## PHYSICAL CHARACTERISTICS



## PHYSICAL DESIGN PROPERTIES

Dimension	2278×1134×30mm
Weight	31.6kg±5%
Front Glass	2.0 mm Semi-tempered Coated PV Glass
Back Glass	2.0 mm Glazed Glass
Junction Box	Protection class IP68
Output Cables	Φ4.0mm <sup>2</sup> ,500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	42.10`%

## IV CURVE



## ELECTRICAL PERFORMANCE

### XN44TF-P1-345

### XN44TF-P1-350

### XN44TF-P1-355

Electrical Performance @ STC （Power Measurement Uncertainty±3%）				
Maximum Power Pmax[Wp]		345	350	355
Max. Power Voltage	Vmpp(V)	27.06	27.37	27.61
Max. Power Current	Impp(A)	12.75	12.79	12.86
Open Circuit Voltage	Voc(V)	31.4	31.7	31.9
Short Circuit Current	Isc(A)	13.42	13.46	13.53
Module Efficiency (%)		13.36%	13.55%	13.74%

Power Gain (Electrical Performance @ STC) 「Power Measurement Uncertainty±3%」				
5%	Pmax[Wp]	362	367	372
	Module Efficiency (%)	14.01%	14.21%	14.40%
15%	Pmax[Wp]	396	402	408
	Module Efficiency (%)	15.33%	15.56%	15.79%
25%	Pmax[Wp]	431	437	443
	Module Efficiency (%)	16.68%	16.92%	17.15%

## ELECTRICAL PERFORMANCE PARAMETERS

Isc Temperature Coefficient	α (%/°C)	+0.045	Maximum Series Fuse Rating	30A
Voc Temperature Coefficient	β (%/°C)	-0.25	Max. System Voltage (IEC)	1500V
Pmax Temperature Coefficient	γ (%/°C)	-0.29	Nominal Operating Cell Temp.(NOCT)	45°C ± 2°C

IV parameters are rated at Standard Test Conditions (Irradiance of 1000 W/m<sup>2</sup>, AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m<sup>2</sup>, 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

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