



XN28TF-P3 PHOTOVOLTAIC MODULES

XN28 SERIES HALF-CUT PV MODULES

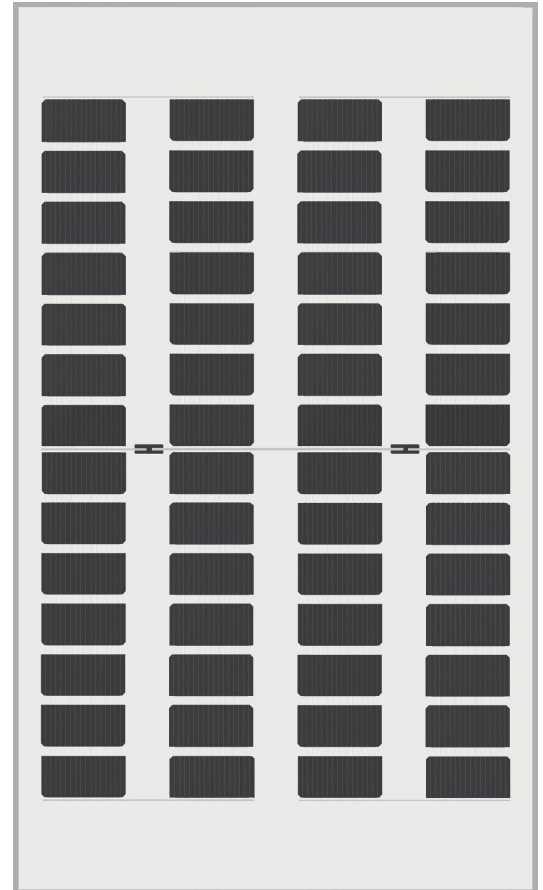
PEAK POWER: 220-230 Wp

FEATURES INCLUDE:

- 28 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 10.64%.
- 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

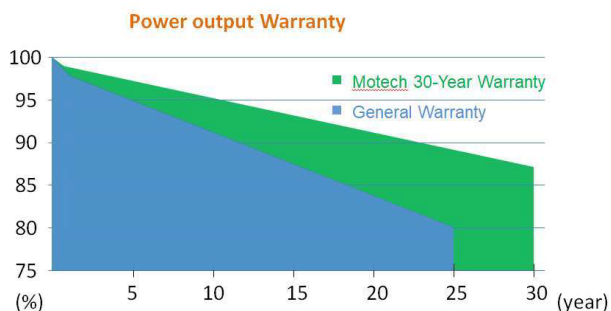
QUALITY, RELIABILITY, AND KWH YIELD

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

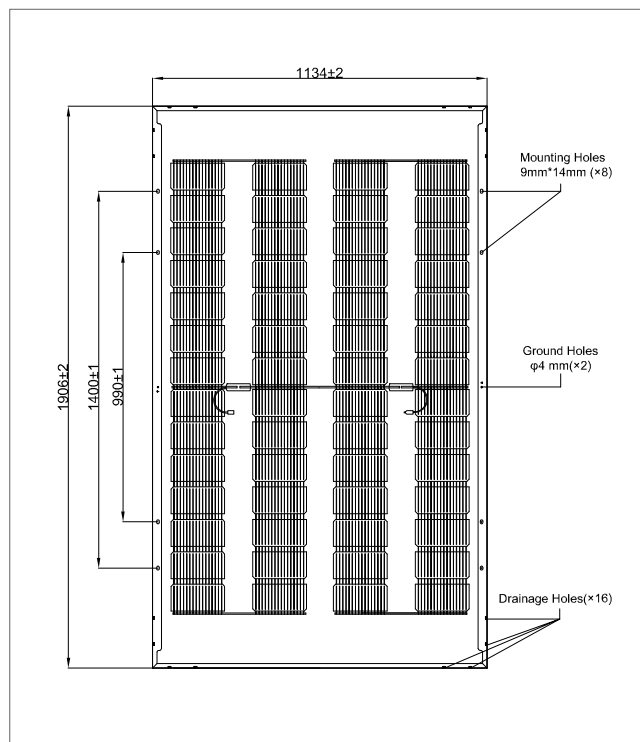


CERTIFICATIONS & STANDARDS*





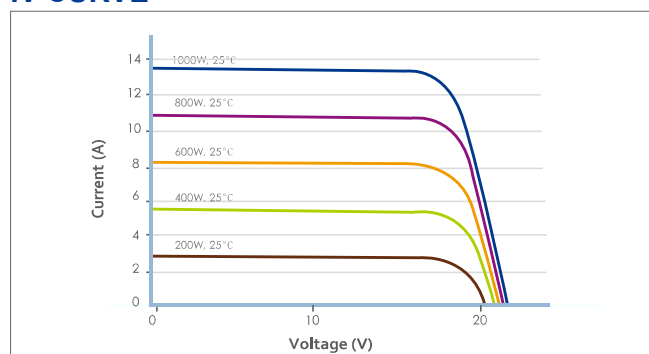
PHYSICAL CHARACTERISTICS



PHYSICAL DESIGN PROPERTIES

Dimension	1906×1134×30mm
Weight	27.1kg±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 ² , 500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	55.92%

IV CURVE



ELECTRICAL PERFORMANCE

XN28TF-P3-220

XN28TF-P3-225

XN28TF-P3-230

Electrical Performance @ STC (Power Measurement Uncertainty±3%)				
Maximum Power Pmax[Wp]		220	225	230
Max. Power Voltage	Vmpp(V)	17.25	17.54	17.76
Max. Power Current	Imp(A)	12.76	12.83	12.95
Open Circuit Voltage	Voc(V)	20.0	20.3	20.5
Short Circuit Current	Isc(A)	13.43	13.51	13.61
Module Efficiency (%)		10.18%	10.41%	10.64%

Power Gain (Electrical Performance @ STC) (Power Measurement Uncertainty±3%)				
5%	Pmax[Wp]	231	236	241
	Module Efficiency (%)	10.69%	10.92%	11.15%
15%	Pmax[Wp]	253	258	264
	Module Efficiency (%)	11.71%	11.94%	12.21%
25%	Pmax[Wp]	275	281	287
	Module Efficiency (%)	12.72%	13.00%	13.28%

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/m², AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m², 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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M31-2404-013-A

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XN32TF-P3 PHOTOVOLTAIC MODULES

XN32SERIES HALF-CUT PV MODULES

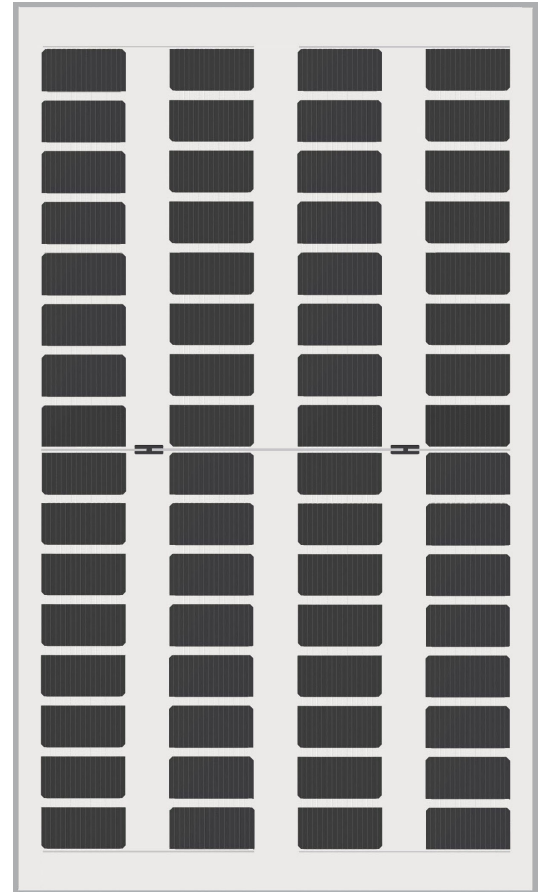
PEAK POWER: 250-260 Wp

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 12.03%.
- 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

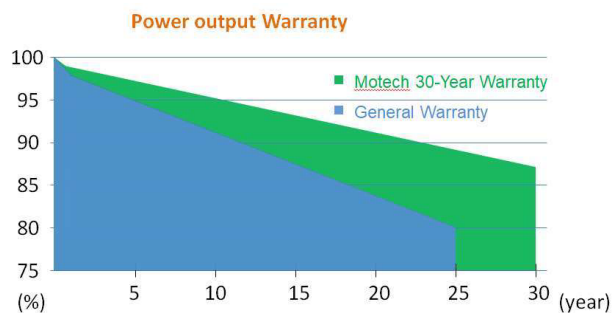
QUALITY, RELIABILITY, AND KWH YIELD

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



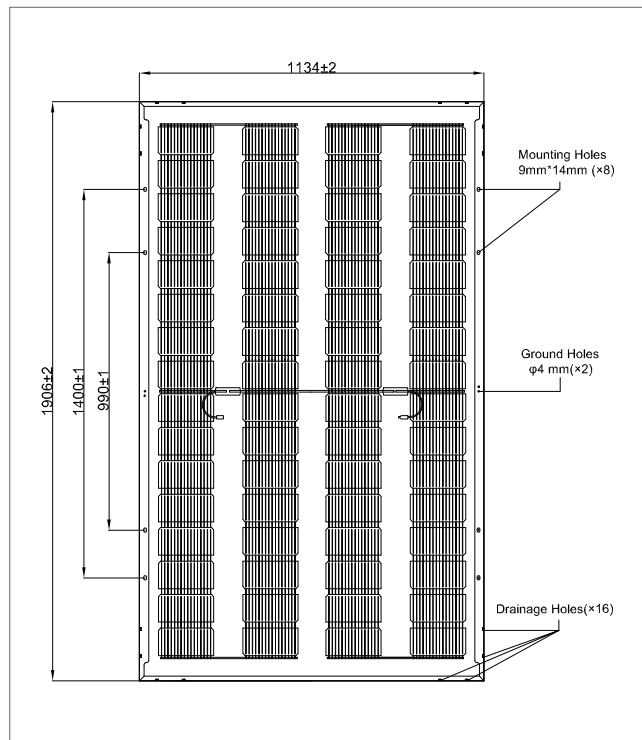
CERTIFICATIONS & STANDARDS*





XN32TF-P3 PHOTOVOLTAIC MODULES

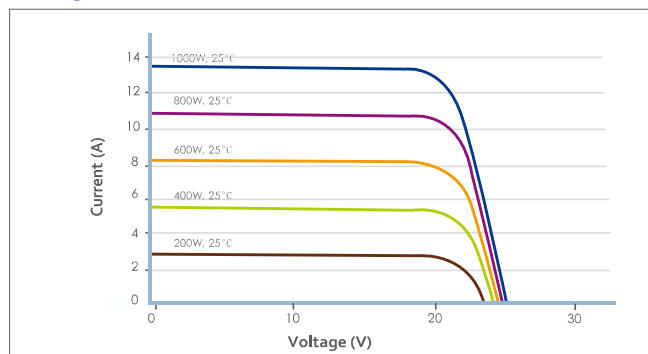
PHYSICAL CHARACTERISTICS



PHYSICAL DESIGN PROPERTIES

Dimension	1906×1134×30mm
Weight	27.1kg±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 ² , 500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	49.63%

IV CURVE



ELECTRICAL PERFORMANCE

XN32TF-P3-250

XN32TF-P3-255

XN32TF-P3-260

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 (%)	11.57%	11.80%	12.03%

Power Gain (Electrical Performance @ STC) 「Power Measurement Uncertainty±3%」				
5%	Pmax[Wp]	262	267	273
	Module Efficiency (%)	12.12%	12.35%	12.63%
15%	Pmax[Wp]	287	293	299
	Module Efficiency (%)	13.28%	13.56%	13.83%
25%	Pmax[Wp]	312	318	325
	Module Efficiency (%)	14.44%	14.71%	15.04%

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/m², AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m², 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

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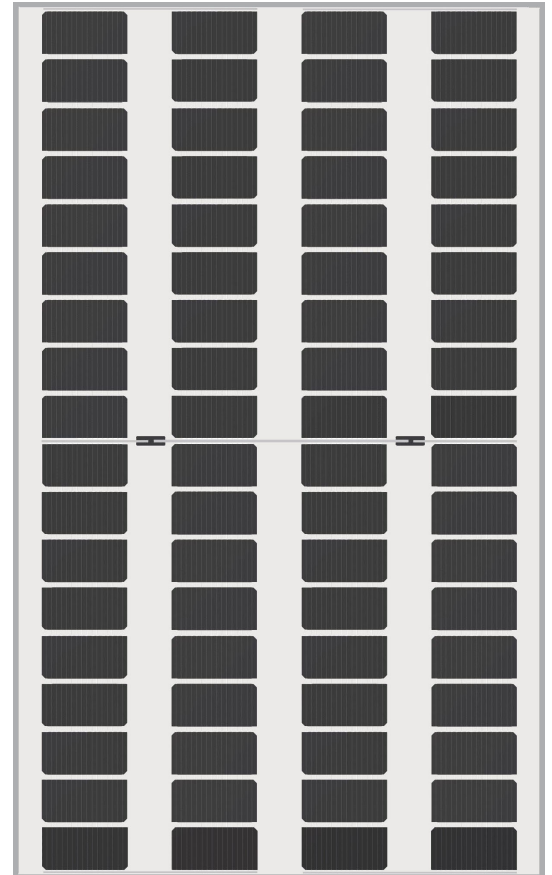
XN36TF-P3 PHOTOVOLTAIC MODULES

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 13.42%.
- 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

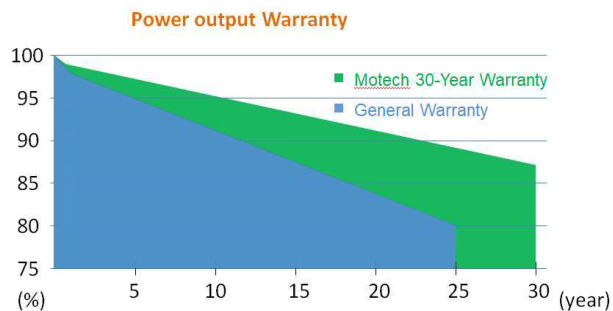


QUALITY, RELIABILITY, AND KWH YIELD

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30-YEAR PROGRESSIVE WARRANTY*

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



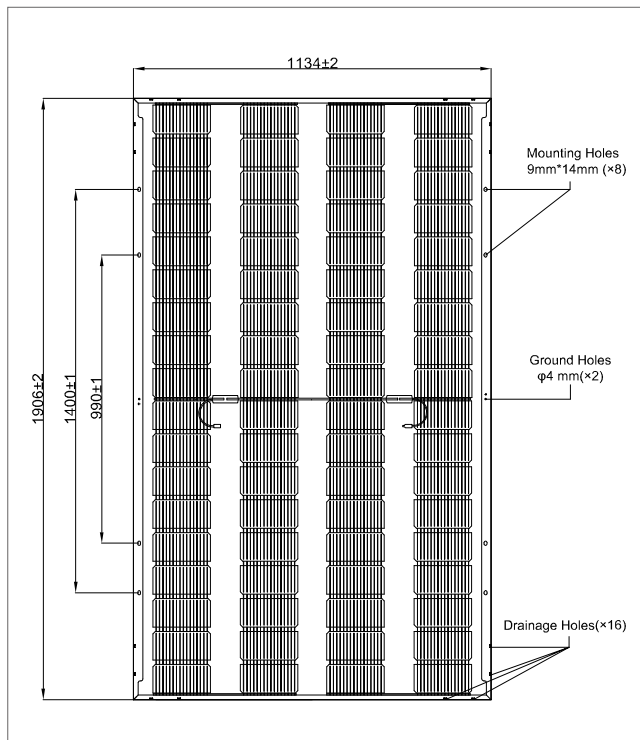
CERTIFICATIONS & STANDARDS*





XN36TF-P3 PHOTOVOLTAIC MODULES

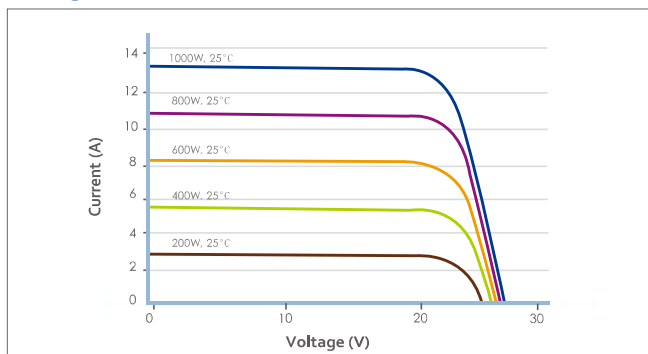
PHYSICAL CHARACTERISTICS



PHYSICAL DESIGN PROPERTIES

Dimension	1906×1134×30mm
Weight	27.1kg±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 ² , 500mm/500mm, or customized length
Connectors	MC4 Compatible
Light transmittance	43.33%

IV CURVE



ELECTRICAL PERFORMANCE

XN36TF-P3-280

XN36TF-P3-285

XN36TF-P3-290

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 (%)		12.95%	13.19%	13.42%

Power Gain (Electrical Performance @ STC) 「Power Measurement Uncertainty±3%」				
5%	Pmax[Wp]	294	299	304
	Module Efficiency (%)	13.60%	13.83%	14.06%
15%	Pmax[Wp]	322	327	333
	Module Efficiency (%)	14.90%	15.13%	15.41%
25%	Pmax[Wp]	350	356	362
	Module Efficiency (%)	16.19%	16.47%	16.75%

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/m², AM 1.5, cell temperature 25°C). All measurements are guaranteed at the laminate leads. NOCT is measured at 800 W/m², 20°C ambient, and 1 m/s windspeed. Specifications are subject to change without notice.

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