

COTECH SOLAR · TOPCon

CSTB72-580~605

N-Type 182mm TOPCon Bifacial Dual-Glass Module · 144 half-cells

605 W_p

MAXIMUM
POWER OUTPUT

23.4 %

MAXIMUM
EFFICIENCY

High customer value

- N-type i-TOPCon bifacial dual-glass module
- Compatible with mainstream inverters & mounting systems
- Mechanical load up to 5400 Pa front / 2400 Pa rear
- Lower BOS cost and lifetime LCOE

High efficiency & power

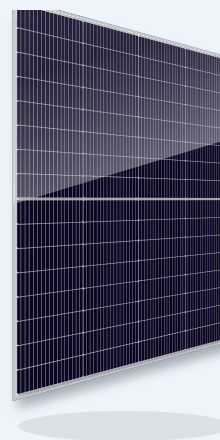
- Up to 23.4% module efficiency
- OBB / SMBB low-resistance cell interconnection
- Excellent performance under low irradiance

High reliability & yield

- 15-year product & 30-year linear power warranty
- Resistant to PID, salt mist and ammonia; low LID / LeTID
- Low temperature coefficient $-0.29\%/^{\circ}C$ · up to $80 \pm 5\%$ bifaciality

Key specifications

Maximum power	580 – 605 W_p
Module efficiency	up to 23.4 %
Open-circuit voltage	52.30 – 53.10 V
Cell type	N-type TOPCon mono, 182mm
No. of cells	144 (6×24) half-cut
Dimensions (mm)	2278 × 1134 × 30
Weight	31.5 kg
Bifaciality	80 ± 5%



N-Type TOPCon

low LID / LeTID

Bifacial

80 ± 5%

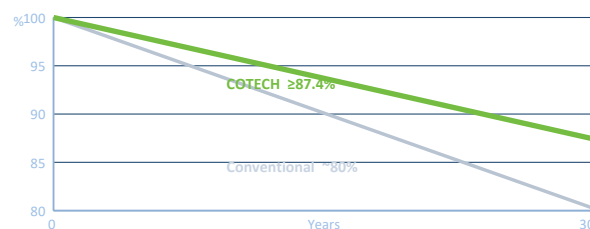
OBB · SMBB

higher energy yield

Glass · Glass

dual-glass

PERFORMANCE WARRANTY



15-yr product

30-yr power

QUALITY ASSURANCE



EL & flash tested

100% inspected, binned & traceable

APPLICATIONS



Residential



C & I



Utility



Off-grid

QUALITY SYSTEM

ISO 9001

ISO 14001

ISO 45001

CERTIFICATION & QUALIFICATION

IEC 61215

IEC 61730

IEC 61701

IEC 62716

UL 61730

CE

TÜV

ISO 9001/14001/45001

TESTED

✓ Damp heat

✓ Thermal cycling

✓ Humidity-freeze

✓ PID

✓ Salt mist

✓ Ammonia

✓ Mechanical load

✓ Hail

Electrical characteristics at STC

Parameter	580	585	590	595	600	605
Maximum power P_{max} (W)	580	585	590	595	600	605
Open-circuit voltage V_{oc} (V)	52.30	52.46	52.62	52.78	52.94	53.10
Short-circuit current I_{sc} (A)	13.92	14.00	14.07	14.15	14.22	14.30
Voltage at P_{max} V_{mp} (V)	43.80	43.96	44.12	44.28	44.44	44.60
Current at P_{max} I_{mp} (A)	13.24	13.31	13.37	13.44	13.50	13.57
Module efficiency η_m (%)	22.45	22.65	22.84	23.03	23.23	23.42

Electrical characteristics at NMOT

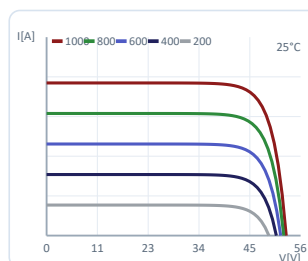
Parameter	580	585	590	595	600	605
Maximum power P_{max} (W)	437.9	441.7	445.4	449.2	453.0	456.8
Open-circuit voltage V_{oc} (V)	48.74	48.89	49.04	49.19	49.34	49.49
Short-circuit current I_{sc} (A)	11.16	11.23	11.28	11.35	11.40	11.47
Voltage at P_{max} V_{mp} (V)	40.65	40.79	40.94	41.09	41.24	41.39
Current at P_{max} I_{mp} (A)	10.50	10.55	10.60	10.66	10.71	10.76

STC 1000 W/m² · 25 °C · AM1.5 — NMOT 800 W/m² · 20 °C · AM1.5 · 1 m/s — Power tolerance 0 ~ +3 %

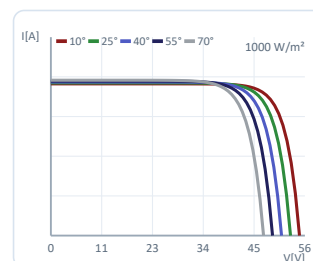
Parameter	Value
Solar cell	N-type TOPCon mono, 182mm
Cell size	182 × 91 mm
No. of cells	144 (6×24) half-cut
Busbar	0BB · SMBB
Dimensions	2278 × 1134 × 30 mm
Weight	31.5 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm ² , 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of P_{max}	-0.29 %/°C
Temp. coeff. of V_{oc}	-0.25 %/°C
Temp. coeff. of I_{sc}	+0.045 %/°C
Operating temperature	-40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

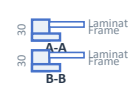
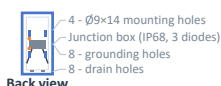
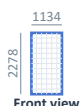
 ϕV_{oc} 98 ± 5% ϕI_{sc} 80 ± 5% ϕP_{max} 80 ± 5%

Rear gain	+0%	+10%	+20%	+25%
P_{max} (W)	605	666	726	756
I_{sc} (A)	14.30	15.73	17.16	17.88

Maximum ratings

Parameter	Value
Max system voltage	1500 V DC (IEC/UL)
Max series fuse	30 A
Max test load (front / back)	5400 Pa / 2400 Pa
Application / safety class	Class A / Class II
Fire rating	Class C

Mechanical drawing (mm)

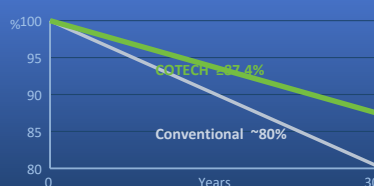


Linear power warranty

15 yr product warranty

30 yr linear power output warranty

1st-year ≤1% · annual ≤0.4% · ≥87.4% at year 30



Packaging

Pieces / pallet	36
Pieces / 20'GP	144
Pieces / 40'HC	720
Pallet size	2300 × 1150 × 1180 mm