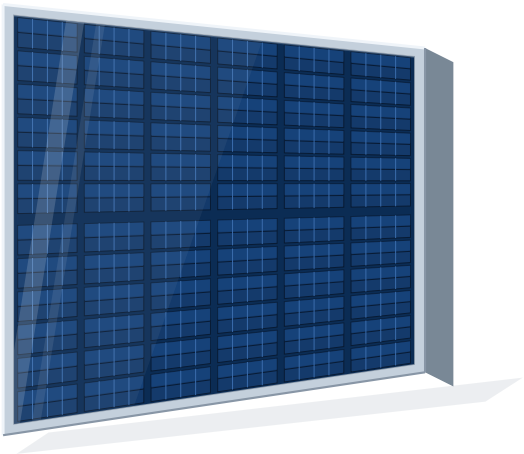
COTECH
solar since 2005

SOLAR MODULES

— Energizing the World Since 2005 —

Product Catalogue · N-Type TOPCon / Back-Contact / HJT

NeoBlack | NeoPro | HyperX | Classic



20 GW
shipped

120+
countries

2005
established

info@cotechsolar.com · www.cotechsolar.com · Shanghai | Hong Kong | Rotterdam

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

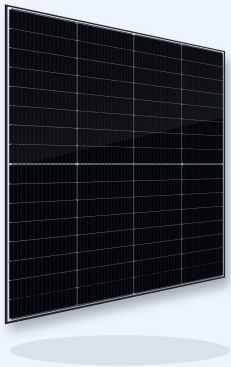
COTECH SOLAR · Back-Contact

CSBC54-460~485

N-Type Back-Contact All-Black Module · 108 half-cells

485 Wp MAXIMUM POWER OUTPUT

24.3 % MAXIMUM EFFICIENCY



- **Back-Contact** — 0BB shadeless cells
- **All-Black** — premium rooftop look
- **Bifacial** — High-density layout
- **Glass · Glass** — dual-glass 2.0 mm

Premium all-black design

- Pure all-black — no front gridlines
- Clean aesthetic for residential & C&I rooftops
- Black anodized frame and uniform appearance

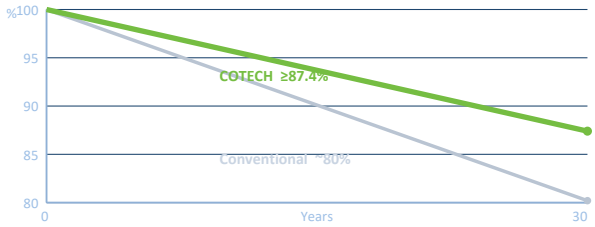
Top efficiency & power

- Back-contact cells reach up to 24.3% efficiency
- Busbars moved to the rear — more active front area
- Highest energy density per square metre

High reliability & yield

- 15-year product & 30-year linear power warranty
- Superior shade tolerance and low-light output
- Low temperature coefficient −0.28 %/°C · PID / salt-mist resistant

PERFORMANCE WARRANTY



15-yr product | 30-yr power

Key specifications

Maximum power	**460 – 485 Wp**
Module efficiency	**up to 24.3 %**
Open-circuit voltage	**40.80 – 41.60 V**
Cell type	**N-type back-contact (BC), 182mm**
No. of cells	**108 (6×18) half-cut**
Dimensions (mm)	**1762 × 1134 × 30**
Weight	**22.5 kg**
Bifaciality	**Mono-facial**

QUALITY ASSURANCE

EL & flash tested
100% inspected, binned & traceable

APPLICATIONS

Residential | C & I | Utility | Off-grid

QUALITY SYSTEM

ISO 9001 | ISO 14001 | ISO 45001

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	460	465	470	475	480	485
Maximum power Pmax (W)	460	465	470	475	480	485
Open-circuit voltage Voc (V)	40.80	40.96	41.12	41.28	41.44	41.60
Short-circuit current Isc (A)	13.90	13.96	14.02	14.08	14.14	14.20
Voltage at Pmax Vmp (V)	34.60	34.76	34.92	35.08	35.24	35.40
Current at Pmax Imp (A)	13.29	13.38	13.46	13.54	13.62	13.70
Module efficiency ηm (%)	23.02	23.27	23.52	23.77	24.02	24.27

Electrical characteristics at NMOT

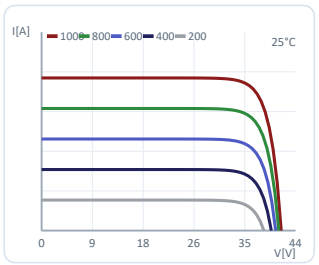
Parameter	460	465	470	475	480	485
Maximum power Pmax (W)	347.3	351.1	354.9	358.6	362.4	366.2
Open-circuit voltage Voc (V)	38.03	38.17	38.32	38.47	38.62	38.77
Short-circuit current Isc (A)	11.15	11.20	11.24	11.29	11.34	11.39
Voltage at Pmax Vmp (V)	32.11	32.26	32.41	32.55	32.70	32.85
Current at Pmax Imp (A)	10.54	10.61	10.67	10.74	10.80	10.86

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

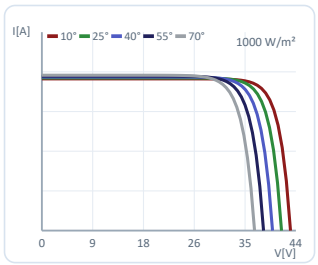
Parameter	Value
Solar cell	N-type back-contact (BC), 182mm
Cell size	182 × 91 mm
No. of cells	108 (6×18) half-cut
Busbar	Back-contact (busbar-free front)
Dimensions	1762 × 1134 × 30 mm
Weight	22.5 kg
Front / back glass	2.0 mm tempered AR / clear backsheet
Encapsulant	POE
Frame	Black anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 300/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.28 %/°C
Temp. coeff. of Voc	−0.24 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



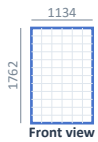
Low-light performance — relative efficiency

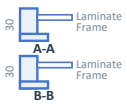
Irradiance (W/m²)	1000	600	400	200
Relative efficiency (%)	100.0	100.4	100.1	98.3

Maximum ratings

Parameter	Value
Max system voltage	1500 V DC (IEC/UL)
Max series fuse	25 A
Max test load (front / back)	5400 Pa / 2400 Pa
Application / safety class	Class A / Class II
Fire rating	Class C

Mechanical drawing (mm)



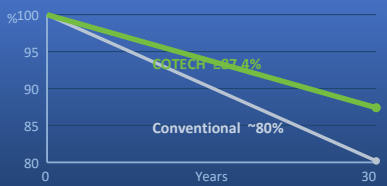


Linear power warranty

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	792
Pallet size	1800 × 1150 × 1180 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

COTECH SOLAR · Back-Contact

CSBC72-630~660

N-Type Back-Contact Bifacial Dual-Glass Module · 144 half-cells

660 Wp MAXIMUM POWER OUTPUT

24.4 % MAXIMUM EFFICIENCY

- **Back-Contact** — 0BB shadeless cells
- **All-Black** — premium rooftop look
- **Bifacial** — 75 ± 5%
- **Glass · Glass** — dual-glass 2.0 mm

Premium all-black design

- Pure all-black — no front gridlines
- Clean aesthetic for residential & C&I rooftops
- Black anodized frame and uniform appearance

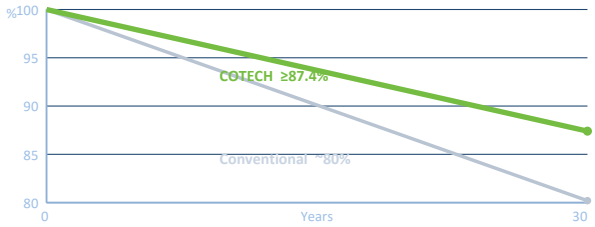
Top efficiency & power

- Back-contact cells reach up to 24.4% efficiency
- Busbars moved to the rear — more active front area
- Highest energy density per square metre

High reliability & yield

- 15-year product & 30-year linear power warranty
- Superior shade tolerance and low-light output
- Low temperature coefficient −0.28 %/°C · PID / salt-mist resistant

PERFORMANCE WARRANTY



15-yr product | 30-yr power

Key specifications

Maximum power	**630 – 660 Wp**
Module efficiency	**up to 24.4 %**
Open-circuit voltage	**49.50 – 50.40 V**
Cell type	**N-type back-contact (BC), 182mm**
No. of cells	**144 (6×24) half-cut**
Dimensions (mm)	**2382 × 1134 × 30**
Weight	**33.0 kg**
Bifaciality	**75 ± 5%**

QUALITY ASSURANCE

EL & flash tested
100% inspected, binned & traceable

APPLICATIONS

Residential | C & I | Utility | Off-grid

QUALITY SYSTEM

ISO 9001 | ISO 14001 | ISO 45001

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	630	635	640	645	650	655	660
Maximum power Pmax (W)	630	635	640	645	650	655	660
Open-circuit voltage Voc (V)	49.50	49.65	49.80	49.95	50.10	50.25	50.40
Short-circuit current Isc (A)	15.90	15.96	16.02	16.07	16.13	16.19	16.25
Voltage at Pmax Vmp (V)	41.50	41.63	41.77	41.90	42.03	42.17	42.30
Current at Pmax Imp (A)	15.18	15.25	15.32	15.39	15.47	15.53	15.60
Module efficiency ηm (%)	23.32	23.51	23.69	23.88	24.06	24.25	24.43

Electrical characteristics at NMOT

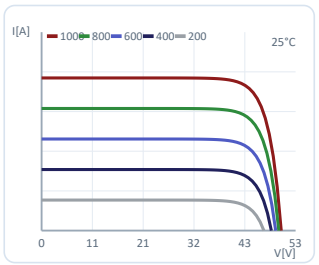
Parameter	630	635	640	645	650	655	660
Maximum power Pmax (W)	475.6	479.4	483.2	487.0	490.8	494.5	498.3
Open-circuit voltage Voc (V)	46.13	46.27	46.41	46.55	46.69	46.83	46.97
Short-circuit current Isc (A)	12.75	12.80	12.85	12.89	12.94	12.98	13.03
Voltage at Pmax Vmp (V)	38.51	38.63	38.76	38.88	39.00	39.13	39.25
Current at Pmax Imp (A)	12.04	12.09	12.15	12.20	12.27	12.32	12.37

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

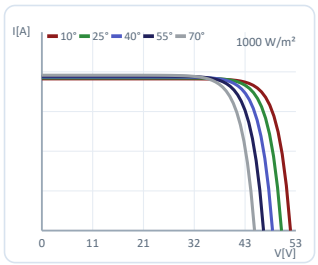
Parameter	Value
Solar cell	N-type back-contact (BC), 182mm
Cell size	182 × 91 mm
No. of cells	144 (6×24) half-cut
Busbar	Back-contact (busbar-free front)
Dimensions	2382 × 1134 × 30 mm
Weight	33.0 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.28 %/°C
Temp. coeff. of Voc	−0.24 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

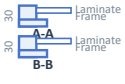
ϕVoc 98 ± 5% ϕIsc 75 ± 5% ϕPmax 75 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	660	726	792	825
Isc (A)	16.25	17.88	19.50	20.31

Maximum ratings

Parameter	Value
Max system voltage	1500 V DC (IEC/UL)
Max series fuse	25 A
Max test load (front / back)	5400 Pa / 2400 Pa
Application / safety class	Class A / Class II
Fire rating	Class C

Mechanical drawing (mm)

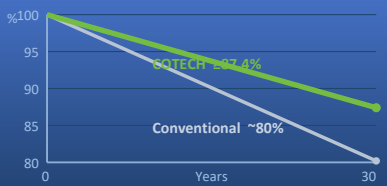


Linear power warranty

15 yr product warranty

30 yr linear power output warranty

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



Packaging

Pieces / pallet	31
Pieces / 20'GP	124
Pieces / 40'HC	620
Pallet size	2400 × 1150 × 1180 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

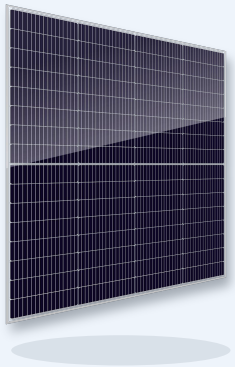
COTECH SOLAR · TOPCon

CSTB54-430~455

N-Type 182mm TOPCon Bifacial Dual-Glass Module · 108 half-cells

455 Wp MAXIMUM POWER OUTPUT

22.8 % MAXIMUM EFFICIENCY



- **N-Type TOPCon** — low LID / LeTID
- **Bifacial** — 70 ± 5%
- **0BB · SMBB** — higher energy yield
- **Glass · Glass** — dual-glass

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 22.8% module efficiency
- 0BB / SMBB low-resistance cell interconnection
- Excellent performance under low irradiance

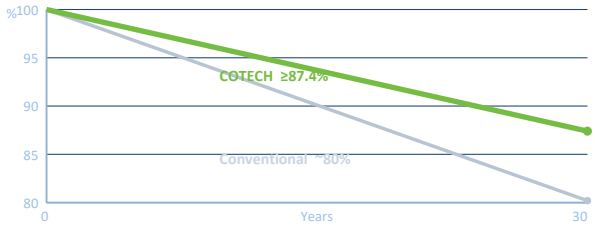
High reliability & yield

- 15-year product & 30-year linear power warranty
- Resistant to PID, salt mist and ammonia; low LID / LeTID
- Low temperature coefficient −0.29 %/°C · up to 70 ± 5% bifaciality

Key specifications

Maximum power	**430 – 455 Wp**
Module efficiency	**up to 22.8 %**
Open-circuit voltage	**39.40 – 40.30 V**
Cell type	**N-type TOPCon mono, 182mm**
No. of cells	**108 (6×18) half-cut**
Dimensions (mm)	**1762 × 1134 × 30**
Weight	**23.0 kg**
Bifaciality	**70 ± 5%**

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

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	430	435	440	445	450	455
Maximum power Pmax (W)	430	435	440	445	450	455
Open-circuit voltage Voc (V)	39.40	39.58	39.76	39.94	40.12	40.30
Short-circuit current Isc (A)	13.70	13.76	13.82	13.88	13.94	14.00
Voltage at Pmax Vmp (V)	32.80	32.98	33.16	33.34	33.52	33.70
Current at Pmax Imp (A)	13.11	13.19	13.27	13.35	13.42	13.50
Module efficiency ηm (%)	21.52	21.77	22.02	22.27	22.52	22.77

Electrical characteristics at NMOT

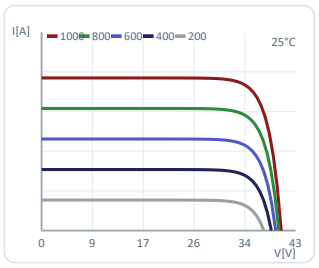
Parameter	430	435	440	445	450	455
Maximum power Pmax (W)	324.6	328.4	332.2	336.0	339.8	343.5
Open-circuit voltage Voc (V)	36.72	36.89	37.06	37.22	37.39	37.56
Short-circuit current Isc (A)	10.99	11.04	11.08	11.13	11.18	11.23
Voltage at Pmax Vmp (V)	30.44	30.61	30.77	30.94	31.11	31.27
Current at Pmax Imp (A)	10.40	10.46	10.52	10.59	10.64	10.71

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

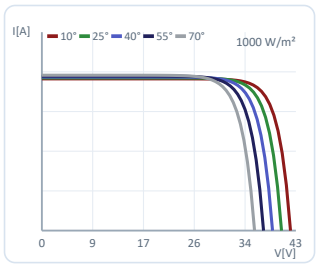
Parameter	Value
Solar cell	N-type TOPCon mono, 182mm
Cell size	182 × 91 mm
No. of cells	108 (6×18) half-cut
Busbar	0BB · SMBB
Dimensions	1762 × 1134 × 30 mm
Weight	23.0 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 300/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.29 %/°C
Temp. coeff. of Voc	−0.25 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

ϕVoc 98 ± 5% ϕIsc 70 ± 5% ϕPmax 70 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	455	501	546	569
Isc (A)	14.00	15.40	16.80	17.50

Maximum ratings

Parameter	Value
Max system voltage	1500 V DC (IEC/UL)
Max series fuse	25 A
Max test load (front / back)	5400 Pa / 2400 Pa
Application / safety class	Class A / Class II
Fire rating	Class C

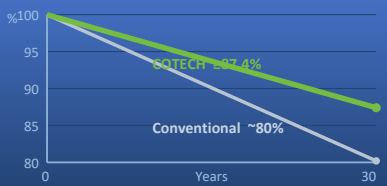
Mechanical drawing (mm)

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	792
Pallet size	1800 × 1150 × 1180 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

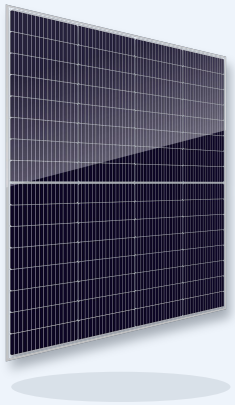
COTECH SOLAR · TOPCon

CSTB60-480~505

N-Type 182mm TOPCon Bifacial Dual-Glass Module · 120 half-cells

505 Wp MAXIMUM POWER OUTPUT

22.7 % MAXIMUM EFFICIENCY



- **N-Type TOPCon** — low LID / LeTID
- **Bifacial** — 75 ± 5%
- **0BB · SMBB** — higher energy yield
- **Glass · Glass** — dual-glass

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 22.7% module efficiency
- 0BB / SMBB low-resistance cell interconnection
- Excellent performance under low irradiance

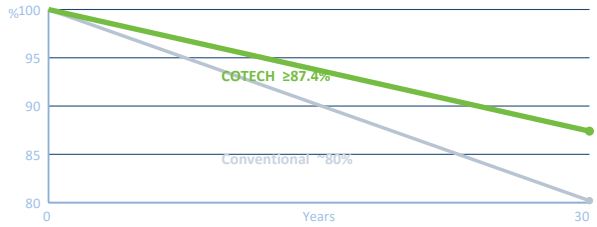
High reliability & yield

- 15-year product & 30-year linear power warranty
- Resistant to PID, salt mist and ammonia; low LID / LeTID
- Low temperature coefficient −0.29 %/°C · up to 75 ± 5% bifaciality

Key specifications

Maximum power	**480 – 505 Wp**
Module efficiency	**up to 22.7 %**
Open-circuit voltage	**43.70 – 44.50 V**
Cell type	**N-type TOPCon mono, 182mm**
No. of cells	**120 (6×20) half-cut**
Dimensions (mm)	**1961 × 1134 × 30**
Weight	**25.5 kg**
Bifaciality	**75 ± 5%**

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

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	480	485	490	495	500	505
Maximum power Pmax (W)	480	485	490	495	500	505
Open-circuit voltage Voc (V)	43.70	43.86	44.02	44.18	44.34	44.50
Short-circuit current Isc (A)	13.90	13.96	14.02	14.08	14.14	14.20
Voltage at Pmax Vmp (V)	36.50	36.66	36.82	36.98	37.14	37.30
Current at Pmax Imp (A)	13.15	13.23	13.31	13.39	13.46	13.54
Module efficiency ηm (%)	21.58	21.81	22.03	22.26	22.48	22.71

Electrical characteristics at NMOT

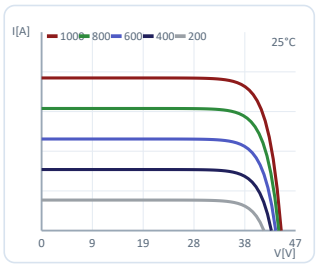
Parameter	480	485	490	495	500	505
Maximum power Pmax (W)	362.4	366.2	369.9	373.7	377.5	381.3
Open-circuit voltage Voc (V)	40.73	40.88	41.03	41.18	41.32	41.47
Short-circuit current Isc (A)	11.15	11.20	11.24	11.29	11.34	11.39
Voltage at Pmax Vmp (V)	33.87	34.02	34.17	34.32	34.47	34.61
Current at Pmax Imp (A)	10.43	10.49	10.55	10.62	10.67	10.74

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

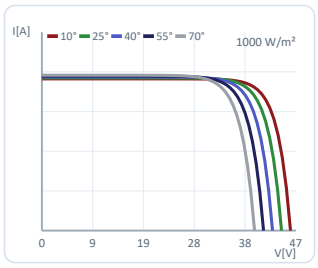
Parameter	Value
Solar cell	N-type TOPCon mono, 182mm
Cell size	182 × 91 mm
No. of cells	120 (6×20) half-cut
Busbar	0BB · SMBB
Dimensions	1961 × 1134 × 30 mm
Weight	25.5 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 300/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.29 %/°C
Temp. coeff. of Voc	−0.25 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

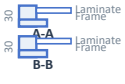
ϕVoc 98 ± 5% ϕIsc 75 ± 5% ϕPmax 75 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	505	556	606	631
Isc (A)	14.20	15.62	17.04	17.75

Maximum ratings

Parameter	Value
Max system voltage	1500 V DC (IEC/UL)
Max series fuse	25 A
Max test load (front / back)	5400 Pa / 2400 Pa
Application / safety class	Class A / Class II
Fire rating	Class C

Mechanical drawing (mm)

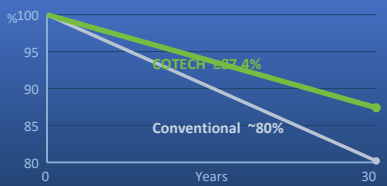


Linear power warranty

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	792
Pallet size	2000 × 1150 × 1180 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

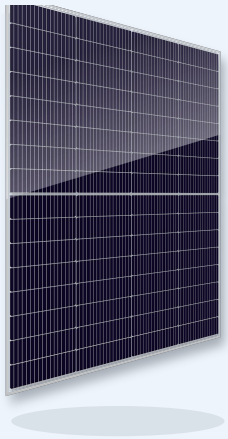
COTECH SOLAR · TOPCon

CSTB72-580~605

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

605 Wp MAXIMUM POWER OUTPUT

23.4 % MAXIMUM EFFICIENCY



- **N-Type TOPCon** — low LID / LeTID
- **Bifacial** — 80 ± 5%
- **0BB · SMBB** — higher energy yield
- **Glass · Glass** — dual-glass

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
- 0BB / SMBB low-resistance cell interconnection
- Excellent performance under low irradiance

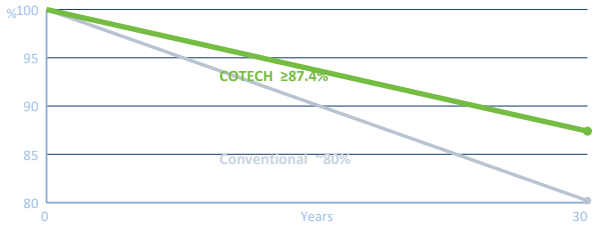
High reliability & yield

- 15-year product & 30-year linear power warranty
- Resistant to PID, salt mist and ammonia; low LID / LeTID
- Low temperature coefficient −0.29 %/°C · up to 80 ± 5% bifaciality

Key specifications

Maximum power	**580 – 605 Wp**
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%**

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

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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 Pmax (W)	580	585	590	595	600	605
Open-circuit voltage Voc (V)	52.30	52.46	52.62	52.78	52.94	53.10
Short-circuit current Isc (A)	13.92	14.00	14.07	14.15	14.22	14.30
Voltage at Pmax Vmp (V)	43.80	43.96	44.12	44.28	44.44	44.60
Current at Pmax Imp (A)	13.24	13.31	13.37	13.44	13.50	13.57
Module efficiency ηm (%)	22.45	22.65	22.84	23.03	23.23	23.42

Electrical characteristics at NMOT

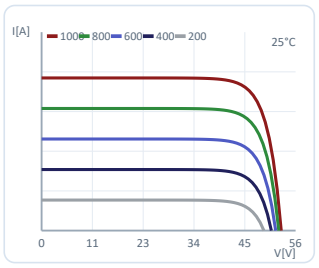
Parameter	580	585	590	595	600	605
Maximum power Pmax (W)	437.9	441.7	445.4	449.2	453.0	456.8
Open-circuit voltage Voc (V)	48.74	48.89	49.04	49.19	49.34	49.49
Short-circuit current Isc (A)	11.16	11.23	11.28	11.35	11.40	11.47
Voltage at Pmax Vmp (V)	40.65	40.79	40.94	41.09	41.24	41.39
Current at Pmax Imp (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 %

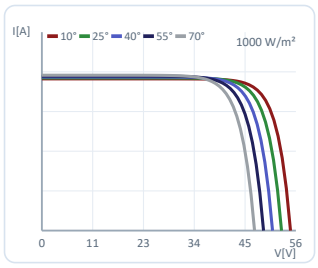
Parameter	Value
Solar cell	N-type TOPCon mono, 182mm
Cell size	182 × 91 mm
No. of cells	144 (6×24) half-cut
Busbar	0BB · SMBB
Dimensions	2278 × 1134 × 30 mm
Weight	31.5 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.29 %/°C
Temp. coeff. of Voc	−0.25 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

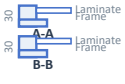
ϕVoc 98 ± 5% ϕIsc 80 ± 5% ϕPmax 80 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	605	666	726	756
Isc (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)

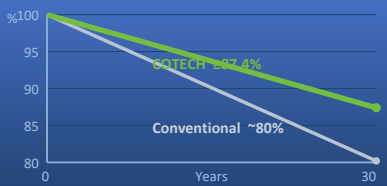


Linear power warranty

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

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

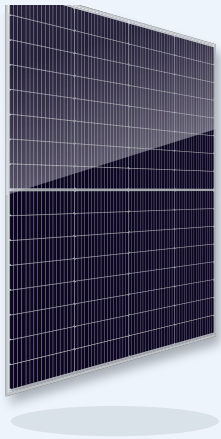
COTECH SOLAR · TOPCon

CSTB66R-615~640

N-Type Rectangular-Wafer TOPCon Bifacial Dual-Glass Module · 132 half-cells

640 Wp MAXIMUM POWER OUTPUT

23.7 % MAXIMUM EFFICIENCY



- **N-Type TOPCon** — low LID / LeTID
- **Bifacial** — 80 ± 5%
- **0BB · SMBB** — higher energy yield
- **Glass · Glass** — dual-glass

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 23.7% module efficiency
- 0BB / SMBB low-resistance cell interconnection
- Excellent performance under low irradiance

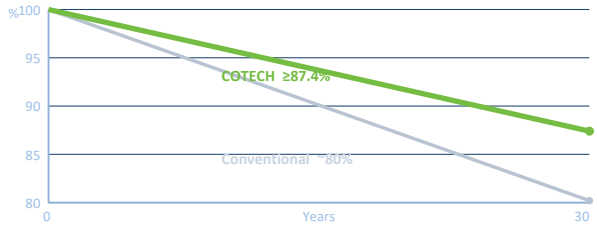
High reliability & yield

- 15-year product & 30-year linear power warranty
- Resistant to PID, salt mist and ammonia; low LID / LeTID
- Low temperature coefficient −0.29 %/°C · up to 80 ± 5% bifaciality

Key specifications

Maximum power	**615 – 640 Wp**
Module efficiency	**up to 23.7 %**
Open-circuit voltage	**49.30 – 50.20 V**
Cell type	**N-type TOPCon mono, rectangular 182×210mm**
No. of cells	**132 (6×22) half-cut**
Dimensions (mm)	**2382 × 1134 × 30**
Weight	**32.5 kg**
Bifaciality	**80 ± 5%**

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

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	615	620	625	630	635	640
Maximum power Pmax (W)	615	620	625	630	635	640
Open-circuit voltage Voc (V)	49.30	49.48	49.66	49.84	50.02	50.20
Short-circuit current Isc (A)	16.05	16.12	16.19	16.26	16.33	16.40
Voltage at Pmax Vmp (V)	40.80	40.95	41.10	41.25	41.40	41.55
Current at Pmax Imp (A)	15.07	15.14	15.21	15.27	15.34	15.40
Module efficiency ηm (%)	22.77	22.95	23.14	23.32	23.51	23.69

Electrical characteristics at NMOT

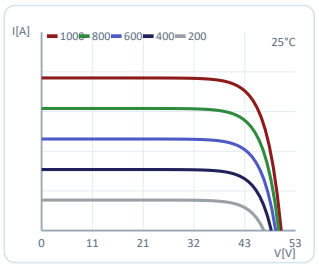
Parameter	615	620	625	630	635	640
Maximum power Pmax (W)	464.3	468.1	471.9	475.6	479.4	483.2
Open-circuit voltage Voc (V)	45.95	46.12	46.28	46.45	46.62	46.79
Short-circuit current Isc (A)	12.87	12.93	12.98	13.04	13.10	13.15
Voltage at Pmax Vmp (V)	37.86	38.00	38.14	38.28	38.42	38.56
Current at Pmax Imp (A)	11.95	12.01	12.06	12.11	12.16	12.21

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

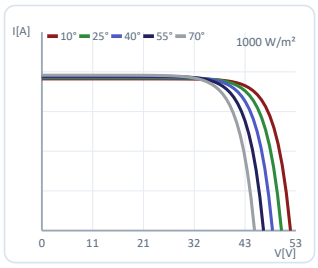
Parameter	Value
Solar cell	N-type TOPCon mono, rectangular 182×210mm
Cell size	210 × 105 mm
No. of cells	132 (6×22) half-cut
Busbar	0BB · SMBB
Dimensions	2382 × 1134 × 30 mm
Weight	32.5 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.29 %/°C
Temp. coeff. of Voc	−0.25 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

ϕVoc 98 ± 5% ϕIsc 80 ± 5% ϕPmax 80 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	640	704	768	800
Isc (A)	16.40	18.04	19.68	20.50

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

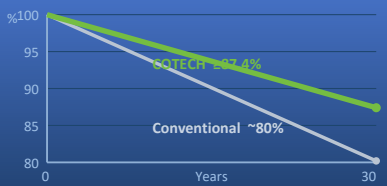
Mechanical drawing (mm)

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	31
Pieces / 20'GP	124
Pieces / 40'HC	620
Pallet size	2450 × 1150 × 1180 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

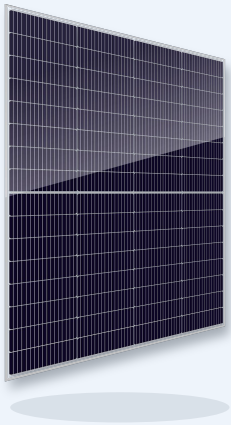
COTECH SOLAR · TOPCon

CSTB132-700~725

N-Type 210mm TOPCon Bifacial Dual-Glass Module · 132 half-cells

725 Wp MAXIMUM POWER OUTPUT

23.3 % MAXIMUM EFFICIENCY



- **N-Type TOPCon** — low LID / LeTID
- **Bifacial** — 80 ± 5%
- **0BB · SMBB** — higher energy yield
- **Glass · Glass** — dual-glass

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 23.3% module efficiency
- 0BB / SMBB low-resistance cell interconnection
- Excellent performance under low irradiance

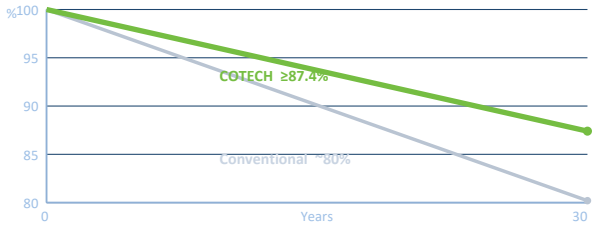
High reliability & yield

- 15-year product & 30-year linear power warranty
- Resistant to PID, salt mist and ammonia; low LID / LeTID
- Low temperature coefficient −0.29 %/°C · up to 80 ± 5% bifaciality

Key specifications

Maximum power	**700 – 725 Wp**
Module efficiency	**up to 23.3 %**
Open-circuit voltage	**47.60 – 48.60 V**
Cell type	**N-type TOPCon mono, 210mm**
No. of cells	**132 (6×22) half-cut**
Dimensions (mm)	**2384 × 1303 × 33**
Weight	**38.3 kg**
Bifaciality	**80 ± 5%**

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

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	700	705	710	715	720	725
Maximum power Pmax (W)	700	705	710	715	720	725
Open-circuit voltage Voc (V)	47.60	47.80	48.00	48.20	48.40	48.60
Short-circuit current Isc (A)	18.20	18.29	18.38	18.47	18.56	18.65
Voltage at Pmax Vmp (V)	39.80	39.94	40.08	40.22	40.36	40.50
Current at Pmax Imp (A)	17.59	17.65	17.71	17.78	17.84	17.90
Module efficiency ηm (%)	22.53	22.70	22.86	23.02	23.18	23.34

Electrical characteristics at NMOT

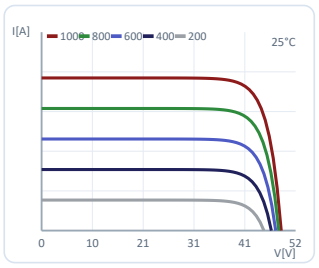
Parameter	700	705	710	715	720	725
Maximum power Pmax (W)	528.5	532.3	536.0	539.8	543.6	547.4
Open-circuit voltage Voc (V)	44.36	44.55	44.74	44.92	45.11	45.30
Short-circuit current Isc (A)	14.60	14.67	14.74	14.81	14.89	14.96
Voltage at Pmax Vmp (V)	36.93	37.06	37.19	37.32	37.45	37.58
Current at Pmax Imp (A)	13.95	14.00	14.04	14.10	14.15	14.19

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

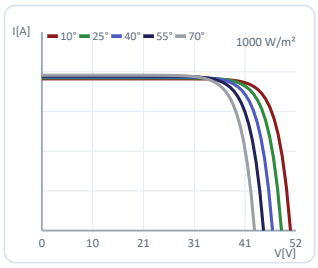
Parameter	Value
Solar cell	N-type TOPCon mono, 210mm
Cell size	210 × 105 mm
No. of cells	132 (6×22) half-cut
Busbar	0BB · SMBB
Dimensions	2384 × 1303 × 33 mm
Weight	38.3 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 33 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.29 %/°C
Temp. coeff. of Voc	−0.25 %/°C
Temp. coeff. of Isc	+0.045 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

ϕVoc 98 ± 5% ϕIsc 80 ± 5% ϕPmax 80 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	725	798	870	906
Isc (A)	18.65	20.52	22.38	23.31

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

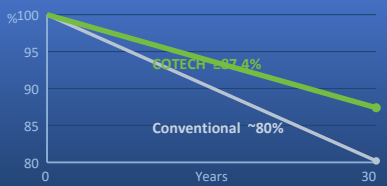
Mechanical drawing (mm)

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	31
Pieces / 20'GP	124
Pieces / 40'HC	620
Pallet size	2450 × 1320 × 1200 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

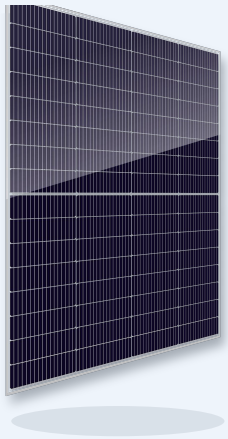
COTECH SOLAR · HJT

CSHJ72-590~620

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

620 Wp MAXIMUM POWER OUTPUT

24.0 % MAXIMUM EFFICIENCY



- **HJT Cell** — heterojunction
- **Bifacial** — 85 ± 5%
- **Low Temp-Co** — better hot-climate yield
- **Glass · Glass** — symmetric bifacial

High efficiency & power

- Symmetrical HJT cells reach up to 24.0%
- Thin-film passivation for high open-circuit voltage
- Excellent low-irradiance performance

Best-in-class energy yield

- Lowest temperature coefficient −0.24 %/°C
- Up to 85 ± 5% bifaciality — high rear-side gain
- Near-zero LID and minimal annual degradation

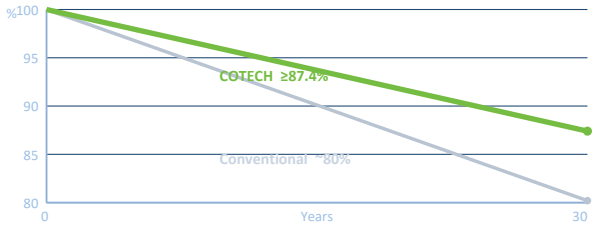
High reliability

- 15-year product & 30-year linear power; ≥90% at year 30
- Dual-glass; PID / salt-mist / ammonia resistant
- Stable output in hot and humid climates

Key specifications

Maximum power	**590 – 620 Wp**
Module efficiency	**up to 24.0 %**
Open-circuit voltage	**53.00 – 54.00 V**
Cell type	**N-type heterojunction (HJT), 182mm**
No. of cells	**144 (6×24) half-cut**
Dimensions (mm)	**2278 × 1134 × 30**
Weight	**32.0 kg**
Bifaciality	**85 ± 5%**

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

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	590	595	600	605	610	615	620
Maximum power Pmax (W)	590	595	600	605	610	615	620
Open-circuit voltage Voc (V)	53.00	53.17	53.33	53.50	53.67	53.83	54.00
Short-circuit current Isc (A)	13.90	13.97	14.03	14.10	14.17	14.23	14.30
Voltage at Pmax Vmp (V)	44.20	44.37	44.53	44.70	44.87	45.03	45.20
Current at Pmax Imp (A)	13.35	13.41	13.47	13.53	13.59	13.66	13.72
Module efficiency ηm (%)	22.84	23.03	23.23	23.42	23.61	23.81	24.00

Electrical characteristics at NMOT

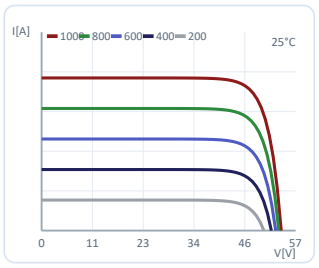
Parameter	590	595	600	605	610	615	620
Maximum power Pmax (W)	445.4	449.2	453.0	456.8	460.6	464.3	468.1
Open-circuit voltage Voc (V)	49.40	49.55	49.70	49.86	50.02	50.17	50.33
Short-circuit current Isc (A)	11.15	11.20	11.25	11.31	11.36	11.41	11.47
Voltage at Pmax Vmp (V)	41.02	41.18	41.32	41.48	41.64	41.79	41.95
Current at Pmax Imp (A)	10.59	10.63	10.68	10.73	10.78	10.83	10.88

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

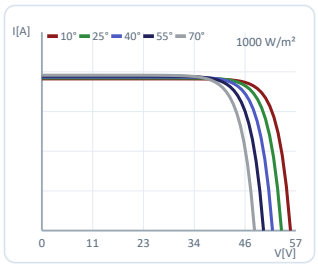
Parameter	Value
Solar cell	N-type heterojunction (HJT), 182mm
Cell size	182 × 91 mm
No. of cells	144 (6×24) half-cut
Busbar	0BB · SMBB
Dimensions	2278 × 1134 × 30 mm
Weight	32.0 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 30 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.24 %/°C
Temp. coeff. of Voc	−0.21 %/°C
Temp. coeff. of Isc	+0.044 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

ϕVoc 98 ± 5% ϕIsc 85 ± 5% ϕPmax 85 ± 5%

Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	620	682	744	775
Isc (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

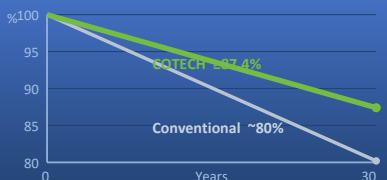
Mechanical drawing (mm)

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

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

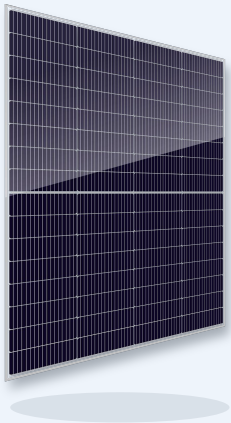
COTECH SOLAR · HJT

CSHJ132-700~730

N-Type 210mm Heterojunction Bifacial Dual-Glass Module · 132 half-cells

730 Wp MAXIMUM POWER OUTPUT

23.5 % MAXIMUM EFFICIENCY



- **HJT Cell** — heterojunction
- **Bifacial** — 85 ± 5%
- **Low Temp-Co** — better hot-climate yield
- **Glass · Glass** — symmetric bifacial

High efficiency & power

- Symmetrical HJT cells reach up to 23.5%
- Thin-film passivation for high open-circuit voltage
- Excellent low-irradiance performance

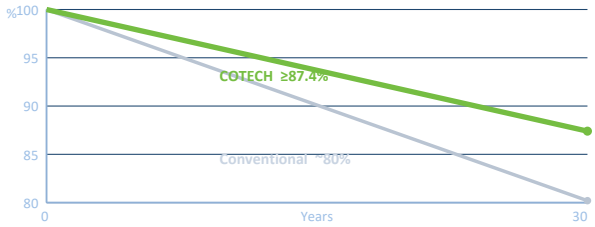
Best-in-class energy yield

- Lowest temperature coefficient −0.24 %/°C
- Up to 85 ± 5% bifaciality — high rear-side gain
- Near-zero LID and minimal annual degradation

High reliability

- 15-year product & 30-year linear power; ≥90% at year 30
- Dual-glass; PID / salt-mist / ammonia resistant
- Stable output in hot and humid climates

PERFORMANCE WARRANTY



15-yr product | 30-yr power

Key specifications

Maximum power	**700 – 730 Wp**
Module efficiency	**up to 23.5 %**
Open-circuit voltage	**49.80 – 50.50 V**
Cell type	**N-type heterojunction (HJT), 210mm**
No. of cells	**132 (6×22) half-cut**
Dimensions (mm)	**2384 × 1303 × 33**
Weight	**37.0 kg**
Bifaciality	**85 ± 5%**

QUALITY ASSURANCE

EL & flash tested
100% inspected, binned & traceable

APPLICATIONS

Residential | C & I | Utility | Off-grid

QUALITY SYSTEM

ISO 9001 | ISO 14001 | ISO 45001

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	700	705	710	715	720	725	730
Maximum power Pmax (W)	700	705	710	715	720	725	730
Open-circuit voltage Voc (V)	49.80	49.92	50.03	50.15	50.27	50.38	50.50
Short-circuit current Isc (A)	17.55	17.62	17.70	17.77	17.85	17.93	18.00
Voltage at Pmax Vmp (V)	41.60	41.70	41.80	41.90	42.00	42.10	42.20
Current at Pmax Imp (A)	16.83	16.91	16.99	17.06	17.14	17.22	17.30
Module efficiency ηm (%)	22.53	22.70	22.86	23.02	23.18	23.34	23.50

Electrical characteristics at NMOT

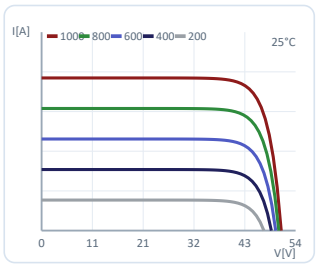
Parameter	700	705	710	715	720	725	730
Maximum power Pmax (W)	528.5	532.3	536.0	539.8	543.6	547.4	551.1
Open-circuit voltage Voc (V)	46.41	46.53	46.63	46.74	46.85	46.95	47.07
Short-circuit current Isc (A)	14.08	14.13	14.20	14.25	14.32	14.38	14.44
Voltage at Pmax Vmp (V)	38.60	38.70	38.79	38.88	38.98	39.07	39.16
Current at Pmax Imp (A)	13.35	13.41	13.47	13.53	13.59	13.66	13.72

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

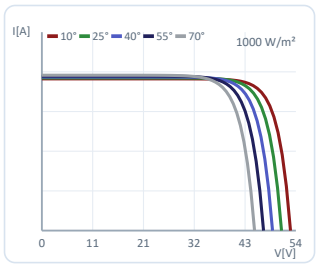
Parameter	Value
Solar cell	N-type heterojunction (HJT), 210mm
Cell size	210 × 105 mm
No. of cells	132 (6×22) half-cut
Busbar	0BB · SMBB
Dimensions	2384 × 1303 × 33 mm
Weight	37.0 kg
Front / back glass	2.0 mm / 2.0 mm tempered, AR coated
Encapsulant	POE
Frame	Anodized aluminium alloy, 33 mm
Junction box	IP68, 3 bypass diodes
Connector	MC4-compatible · EVO2
Output cable	4 mm², 400/200 mm

Parameter	Value
NMOT	43 ± 2 °C
Temp. coeff. of Pmax	−0.24 %/°C
Temp. coeff. of Voc	−0.21 %/°C
Temp. coeff. of Isc	+0.044 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



Bifacial gain & coefficients

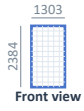
ϕVoc 98 ± 5% ϕIsc 85 ± 5% ϕPmax 85 ± 5%

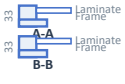
Rear gain	+0%	+10%	+20%	+25%
Pmax (W)	730	803	876	912
Isc (A)	18.00	19.80	21.60	22.50

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)



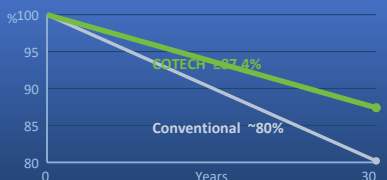


Linear power warranty

15 yr product warranty

30 yr linear power output warranty

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



Packaging

Pieces / pallet	31
Pieces / 20'GP	124
Pieces / 40'HC	620
Pallet size	2450 × 1320 × 1200 mm

Headquarter · Shanghai
Tel +86 17717537975
info@cotechsolar.com

Cotech · Hong Kong
Tel +852 5791 3679
hk@cotechsolar.com

Europe · Rotterdam
Tel +49 152223110991
eu@cotechsolar.com

COTECH SOLAR · Portable

CSPT-180~200

Foldable Portable Solar Panel · mono ETFE · for power stations

200 Wp MAXIMUM POWER OUTPUT

17.5 % MAXIMUM EFFICIENCY

- **Foldable** — travel & off-grid
- **Plug & Play** — DC / USB outputs
- **High-Eff Cell** — monocrystalline
- **Rugged** — IP-rated & durable

Foldable & portable

- Folds compact with handle and kickstand
- Adjustable angle to the sun for maximum harvest
- Grab-and-go for off-grid and backup power

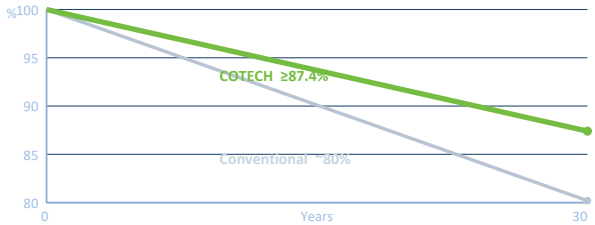
Universal fast charging

- Mono ETFE cells reach up to 17.5% efficiency
- DC / Anderson / XT60 plus USB outputs
- For power stations, RV and devices

Rugged & weatherproof

- IP67 ETFE front surface
- Reinforced oxford-cloth backing
- Built for camping and emergency power

PERFORMANCE WARRANTY



15-yr product | **30-yr power**

Key specifications

Maximum power	**180 – 200 Wp**
Module efficiency	**up to 17.5 %**
Open-circuit voltage	**24.00 – 25.00 V**
Cell type	**Mono-crystalline ETFE, foldable**
No. of cells	**40 mono cells**
Dimensions (mm)	**2120 × 540 × 25**
Weight	**7.5 kg**
Bifaciality	**Mono-facial**

QUALITY ASSURANCE

EL & flash tested
100% inspected, binned & traceable

APPLICATIONS

Residential · C & I · Utility · Off-grid

QUALITY SYSTEM

ISO 9001 | ISO 14001 | ISO 45001

Engineered for 30 years of bankable energy

Top-50 global supplier · 20 GW shipped to 120+ countries since 2005

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	180	185	190	195	200
Maximum power Pmax (W)	180	185	190	195	200
Open-circuit voltage Voc (V)	24.00	24.25	24.50	24.75	25.00
Short-circuit current Isc (A)	9.60	9.68	9.75	9.82	9.90
Voltage at Pmax Vmp (V)	20.00	20.20	20.40	20.60	20.80
Current at Pmax Imp (A)	9.00	9.16	9.31	9.47	9.62
Module efficiency ηm (%)	15.72	16.16	16.60	17.03	17.47

Electrical characteristics at NMOT

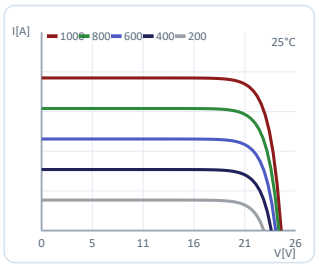
Parameter	180	185	190	195	200
Maximum power Pmax (W)	135.9	139.7	143.4	147.2	151.0
Open-circuit voltage Voc (V)	22.37	22.60	22.83	23.07	23.30
Short-circuit current Isc (A)	7.70	7.76	7.82	7.88	7.94
Voltage at Pmax Vmp (V)	18.56	18.75	18.93	19.12	19.30
Current at Pmax Imp (A)	7.14	7.26	7.38	7.51	7.63

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

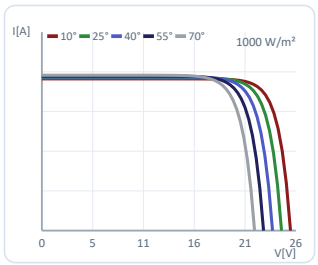
Parameter	Value
Solar cell	Mono-crystalline ETFE, foldable
Cell size	182 × 91 mm
No. of cells	40 mono cells
Busbar	0BB · SMBB
Dimensions	2120 × 540 × 25 mm
Weight	7.5 kg
Front / back glass	ETFE front, oxford-cloth backing
Encapsulant	POE
Frame	Foldable, kickstand & handle, 25 mm
Junction box	IP67, integrated
Connector	DC / Anderson / XT60 · USB
Output cable	3 m, integrated

Parameter	Value
NMOT	44 ± 2 °C
Temp. coeff. of Pmax	−0.35 %/°C
Temp. coeff. of Voc	−0.30 %/°C
Temp. coeff. of Isc	+0.05 %/°C
Operating temperature	−40 °C ~ +85 °C

I-V curve · irradiance



I-V curve · temperature



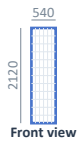
Low-light performance — relative efficiency

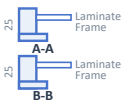
Irradiance (W/m²)	1000	600	400	200
Relative efficiency (%)	100.0	100.4	100.1	98.3

Maximum ratings

Parameter	Value
Max system voltage	50 V DC
Max series fuse	15 A
Max test load (front / back)	Foldable (n/a)
Application / safety class	Class A / Class II
Fire rating	Class C

Mechanical drawing (mm)



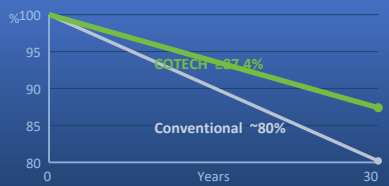


Linear power warranty

15 yr product warranty

30 yr linear power output warranty

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



Packaging

Pieces / pallet	-
Pieces / 20'GP	—
Pieces / 40'HC	-
Pallet size	Folded 540 × 540 × 70 mm

About COTECH Solar

COTECH SOLAR, founded in Shanghai in 2005, is a vertically-integrated solar manufacturer and a subsidiary of COTECH SOLAR GROUP LIMITED. A Top-50 global PV module supplier, COTECH runs 2 production bases and 4 branches, and has shipped over 20 GW of modules to 120+ countries across 20 years — spanning cells, modules, energy storage and complete PV systems.

20 GW	120+	20 yrs	Top 50
Global shipment	Countries	Since 2005	Module supplier

Contact us

Cotech — Headquarter

No.3805 Zhoujiazui Road, SHUFE
Sci-Tech Park, Shanghai, P.R. China

Tel +86-21-35328987 · Mob +86 17717537975

info@cotechsolar.com

www.cotechsolar.com

Cotech — Hong Kong

RM 907, Wing Tuck Commercial Centre
177-183 Wing Lok Street, Hong Kong

Tel +852 5791 3679

hk@cotechsolar.com

www.cotechsolar.com

Cotech — Europe

Marco Polostraat 22, 3165 AL
Rotterdam-Albrandswaard, Netherlands

Tel +49 152223110991

eu@cotechsolar.com

www.cotechsolar.com

WhatsApp / WeChat +86 17717537975 · Sales info@cotechsolar.com · Europe eu@cotechsolar.com

Product range

Solar modules | Energy storage | On / off-grid systems | Lighting · Pumps | Mounting · Robots

CERTIFICATIONS & MANAGEMENT SYSTEMS

IEC 61215 | IEC 61730 | IEC 61701 | IEC 62716 | UL 61730 | CE | ISO 9001 | ISO 14001 | ISO 45001

Specifications are subject to change without notice. STC: 1000 W/m², AM1.5, 25°C. Measurement tolerance ±3%. © 2026 COTECH Solar Holdings Limited. All rights reserved.