

FLEXIBLE MODULE

Flexible 12 V Series

Ultra-light N-type ETFE flexible modules — bend to 248°, 70% lighter, for RV, marine & curved roofs

248° | BENDS UP
TO

70 % | LIGHTER
THAN RIGID

Solar for surfaces glass can't follow

- Bends up to 248° — conforms to RV, van, boat, cabin & airstream roofs
- Frameless ETFE laminate, only ≈3 mm thin — near-invisible, low-drag
- Bonds with adhesive or fixes through eyelets — no rails, no ballast

N-type efficiency, honestly rated

- N-type monocrystalline (TOPCon) cells — up to 22% MODULE efficiency
- Cell conversion up to 24%; low -0.30 %/°C temperature loss
- 12 V / 24 V battery-ready via PWM or MPPT controller

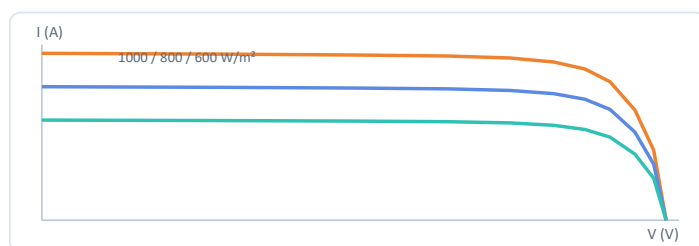
Ultra-light & weatherproof

- 70% lighter than a rigid panel — 50 W is just 0.6 kg
- IP68 junction box & connectors; 5400 Pa snow / 2400 Pa wind
- ETFE self-cleaning surface; EL-tested before & after lamination

Key specifications

Power range	50 – 200 W
Cell	N-type mono (TOPCon)
Module efficiency	up to 21.6%
Max bend	up to 248°
Weight	0.6 – 2.4 kg
Ingress	IP68
Operating temp	-40 ~ +85 °C
Warranty	5 yr / 10 yr power

MODULE I-V CURVE



N-type · up to 22%
high-efficiency module

Bends to 248°
curved roofs & decks

70% lighter · ETFE
no frame, no glass

IP68 waterproof
5400 Pa load

WHY COTECH



EL-tested before & after lamination
100% inspected, power-binned & fully traceable

IDEAL FOR

RV / caravan

Marine / boat

Van & camper

Cabin / tiny home

Portable / camping

Telecom

APPLICATIONS



RV / marine



Cabin / van

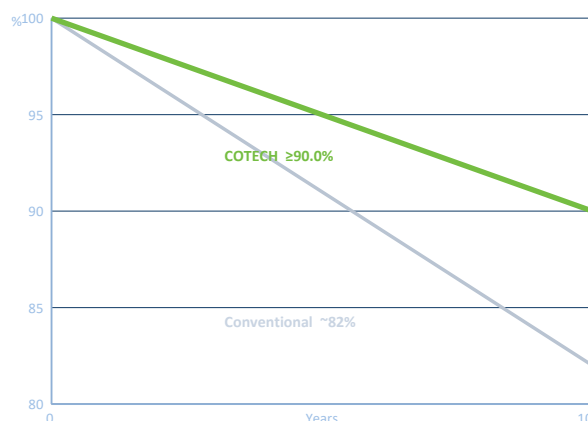


Portable



Telecom

PERFORMANCE WARRANTY



5-yr product

10-yr ≥90% power

CERTIFICATION & QUALIFICATION

IEC 61215

IEC 61730

CE

RoHS

ISO 9001

ISO 14001

STC: 1000 W/m², 25 °C, AM1.5. Cell efficiency up to 24%; ηm is module efficiency. Specs subject to change.

Flexible 12 V Series — specifications

Parameter	50 W	100 W	120 W	150 W	200 W
Electrical characteristics (STC)					
Maximum power Pmax (W)	50	100	120	150	200
Open-circuit voltage Voc (V)	22.8	23.5	23.5	23.5	24.2
Short-circuit current Isc (A)	2.75	5.33	6.39	7.99	10.34
Voltage at Pmax Vmp (V)	19.2	19.8	19.8	19.8	20.4
Current at Pmax Imp (A)	2.60	5.05	6.06	7.58	9.80
Module efficiency ηm (%)	20.5	21.0	21.2	21.4	21.6
Cell / power tolerance	N-type mono · 0 / +3%				
Max. system voltage	1000 V				
Max. series fuse	15 A				
Temperature characteristics					
Temp. coefficient of Pmax	−0.30 %/°C				
Temp. coefficient of Voc	−0.25 %/°C				
Temp. coefficient of Isc	+0.045 %/°C				
NOCT	45 ± 2 °C				
Operating temperature	−40 ~ +85 °C				
Mechanical characteristics					
Cell type	N-type monocrystalline (TOPCon)				
Dimensions (mm)	700×348×3	960×496×3	1130×500×3	1200×584×3	1400×662×3
Weight (kg)	0.6	1.2	1.5	1.8	2.4
Thickness	≈ 3 mm (≈ 95% thinner than rigid)				
Front / backing	ETFE surface · glass-fibre reinforced				
Max. bend	up to 248°				
Junction box	IP68 · bypass diodes				
Cable / connector	90 cm (customisable) · MC4-compatible				
Mechanical load	5400 Pa snow / 2400 Pa wind				

MECHANICAL & SYSTEM

Mechanical	Data
Cell	N-type monocrystalline (TOPCon)
Front surface	ETFE, self-cleaning anti-soiling
Backing	Advanced glass-fibre reinforced polymer
Junction box / diodes	IP68 · bypass diodes
Connector	MC4-compatible · 90 cm cable
Mounting	Adhesive · eyelets / grommets



COTECH SOLAR — vertically-integrated cell-to-module manufacturing

20 GW

shipped

120+

countries

IEC · CE

certified

IDEAL FOR

RV / caravan

Marine / boat

Van & camper

Cabin / tiny home

Portable / camping

Telecom

Solar that bends to any surface.

N-type ETFE flexible modules — 70% lighter, bend to 248°, from a Top-50 vertically-integrated maker.

Get a quote — info@cotechsolar.com
www.cotechsolar.com · +86 17717537975

FLEXIBLE MODULE

Flexible HV Series

Large-format N-type ETFE flexible modules — 24 V systems for rooftops, carports & mobile fleets

500_W | UP TO
POWER

22.0 % | MODULE
EFFICIENCY

Big power, still flexible

- Up to 500 W from a single frameless ETFE laminate
- 24 V-class voltage for larger off-grid & hybrid systems
- Bends to 248° — curved commercial roofs, carports, bus & truck tops

N-type efficiency at scale

- N-type monocrystalline (TOPCon) — up to 22% module efficiency
- Fewer panels & connectors per kW than older flexible
- Low -0.30 %/°C temperature loss; strong low-light yield

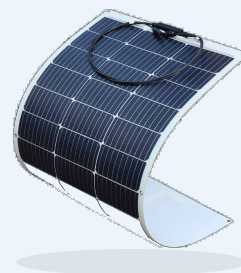
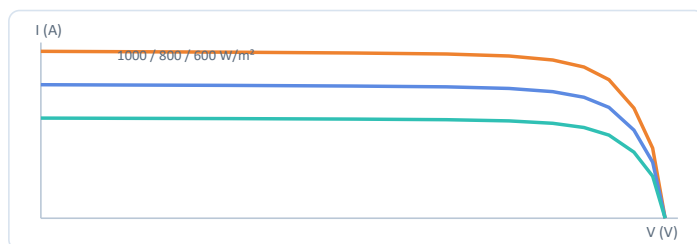
Tough where rigid can't go

- ETFE self-cleaning surface + glass-fibre reinforced backing
- IP68 junction box; 5400 Pa snow / 2400 Pa wind load
- EL-tested before & after lamination; power-binned & traceable

Key specifications

Power range	300 – 500 W
Cell	N-type mono (TOPCon)
Module efficiency	up to 22.0%
Max bend	up to 248°
Weight	3.6 – 5.9 kg
Ingress	IP68
Operating temp	-40 ~ +85 °C
Warranty	5 yr / 10 yr power

MODULE I-V CURVE



Up to 500 W
large-format flexible

Bends to 248°
curved commercial roofs

N-type · 22% η_m
more watts per m²

IP68 · ETFE
5400 Pa load

WHY COTECH



EL-tested before & after lamination
100% inspected, power-binned & fully traceable

IDEAL FOR

Commercial roofs

Solar carports

Bus & truck tops

Off-grid plant

Agriculture

Mobile fleets

APPLICATIONS



Rooftop



Carport

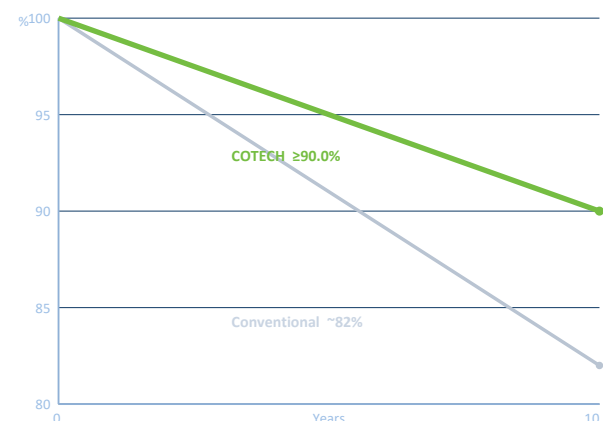


Fleet



Off-grid

PERFORMANCE WARRANTY



5-yr product

10-yr ≥90% power

CERTIFICATION & QUALIFICATION

IEC 61215

IEC 61730

CE

RoHS

ISO 9001

ISO 14001

STC: 1000 W/m², 25 °C, AM1.5. Cell efficiency up to 24%; η_m is module efficiency. Specs subject to change.

Flexible HV Series — specifications

Parameter	300 W	400 W	500 W
Electrical characteristics (STC)			
Maximum power Pmax (W)	300	400	500
Open-circuit voltage Voc (V)	45.0	45.6	46.2
Short-circuit current Isc (A)	8.33	10.96	13.53
Voltage at Pmax Vmp (V)	38.0	38.5	39.0
Current at Pmax Imp (A)	7.89	10.39	12.82
Module efficiency ηm (%)	21.8	21.9	22.0
Cell / power tolerance	N-type mono · 0 / +3%		
Max. system voltage	1000 V		
Max. series fuse	20 A		
Temperature characteristics			
Temp. coefficient of Pmax	−0.30 %/°C		
Temp. coefficient of Voc	−0.25 %/°C		
Temp. coefficient of Isc	+0.045 %/°C		
NOCT	45 ± 2 °C		
Operating temperature	−40 ~ +85 °C		
Mechanical characteristics			
Cell type	N-type monocrystalline (TOPCon)		
Dimensions (mm)	1720×800×3	2000×913×3	2110×1078×3
Weight (kg)	3.6	4.7	5.9
Thickness	≈ 3 mm (≈ 95% thinner than rigid)		
Front / backing	ETFE surface · glass-fibre reinforced		
Max. bend	up to 248°		
Junction box	IP68 · bypass diodes		
Cable / connector	90 cm (customisable) · MC4-compatible		
Mechanical load	5400 Pa snow / 2400 Pa wind		

MECHANICAL & SYSTEM

Mechanical	Data
Cell	N-type monocrystalline (TOPCon)
Front surface	ETFE, self-cleaning anti-soiling
Backing	Advanced glass-fibre reinforced polymer
Junction box / diodes	IP68 · bypass diodes
Connector	MC4-compatible · 90 cm cable
Mounting	Adhesive · eyelets / grommets



20 GW

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Bus & truck tops

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