

OFF-GRID MODULE

Off-Grid 210 mm · 80–190 W

Compact 210 mm off-grid modules, 80–190 W — higher-current 12 V / 24 V charging

80–190 W

POWER
RANGE

21.4 %

UP TO
MODULE EFF.

Matched to off-grid batteries

- Voltage matched to charge 12 V / 24 V / 48 V banks directly via PWM or MPPT
- Ideal for RV, caravan, boat, cabin, solar pump & off-grid lighting
- Every wattage self-consistent — no over-rated specs

High-efficiency half-cut mono

- Monocrystalline half-cut cells — up to 21.4% module efficiency
- Low $-0.29\%/^{\circ}\text{C}$ temperature loss; strong morning / evening yield
- Better long-term reliability (low LID / LeTID)

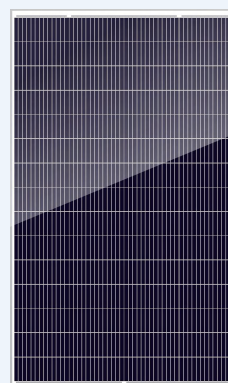
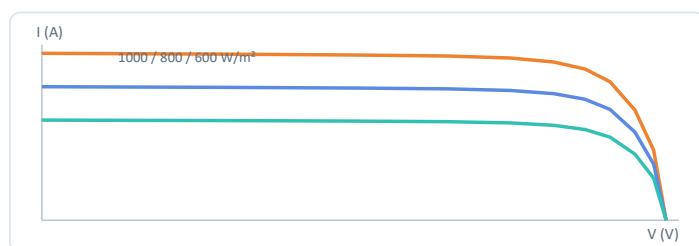
Rugged & weatherproof

- Anodised aluminium frame, anti-reflective tempered glass
- IP67 junction box, 5400 Pa front load, $-40 \sim +85\text{ }^{\circ}\text{C}$
- EL & flash-tested, power-binned, 25-year linear power warranty

Key specifications

Power range	80 – 190 W
Cell	Half-cut mono
Voc class	$\approx 21 - 25\text{ V}$
Module efficiency	up to 21.4%
Max system voltage	700 / 1000 V
Operating temp	$-40 \sim +85\text{ }^{\circ}\text{C}$
Connector	MC4-compatible
Warranty	12 yr / 25 yr

MODULE I-V CURVE



210 mm half-cut
high current

12 V / 24 V
battery-ready

Strong low-light
 $-0.29\%/^{\circ}\text{C}$

IP67 · 5400 Pa
weatherproof

WHY COTECH



EL & flash tested

100% inspected, power-binned & traceable

IDEAL FOR

RV / caravan

Marine / boat

Off-grid cabin

Solar pump

Telecom

Solar lighting

APPLICATIONS



RV / marine



Cabin

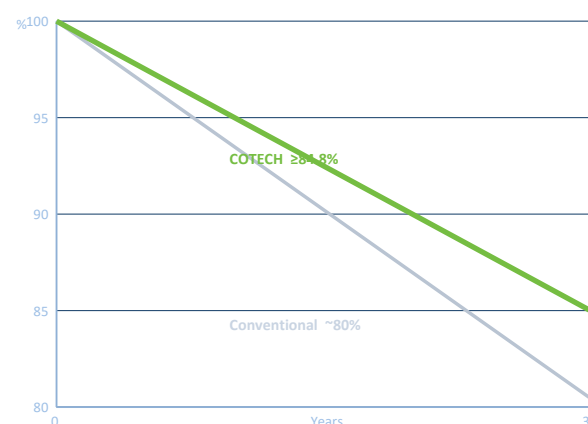


Pump



Telecom

PERFORMANCE WARRANTY



12-yr product

25-yr power

CERTIFICATION & QUALIFICATION

IEC 61215

IEC 61730

CE

RoHS

ISO 9001

STC: 1000 W/m², 25 °C, AM1.5. Electricals per COTECH source datasheets; every bin self-consistent. Specs subject to change.

Off-Grid 210 mm · 80–190 W — specifications

Rating	80 W	90 W	100–110 W	120–130 W	150–170 W	180–190 W
Electrical characteristics (STC)						
Module code	CS-80M12	CS-90M12	CS-100~110M12	CS-120~130M12	CS-150~170M12	CS-180~190M12
Maximum power Pmax (W)	80	90	100–110	120–130	150–170	180–190
Open-circuit voltage Voc (V)	21.7	24.4	21.2–22.5	24.4–25.8	21.2–22.7	24.4–25.5
Short-circuit current Isc (A)	4.55	4.55	5.88–5.99	6.06–6.12	8.82–9.11	9.10–9.12
Voltage at Pmax Vmp (V)	18.5	20.8	18.2–19.2	20.8–22.4	18.2–19.6	20.8–22.0
Current at Pmax Imp (A)	4.33	4.33	5.50–5.72	5.77–5.81	8.25–8.67	8.65–8.67
Module efficiency ηm (%)	18.7	18.9	18.1–19.9	19.6–21.2	18.8–21.4	20.3–21.4
Power tolerance	0 / +5 W					
Max. system voltage (V)	700	700	700	700	700	700
Max. series fuse (A)	10	10	10	10	10	15
Temperature characteristics						
Temp. coefficient of Pmax	−0.29 %/°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	Monocrystalline half-cut					
Cell size	210mm · 32 cells	210mm · 36 cells	210mm · 32 cells	210mm · 36 cells	210mm · 32 cells	210mm · 36 cells
Dimensions (mm)	490×875×25mm	545×875×25mm	630×875×25mm	700×875×25mm	910×875×30mm	1015×875×30mm
Weight (kg)	4.8	5.0	5.3	5.5	8.5	9.0
Front glass	2.0–3.2 mm tempered, anti-reflective					
Frame	Anodised aluminium alloy					
Junction box	IP67, bypass diodes					
Cable / connector	50–90 cm (cust.) · MC4-compatible					
Mechanical load	5400 Pa front / 2400 Pa rear					

MECHANICAL & SYSTEM

Mechanical	Data
Cell	Monocrystalline, half-cut
Front glass	2.0–3.2 mm tempered · anti-reflective
Frame	Anodised aluminium alloy
Junction box / diodes	IP67 · bypass diodes
Connector	MC4-compatible · 50–90 cm cable
Product / power warranty	12 years / 25 years (linear)



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

20 GW

shipped

120+

countries

IEC · CE

certified

IDEAL FOR

RV / caravan

Marine / boat

Off-grid cabin

Solar pump

Telecom

Solar lighting

Power your off-grid life — at any size.

26 half-cut mono off-grid modules, 40–380 W, EL & flash-tested, from a Top-50 vertically-integrated maker.

Get a quote — info@cotechsolar.com

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