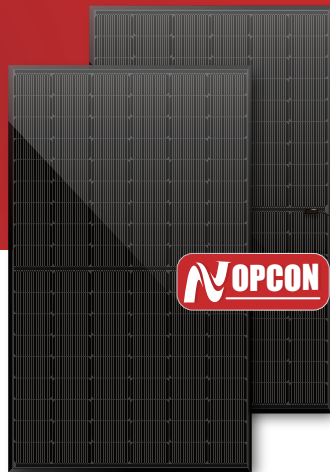


N-type TOPCon Mono

450-470W

AS450-470G12R-96 Full Black

Full Black Half-Cell PV Module



TOPCON



N-TYPE TOPCON module could increase power generation by 3%+ per watt compared with PERC



HIGHER power output
Bifacial module back-side power increase 5-25%



COMPATIBLE with mainstream trackers
effective product for utility power plant



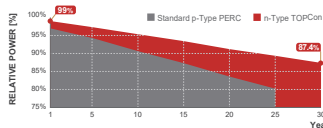
Lower degradation rate, **BETTER** shading tolerance
First-year $\leq 1\%$, 2-30 year $\leq 0.4\%$



LOWER Temp. COEFFICIENT
More power generation under high-temperature



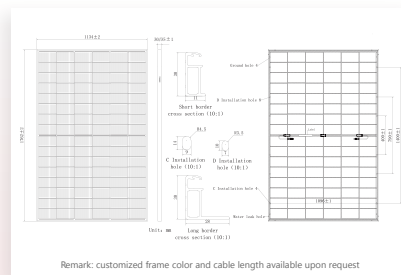
LINEAR PERFORMANCE WARRANTY



AS450-470G12R-96 Full Black Half-Cell PV Module

MECHANICAL SPECIFICATION

Cell	N-type monocrystalline
No. of cells	96(6x16)
Cable Length	300mm(+)/300mm(-)
Cable Cross Section Size	4mm ² (IEC)
Junction Box	IP68
Connector	MC4 Compatible
Weight	24kg $\pm 3\%$
Cells Type	Mono 182x105mm
Dimension(LxWxT)	1762x2mmx1134x2mmx30x1mm
Packaging	36pcs/pallet, 936pcs/40HQ(30mm) 31pcs/pallet, 806pcs/40HQ(35mm)



Remark: customized frame color and cable length available upon request

ELECTRICAL CHARACTERISTICS

STC:AM1.5 1000W/m² 25°C NOCT:AM1.5 800W/m² 20°C 1m/s Test uncertainty for Pmax $\pm 3\%$

Module Type	AS450G12R-96		AS455G12R-96		AS460G12R-96		AS465G12R-96		AS470G12R-96	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power(Pmax/W)	450	339	455	343	460	347	465	351	470	355
Open Circuit Voltage(Voc/V)	35.20	33.30	35.38	33.50	35.56	33.70	35.74	33.90	36.87	34.10
Short Circuit Current(Isc/A)	15.65	12.96	15.70	13.00	15.75	13.04	15.80	13.08	15.85	13.12
Voltage at Maximum Power(Vmp/V)	30.09	28.00	30.27	28.20	30.45	28.40	30.63	28.60	31.46	28.80
Current at Maximum Power(Imp/A)	14.97	12.10	15.05	12.20	15.13	12.30	15.21	12.40	14.94	12.50
Module Efficiency(%)	22.52		22.77		23.02		23.27		23.52	

ELECTRICAL CHARACTERISTICS

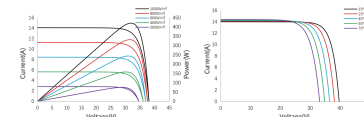
OPERATING PARAMETERS

5%	Maximum power (W)	472	478	483	488	493	Maximum System Voltage	1500VDC
15%	Module efficiency STC (%)	23.6%	24.0%	24.2%	24.4%	24.7%	Operating Temperature	-40°C ~+85°C
	Maximum power (Total)	518	523	529	535	541	Maximum Series Fuse	30A
25%	Module efficiency STC (%)	26.0%	26.1%	26.5%	26.8%	27.1%	Maximum Static Load, Front	5400Pa(12lb/ft ²)
	Maximum power (Total)	563	569	575	581	588	Maximum Static Load, Back	2400Pa(50lb/ft ²)
	Module efficiency STC (%)	28.2%	28.5%	28.8%	29.1%	29.4%	Safety Class	Class II

OPERATING PARAMETERS

Normal Operating Cell Temperature(NOCT)	45 ± 2 °C
Temperature Coefficient of Isc	+0.045%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Pmax	-0.29%/°C

I-V CURVE(AS450-470G12R-96)



*Specs are subject to change without further notification

