







Extraordinary Product Performance

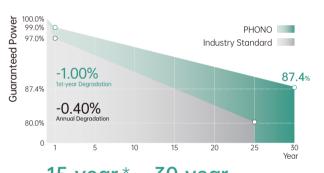
- Up to 30% additional power yield benefited from bifacial technology and over 80% cell bifaciality
- Competitive high-temperature performance with ameliorated temperature coefficient
- Better weak illumination response, higher power generation with N-TOPCon technology

High Quality Reliability

- N-type with lower LID and LeTID
- Industry-leading cell processing technology and dual glass contributes to excellent anti-PID characteristic
- First-year degradation is less than 1.0%, with linear degradation of 0.4% per year for 30 year

Wider Application Conditions

- BIPV , vertical installation , snowfield , high-humid area , windy and dusty area
- Safer and easier handling during transportation and installation



15-year * **30-year** Product Warranty Can be extended to 25 years for a fee by contacting your local sales representative

MANAGEMENT SYSTEM CERTIFICATES

IEC 61215, IEC 61730

ISO 9001 2015 / Quality management system

ISO 14001 2015 / Standards for environmental management system

ISO 45001 2018 / International standards for occupational health & safety



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	1000V	PS465M8GF-20/UNH		PS470M8GF-20/UNH		PS475M8GF-20/UNH		PS480M8GF-20/UNH		PS485M8GF-20/UNH		
Model	1500V	PS465M8	GFH-20/UNH	PS470M80	GFH-20/UNH	PS475M8G	FH-20/UNH	PS480M8G	FH-20/UNH	PS485M80	GFH-20/UNH	
Testing	Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
Rated P	ower (Pmpp)	465	356	470	360	475	364	480	368	485	371	
Rated C	urrent (Impp)	13.18	10.62	13.24	10.66	13.30	10.71	13.36	10.76	13.42	10.81	
≀ated V	oltage (Vmpp)	35.29	33.54	35.50	33.75	35.72	33.95	35.93	34.16	36.15	34.36	
Short Ci	rcuit Current (Isc)	13.83	11.14	13.89	11.19	13.95	11.24	14.04	11.31	14.11	11.36	
Open Ci	rcuit Voltage (Voc)	42.57	40.76	42.83	41.01	43.11	41.28	43.38	41.54	43.66	41.80	
Module Efficiency (%) 21.4			1.48	21.71			21.94		22.17		22.40	
STC(Sto	ndard Testing Cond	itions): Irro	diance 1000W	/m², AM 1.5, C	Cell Temperatu	re 25°C						
	Jominal Operation C	Cell Temper	rature): Irradia	nce 800W/m ²	, Ambient Tem	perature 20°C	C , Spectra at	AM1.5, Wind d	at 1m/s			
BSTC												
	m Power (Pmax)		510		515		520		525		530	
Optimu	n Operating Curren	t (Impp)	14.45		14.51		14.56		14.61		14.66	
Optimum Operating Voltage (Vmpp			35.29		35.50		35.72		35.93		36.15	
Short Circuit Current (Isc)				15.16 15.22		15.27		15.32			15.37	
Open Ci	rcuit Voltage (Voc)		42.57		42.83		43.11		43.38		43.66	
	ont Side Irradiation	1000W/m ²		lection Irradio		. AM 1.5. Amb		ture 25°C	10100		10100	
	anical Chara		,		,		Electrical		ristics			
Cell Typ			Type Monocry	rstalline								
Length: 1909mDimension (L × W × H)Width: 1134mmHeight: 30mm			/idth: 1134mm	(44.65 inch)			400 Incident li Incident li	°C rad.=1000W/m ² rad.=800W/m ² rad.=600W/m ² rad.=400W/m ²				
.			7.0kg (59.52 lb	2 lbs)			300 Incident II	rad.=200W/m²		\sim		
Glass 2			2.0mm/2.0mm toughened glass			Po						
rame Anodized Alumin			nium Alloy			100						
Cable4mm² (IEC),Including Connector)(+): 450mm,(-): 2			250mm or Cu	stomized Leng	gth	0 0 ¹⁶ Cell temp.=25	10 20	30 Voltage [V]	40	50		
Junctio	n Box	IF	68 Rated				14	Incident	Irrad.=1000W/r	n²		
Temp	erature Ratir	ngs					12	Incident	Irrad.=800W/m	1 ²		
/oltage Temperature Coefficient		icient	-0.25%/°C			1t [A]	S 10 Incident Irrad.=600W/m ²					
Current Temperature Coefficient		icient	+0.04%/°C			Currer	Incident Irrad.=600W/m ²			2		
Power 1	emperature Coeffic	ient	-0.29%/	°C			4	Incident	Irrad.=200W/m	2		
Toleran	ce		0~+3%				2					
NOCT			42±2°C				0	10 20	30 Voltage [V]	40	50	
Bifacial	ty		80±5%					в	30 (1. 18)	1086±2 (42.76)		
Abso	lute Maximur	n Ratin	g									
Operati	ng Temperature		From -4	0 to + 85°C					e	········	······	
Hail Diameter @ 80km/h			Up to 25mm						á			
Front Side Maximum Static Load		Loading	ing 5400Pa				16)	·······			31)	
Rear Side Maximum Static Loadir			ng 2400Pa				1909±2 (75.16)		-		1100±1 (43.31)	
Maximum Series Fuse Rating			30A				130				110/	
PV Module Classification			II						I			
Fire Rating (IEC 61730)			С				-		-			
Naximu	m System Voltage		DC 1000)V/1500V					A I			
Packi	ng Configura	tion					1134±2	(44.65) <u>B</u>				
Contain			20' GP		40' HQ							
Pieces/0	Container		180		864					9 (0.35)		
							~i	EH 1		135		



PHONO

Pcs/Pallet

Pallets/Container

36

5

36

24

PHONO SOLAR TECHNOLOGY CO., LTD. reserves the right to make necessary adjustments to the information described herein at any time without further notice. The specifications and certificates contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Please be sure to use the most recent version of data.