



# 400-420W Twinplus X Module Series

HIGH EFFICIENCY MONO-PERC M6-10B-B







## Original Cutless Half-cell Technology In PV Module Industry

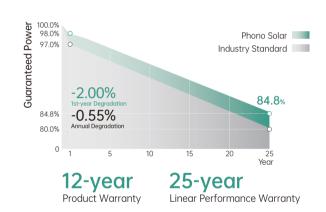
# Optimized Module Appearance With Square Mono Wafer

## **Outstanding Product Performance**

- 0.32% additional power yield benefited from square mono wafer
- Competitive high-temperature performance with ameliorated temperature coefficient
- Minimized power loss in cell connection
- Higher power generation and better performance under shading effect with multi-busbar and half-cell technology

## **Trustworthy Quality And Reliability**

- Optimized electrical design lowers hot spot risk and operating current
- Minimized risk of microcrack by using industry-leading cutless cell processing technology
- Excellent anti-PID resistance by Nitrous Oxide passivation processing technology



# 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























Electrical Typical Values											
1000V	PS400M6-18/VH		PS405M6-18/VH		PS410M6-18/VH		PS415M6-18/VH		PS420M6-18/VH		
I500V	PS400M6H-18/VH		PS405M6H-18/VH		PS410M6H-18/VH		PS415M6H-18/VH		PS420Me	PS420M6H-18/VH	
ondition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
ver (Pmpp)	400	301	405	305	410	309	415	313	420	316	
rent (Impp)	12.97	10.46	13.06	10.54	13.15	10.61	13.24	10.68	13.33	10.75	
tage (Vmpp)	30.85	28.81	31.02	28.97	31.18	29.12	31.35	29.28	31.51	29.43	
uit Current (Isc)	13.52	10.91	13.62	10.99	13.72	11.07	13.82	11.15	13.92	11.23	
uit Voltage (Voc)	36.87	34.95	37.05	35.12	37.23	35.29	37.42	35.47	37.61	35.65	
ficiency (%)	20.48		20	20.74		21.00		21.25		21.51	
t	000V 500V Indition Ver (Pmpp) Irent (Impp) Irage (Vmpp) Luit Current (Isc)	000V         PS400M           500V         PS400M           500V         PS400M           ndition         STC           ver (Pmpp)         400           rent (Impp)         12.97           rage (Vmpp)         30.85           uit Current (Isc)         13.52           uit Voltage (Voc)         36.87	000V         PS400M6-18/VH           500V         PS400M6H-18/VH           ndition         STC         NOCT           ver (Pmpp)         400         301           rent (Impp)         12.97         10.46           rage (Vmpp)         30.85         28.81           uit Current (Isc)         13.52         10.91           uit Voltage (Voc)         36.87         34.95	000V         PS400M6-18/VH         PS405M           500V         PS400M6H-18/VH         PS405M           ndition         STC         NOCT         STC           ver (Pmpp)         400         301         405           rent (Impp)         12.97         10.46         13.06           rage (Vmpp)         30.85         28.81         31.02           uit Current (Isc)         13.52         10.91         13.62           uit Voltage (Voc)         36.87         34.95         37.05	000V         PS400M6-18/VH         PS405M6-18/VH           500V         PS400M6H-18/VH         PS405M6H-18/VH           ndition         STC         NOCT         STC         NOCT           ver (Pmpp)         400         301         405         305           rent (Impp)         12.97         10.46         13.06         10.54           rage (Vmpp)         30.85         28.81         31.02         28.97           uit Current (Isc)         13.52         10.91         13.62         10.99           uit Voltage (Voc)         36.87         34.95         37.05         35.12	000V         PS400M6-18/VH         PS405M6-18/VH         PS410M           500V         PS400M6H-18/VH         PS405M6H-18/VH         PS410M6           Indition         STC         NOCT         STC         NOCT         STC           Iver (Pmpp)         400         301         405         305         410           Irent (Impp)         12.97         10.46         13.06         10.54         13.15           Idage (Vmpp)         30.85         28.81         31.02         28.97         31.18           Luit Current (Isc)         13.52         10.91         13.62         10.99         13.72           Luit Voltage (Voc)         36.87         34.95         37.05         35.12         37.23	0000V         PS400M6-18/VH         PS405M6-18/VH         PS410M6-18/VH           500V         PS400M6H-18/VH         PS405M6H-18/VH         PS410M6H-18/VH           ndition         STC         NOCT         STC         NOCT           ver (Pmpp)         400         301         405         305         410         309           rent (Impp)         12.97         10.46         13.06         10.54         13.15         10.61           rage (Vmpp)         30.85         28.81         31.02         28.97         31.18         29.12           uit Current (Isc)         13.52         10.91         13.62         10.99         13.72         11.07           uit Voltage (Voc)         36.87         34.95         37.05         35.12         37.23         35.29	000V         PS400M6-18/VH         PS405M6-18/VH         PS410M6-18/VH         PS415M6-18/VH           500V         PS400M6H-18/VH         PS405M6H-18/VH         PS410M6H-18/VH         PS415M6-18/VH           Indition         STC         NOCT         STC         NOCT         STC           Iver (Pmpp)         400         301         405         305         410         309         415           Irent (Impp)         12.97         10.46         13.06         10.54         13.15         10.61         13.24           Idage (Vmpp)         30.85         28.81         31.02         28.97         31.18         29.12         31.35           Luit Current (Isc)         13.52         10.91         13.62         10.99         13.72         11.07         13.82           Luit Voltage (Voc)         36.87         34.95         37.05         35.12         37.23         35.29         37.42	000V         PS400M6-18/VH         PS405M6-18/VH         PS410M6-18/VH         PS415M6-18/VH           500V         PS400M6H-18/VH         PS405M6H-18/VH         PS410M6H-18/VH         PS415M6H-18/VH           Indition         STC         NOCT         STC         NOCT         STC         NOCT           Iver (Pmpp)         400         301         405         305         410         309         415         313           Irent (Impp)         12.97         10.46         13.06         10.54         13.15         10.61         13.24         10.68           Idage (Vmpp)         30.85         28.81         31.02         28.97         31.18         29.12         31.35         29.28           Luit Current (Isc)         13.52         10.91         13.62         10.99         13.72         11.07         13.82         11.15           Luit Voltage (Voc)         36.87         34.95         37.05         35.12         37.23         35.29         37.42         35.47	000V         PS400M6-18/VH         PS405M6-18/VH         PS410M6-18/VH         PS415M6-18/VH         PS420M6-18/VH           500V         PS400M6H-18/VH         PS405M6H-18/VH         PS410M6H-18/VH         PS415M6H-18/VH         PS420M6H-18/VH           ndition         STC         NOCT         STC         NOCT         STC         NOCT         STC           ver (Pmpp)         400         301         405         305         410         309         415         313         420           rent (Impp)         12.97         10.46         13.06         10.54         13.15         10.61         13.24         10.68         13.33           rage (Vmpp)         30.85         28.81         31.02         28.97         31.18         29.12         31.35         29.28         31.51           uit Current (Isc)         13.52         10.91         13.62         10.99         13.72         11.07         13.82         11.15         13.92           uit Voltage (Voc)         36.87         34.95         37.05         35.12         37.23         35.29         37.42         35.47         37.61	

STC(Standard Testing Conditions): Irradiance 1000W/m<sup>2</sup>, AM 1.5, Cell Temperature 25°C

NOCT (Nominal Operation Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s

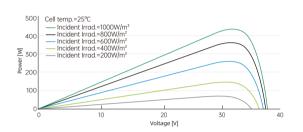
#### **Mechanical Characteristics** Cell Type Monocrystalline Length: 1722mm (67.80 inch) Dimension (L × W × H) Width: 1134mm (44.65 inch) Height: 30mm (1.18 inch) Weight 21.5kg (47.39 lbs) Glass 3.2mm toughened glass Frame Anodized Aluminium Alloy 4mm² (IEC), Cable (Including Connector) (+): 450mm,(-): 250mm or Customized Length IP 68 Rated Junction Box

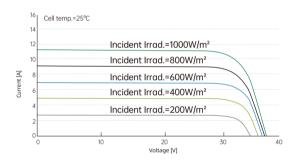
Temperature Ratings		
Voltage Temperature Coefficient	-0.26% <b>/</b> °C	
Current Temperature Coefficient	+0.042%/°C	
Power Temperature Coefficient	-0.33%/°C	
Tolerance	0~+3%	
NOCT	45±2°C	

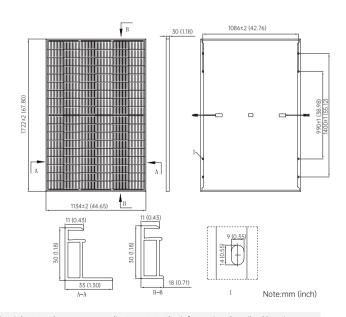
#### Absolute Maximum Rating **Operating Temperature** From -40 to + 85°C Hail Diameter @ 80km/h Up to 25mm Front Side Maximum Static Loading 5400Pa 2400Pa Rear Side Maximum Static Loading Maximum Series Fuse Rating 25A **PV Module Classification** $\parallel$ Fire Rating (IEC61730) С DC 1000V/1500V Maximum System Voltage

Packing Configuratio	n	
Container	20' GP	40' HQ
Pieces/Container	216	936
Pcs/Pallet	36	36
Pallets/Container	6	26

### **Electrical Characteristics**









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.