

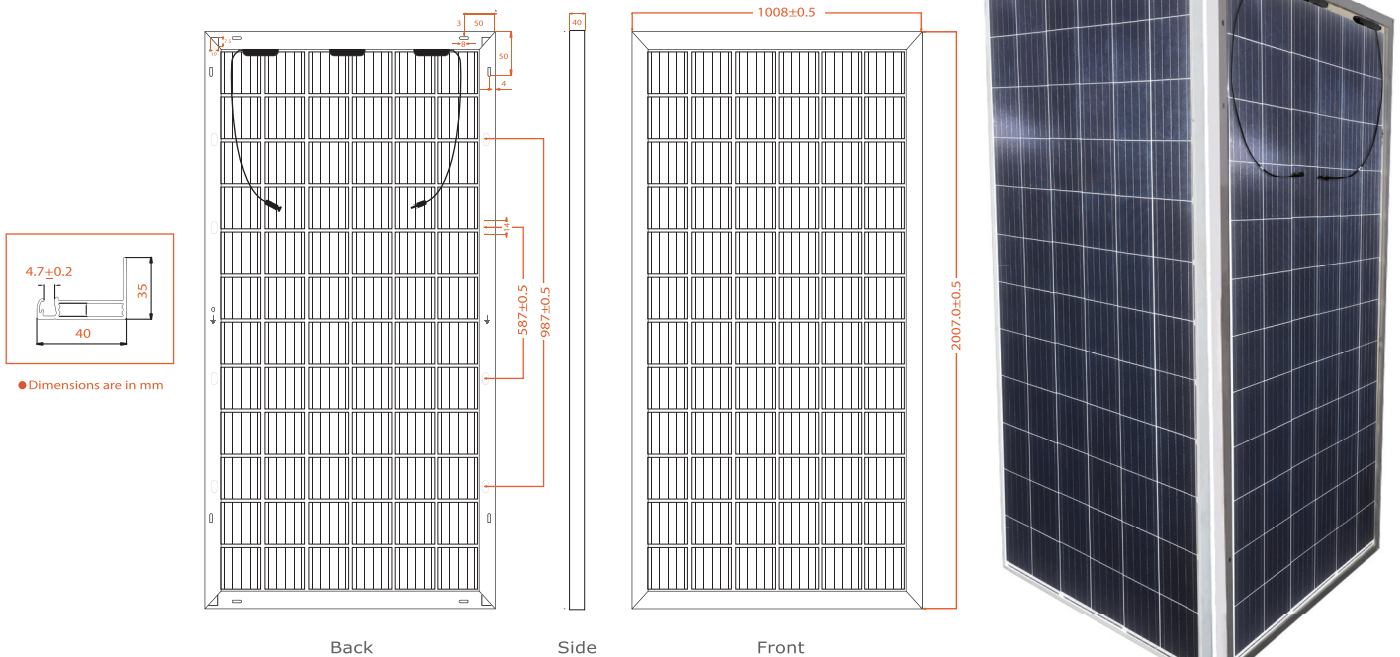


Philadelphia Solar
Delivering Clean Energy Solutions

PS-M72(BF)-(390-405 W)

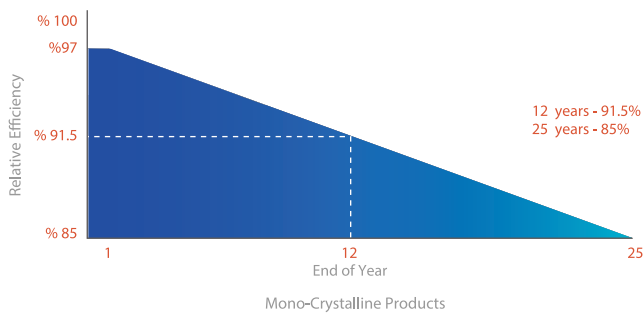
Mono **PERC** Bifacial Modules

Module Drawings



Philadelphia Solar's Mono-Crystalline Bifacial Modules with power up to **405 Wp** are produced using the state-of-the-art (automated) robotic production lines. These modules are suitable to be used for most electrical power applications and have excellent durability to prevailing weather conditions.

Linear Performance Warranty



12 Year Product Warranty



25 Year Linear Power Warranty



Only **-0.5%** Annual Degradation

Certificates

- Bankability Report DNV GL



ANSI/UL61730-1-2017
ANSI/UL61730-2-2017



IEC61215-1-2016
IEC61215-2-2016



IEC61730-1-2016
IEC61730-2-2016



EN ISO 9001:2015 EN ISO 14001:2015 EN ISO 18001:2007



ELECTRICAL CHARACTERISTICS (STC)		390W	395W	400W	405W
Module System Voltage (v)		1500	1500	1500	1500
Open Circuit Voltage - Voc (V)		49.88	50.18	50.52	50.80
Short Circuit Current - Isc (A)		9.92	9.97	10.03	10.08
Maximum Power Voltage - Vmpp (V)		41.19	41.50	41.80	42.10
Maximum Power Current - Impp (A)		9.47	9.52	9.57	9.62
Maximum Power - Pmax (W)		390	395	400	405
Module Efficiency - η ' (%)		19.3	19.6	19.8	20.0

Values at Standard Test Conditions STC (Air Mass AM1.5, Irradiance 1000W/m², Cell Temperature 25°C).

MATERIAL CHARACTERISTICS		PACKAGING	
Characteristics	Value	Physical Characteristics	Value
Cells per Module	72 (12X6)	Module Dimensions (mm)	2007 x 1008x 40
Cell Type	Grade A - Mono-Crystalline Silicon (PERC) Bifacial 158.75x158.75 ±0.25 mm	Module Weight (kg)	23
Front Surface	Anti-Reflective Coated Tempered 3.2mm Glass	Pallet Dimensions W.D.H (mm)	2035 x 1140 x 1150
Encapsulant	PID Free EVA	Modules per Pallet	27
Back Cover	Transparent Backsheet	Container Capacity	Value
Frame	Anodized Aluminum	20 Feet Container	270 Modules
Junction Box	IP3 ,68 Bypass Diodes	40 Feet High-Cube Container	594 Modules
Connector and Cable	MC4 interconnection / Cable length can be customized		
Fire Classification	Type I		

Bifacial Output-Rearside Power Gain					
Power Gain%	Front Side Power at STC	390W	395W	400W	405W
10%	Maximum Power W	429,0	434,5	440,0	445,5
	Module Efficiency %	21.2	21.5	21.7	22.0
20%	Maximum Power W	468.0	474.0	480.0	486.0
	Module Efficiency %	23.1	23.4	23.7	24.0
30%	Maximum Power W	507.0	513.5	520.0	526,5
	Module Efficiency %	25,1	25,4	25.7	26.0

THERMAL CHARACTERISTICS		OPERATING CONDITIONS	
Characteristics	Value		
Open Voltage Temperature Coefficient β_{voc} (%/°C)	-0.280	Maximum Sytem Voltage - Vmax (V)	1500
Short Current Temperature Coefficient α_{isc} (%/°C)	+0.05	Maximum Series Fuse (A)	20
Power Temperature Coefficient γ_{Pmp} (%/°C)	-0.370	Operating Temperature Range (°C)	IEC: -40 to + 85 /UL: -40 to + 90
NOCT (°C)	43 ± 2	Bifaciality Ratio	75% ±5%

FEATURES

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Less degradation than standard modules
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Easy to handle, 25-35 % lighter weight than dual glass modules.
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Positive power tolerance up to %3 extra output.
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Diverse mounting solutions
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Excellent low light performance.
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Less cell gap light transmittance loss than dual glass module
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More power gain with same utilized area
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PID resistant.
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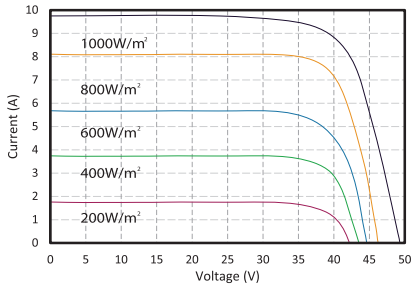
Excellent high mechanical loads, certified to withstand high wind load (2400 pa) and snow load (5400 pa).

BENEFITS

- Outstanding technical support.
- Pre and after sales-service.
- Marketing support to official distributors.
- Customized mounting solutions.

- Power measuring tolerance: ± %3, other measurements tolerances: ± %5
- Datasheet is subjected to changes without prior notice, always obtain the most recent version of the datasheet.
- Caution: For professional use only, the installation and handling of PV modules and cleaning modules require professional skills and should only be performed by qualified professionals, please read the Installation and Operation Manual before using the modules, also Cleaning Guidelines.

IV - Curve M72 (BF) - 390W



APPLICATIONS

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On-Grid Residential
Roof-Tops
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On-Grid Commercial/
Industrial Roof-Tops
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Off-Grid Systems
(Including Lighting Systems)
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Solar Power Plants