

PHOTON ENERGY SYSTEMS LIMITED

Multi - Crystalline

Model - PM020

☎ 1800 4252 786

 www.fb.com/PhotonSolarPower



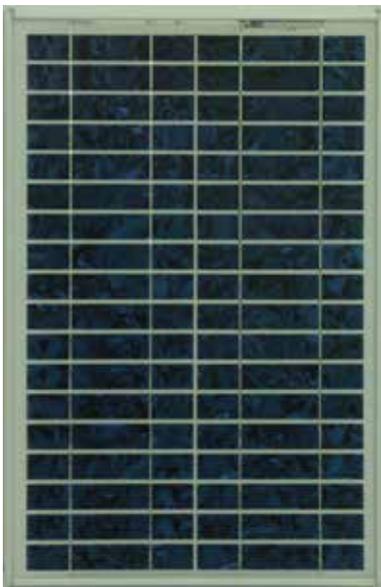
ABOUT

Established in 1995, Photon Energy Systems Limited is one of the most experienced solar energy companies in the World. At Photon, we are the leading manufacturers of high performance solar PV modules which are used to power residential, commercial and other large scale utilities. With our highly reliable solar PV modules, produced in a state of the art manufacturing facility, we have installed & commissioned more than 60 MW grid connected power plants in India at the end of fiscal year 2013-14.

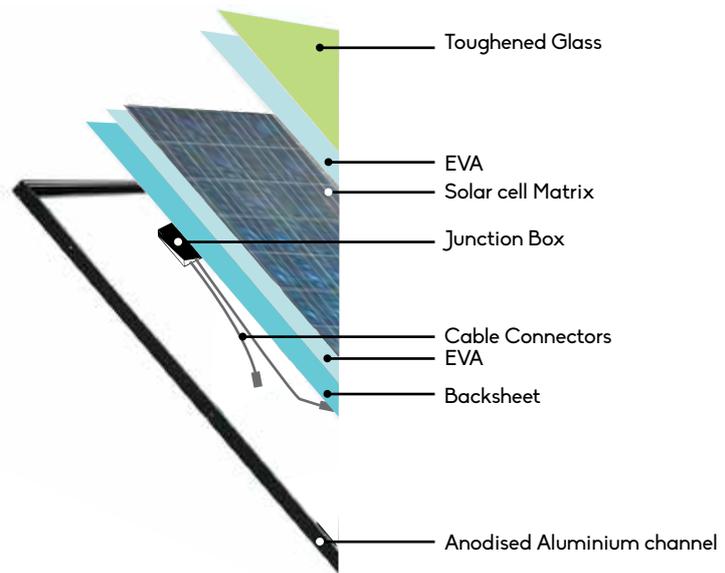
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PM0020 MODULE



CELL LAYER DAIGRAM



for more details, refer Backpage.

CERTIFICATIONS & APPROVALS



AVAILABLE AS PER REQUEST



RFID Tag embedded Modules

SPECIAL FEATURES

- High energy conversion efficiency because of high fill factor
- Cells sorted by power and current to minimize field mismatch losses.
- Electroluminescence test carried out for micro-cracks



Superior
25 years Warranty



Certifications: ISO
9001, ISO 14001



Made in India
Quality checked



Mechanical Load
(Wind, Snow) = 5400 Pa



15.2% Module
Efficiency



Easy Installation
& Maintainece



Industrial



Commercial

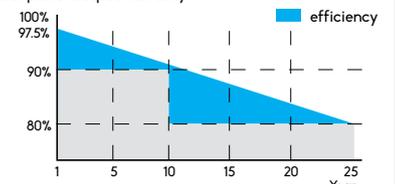


Residential



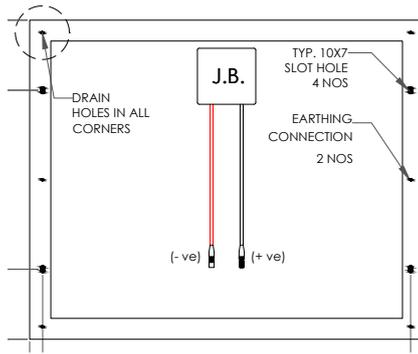
Rural MicroGrids

10 year product warranty
25 year power output warranty



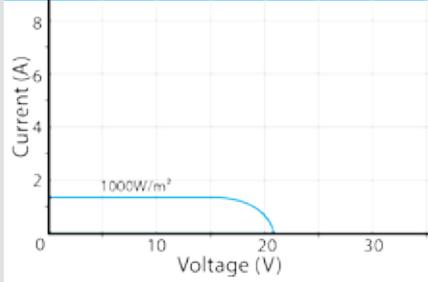
TECHNICAL DRAWING

BACK VIEW



Model - PM020

CURRENT VOLTAGE CURVE PM0020



OPERATING CONDITIONS

Maximum system Voltage - V	1000 VDC
Operating Temperature	- 40 to + 85 °C
Maximum Static Load (Wind/Hail or Snow)	5400 Pa (113 psf)
Maximum series fuse rating (A)	15



PHOTON ENERGY SYSTEMS LIMITED

* Measured at Standard Test Conditions (STC):
Irradiance of 1000W/m², AM 1.5, and
Cell temperature 25° C
** All Dimensions are in mm.

PACKAGING DETAILS

No. of Modules per pallet	24
Number of pallets per 40ft container	24

ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC)

Nominal Power - P _{max} (Watts)	20
Power tolerance (%)	± 2
Module Efficiency / Fill Factor (%)	13.6
Voltage at Maximum Power - V _{mp} (V)	17.70
Current at Maximum Power - I _{sc} (A)	1.13
Open Circuit Voltage - V _{oc} (V)	21.60
Short Circuit Current - I _{sc} (A)	1.30

MODULE DATA

L X W X D (mm)	540 x 355 x 22
Weight (Kg)	2
Area - Sq.m	0.19
Frame Material	Silver White color Anodised Aluminium channel
Glass	3.2 mm Tempered Low Iron Textured toughened glass
Junction Box	Solar Box-RH3, with IP 67 and 3 Bypass diodes (Make: Huber+ Shuner)
Cable connector	Radox Solar Connectors with 1m length cable (make: Huber +Suhner)
Cell encapsulation material	Ethylene Vinyl Acetate
Backside Sheet	Multi layered PET based film

CELL DATA

Cell type	Multi-Crystalline
Solar Cells per Module	36 (9 x 4)
Parent Solar Cell Size	156 x 156

References: Specifications included in this datasheet are subject to change without notice.
However proper care has been taken to ensure the accuracy of provided data.

Caution: Read safety and installation instructions before using this product. This module should not be directly connected to a load.

Photon Energy Systems Limited
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PHOTON ENERGY SYSTEMS LIMITED

Multi - Crystalline

Model - PM010

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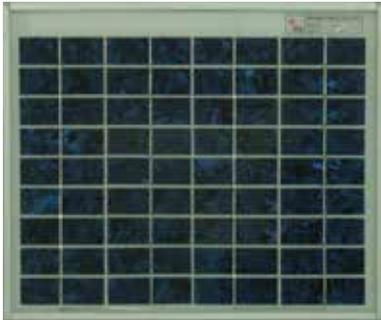
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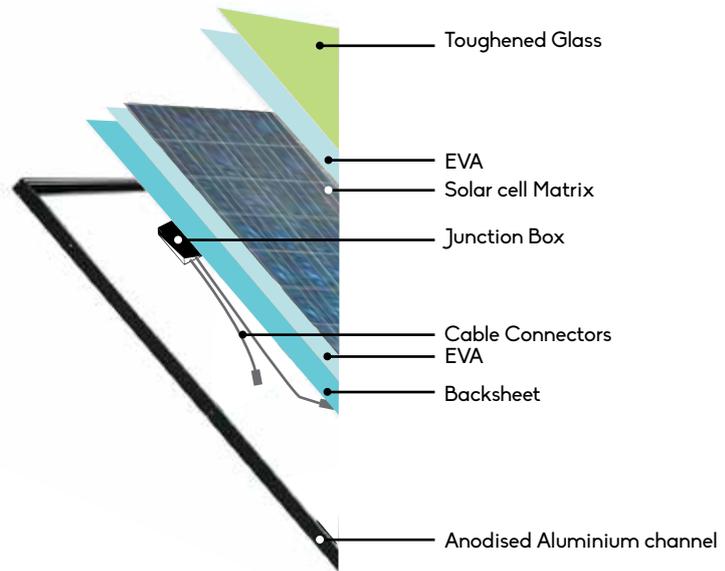
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PM010 MODULE



CELL LAYER DAIGRAM



for more details, refer Backpage.

CERTIFICATIONS & APPROVALS



AVAILABLE AS PER REQUEST



RFID Tag embedded Modules

SPECIAL FEATURES

- High energy conversion efficiency because of high fill factor
- Cells sorted by power and current to minimize field mismatch losses.
- Electroluminescence test carried out for micro-cracks



Superior
25 years Warranty



Certifications: ISO
9001, ISO 14001



Made in India
Quality checked



Mechanical Load
(Wind, Snow) = 5400 Pa



15.2% Module
Efficiency



Easy Installation
& Maintainece



Industrial



Commercial

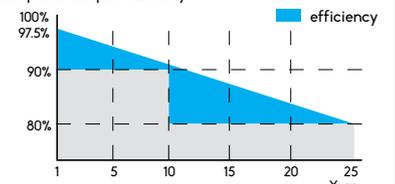


Residential



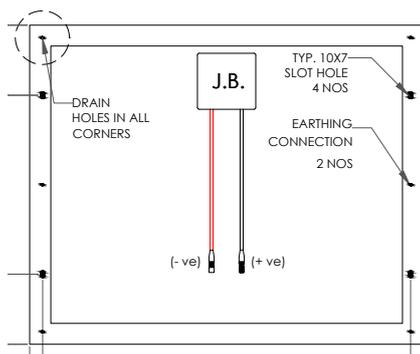
Rural MicroGrids

10 year product warranty
25 year power output warranty



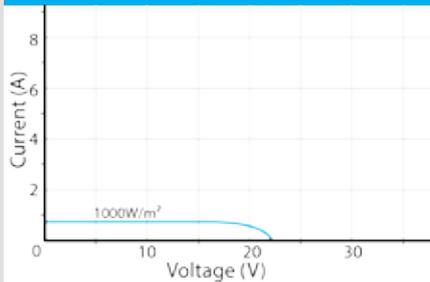
TECHNICAL DRAWING

BACK VIEW



Model - PM010

CURRENT VOLTAGE CURVE PM010



OPERATING CONDITIONS

Maximum system Voltage - V	1000 VDC
Operating Temperature	- 40 to + 85 °C
Maximum Static Load (Wind/Hail or Snow)	5400 Pa (113 psf)
Maximum series fuse rating (A)	15



PHOTON ENERGY SYSTEMS LIMITED

* Measured at Standard Test Conditions (STC):
Irradiance of 1000W/m², AM 1.5, and
Cell temperature 25° C
** All Dimensions are in mm.

PACKAGING DETAILS

No. of Modules per pallet	24
Number of pallets per 40ft container	24

ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC)

Nominal Power - P _{max} (Watts)	10
Power tolerance (%)	± 2
Module Efficiency / Fill Factor (%)	11
Voltage at Maximum Power - V _{mp} (V)	17.70
Current at Maximum Power - I _{sc} (A)	0.56
Open Circuit Voltage - V _{oc} (V)	21.60
Short Circuit Current - I _{sc} (A)	0.64

MODULE DATA

L X W X D (mm)	295 x 355 x 22
Weight (Kg)	0.7
Area - Sq.m	0.06
Frame Material	Silver White color Anodised Aluminium channel
Glass	3.2 mm Tempered Low Iron Textured toughened glass
Junction Box	Solar Box-RH3, with IP 67 and 3 Bypass diodes (Make: Huber+ Shuner)
Cable connector	Radox Solar Connectors with 1m length cable (make: Huber +Suhner)
Cell encapsulation material	Ethylene Vinyl Acetate
Backside Sheet	Multi layered PET based film

CELL DATA

Cell type	Multi-Crystalline
Solar Cells per Module	36 (9 x 4)
Parent Solar Cell Size	156 x 156

References: Specifications included in this datasheet are subject to change without notice.
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Caution: Read safety and installation instructions before using this product. This module should not be directly connected to a load.

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PHOTON ENERGY SYSTEMS LIMITED

Multi - Crystalline

Model - PM005

☎ 1800 4252 786

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ABOUT

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To Visit Our Website

SCAN

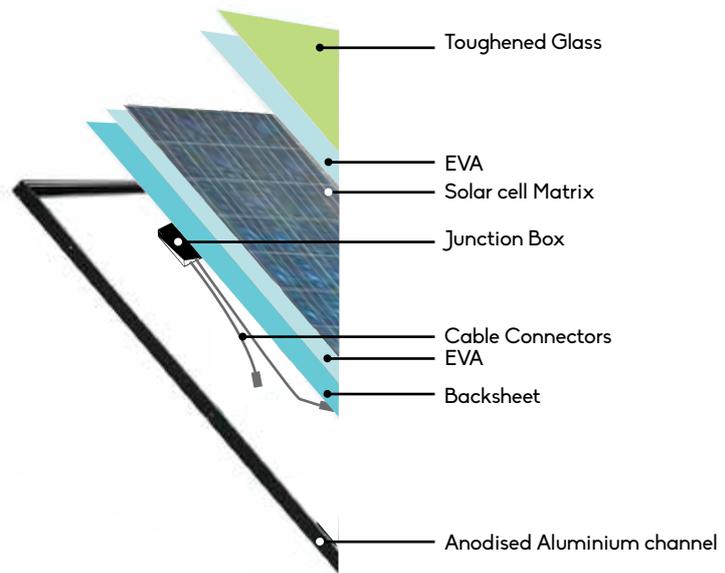
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PM005 MODULE



CELL LAYER DAIGRAM



for more details, refer Backpage.

CERTIFICATIONS & APPROVALS



AVAILABLE AS PER REQUEST



RFID Tag embedded Modules

SPECIAL FEATURES

- High energy conversion efficiency because of high fill factor
- Cells sorted by power and current to minimize field mismatch losses.
- Electroluminescence test carried out for micro-cracks



Superior
25 years Warranty



Certifications: ISO
9001, ISO 14001



Made in India
Quality checked



Mechanical Load
(Wind, Snow) = 5400 Pa



15.2% Module
Efficiency



Easy Installation
& Maintainece



Industrial



Commercial

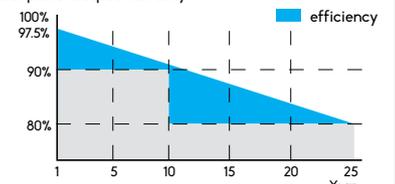


Residential



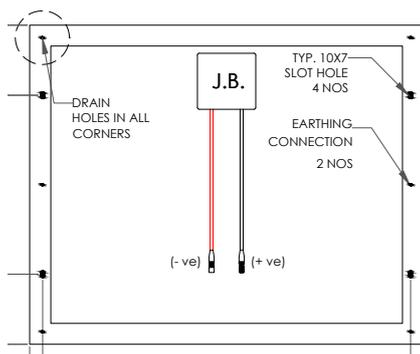
Rural MicroGrids

10 year product warranty
25 year power output warranty



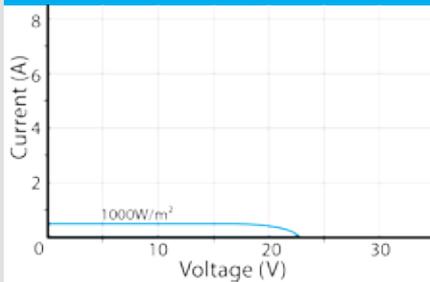
TECHNICAL DRAWING

BACK VIEW



Model - PM005

CURRENT VOLTAGE CURVE PM005



OPERATING CONDITIONS

Maximum system Voltage - V	1000 VDC
Operating Temperature	- 40 to + 85 °C
Maximum Static Load (Wind/Hail or Snow)	5400 Pa (113 psf)
Maximum series fuse rating (A)	15



PHOTON ENERGY SYSTEMS LIMITED

* Measured at Standard Test Conditions (STC):
Irradiance of 1000W/m², AM 1.5, and
Cell temperature 25° C
** All Dimensions are in mm.

PACKAGING DETAILS

No. of Modules per pallet	24
Number of pallets per 40ft container	24

ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC)

Nominal Power - P _{max} (Watts)	5
Power tolerance (%)	± 2
Module Efficiency / Fill Factor (%)	9
Voltage at Maximum Power - V _{mp} (V)	17.70
Current at Maximum Power - I _{sc} (A)	0.28
Open Circuit Voltage - V _{oc} (V)	21.60
Short Circuit Current - I _{sc} (A)	0.32

MODULE DATA

L X W X D (mm)	310 x 195 x 22
Weight (Kg)	0.7
Area - Sq.m	0.06
Frame Material	Silver White color Anodised Aluminium channel
Glass	3.2 mm Tempered Low Iron Textured toughened glass
Junction Box	Solar Box-RH3, with IP 67 and 3 Bypass diodes (Make: Huber+ Shuner)
Cable connector	Radox Solar Connectors with 1m length cable (make: Huber +Suhner)
Cell encapsulation material	Ethylene Vinyl Acetate
Backside Sheet	Multi layered PET based film

CELL DATA

Cell type	Multi-Crystalline
Solar Cells per Module	36 (9 x 4)
Parent Solar Cell Size	156 x 156

References: Specifications included in this datasheet are subject to change without notice.
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PHOTON ENERGY SYSTEMS LIMITED

Multi - Crystalline

Model - PM003

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ABOUT

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SCAN

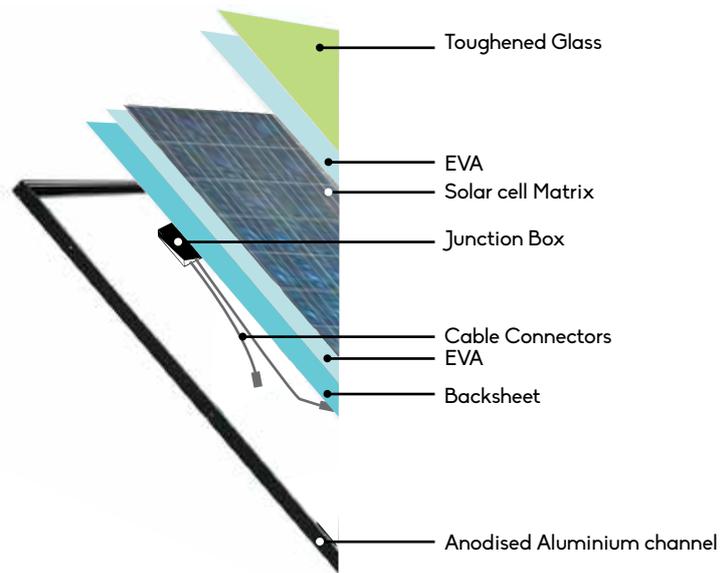
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PM003 MODULE



CELL LAYER DAIGRAM



for more details, refer Backpage.

CERTIFICATIONS & APPROVALS



AVAILABLE AS PER REQUEST



RFID Tag embedded Modules

SPECIAL FEATURES

- High energy conversion efficiency because of high fill factor
- Cells sorted by power and current to minimize field mismatch losses.
- Electroluminescence test carried out for micro-cracks



Superior
25 years Warranty



Certifications: ISO
9001, ISO 14001



Made in India
Quality checked



Mechanical Load
(Wind, Snow) = 5400 Pa



15.2% Module
Efficiency



Easy Installation
& Maintenance



Industrial



Commercial

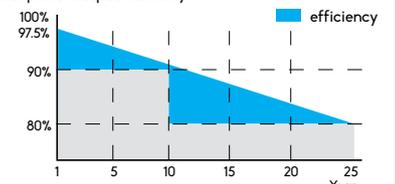


Residential



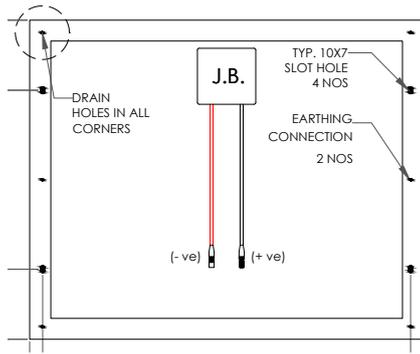
Rural MicroGrids

10 year product warranty
25 year power output warranty



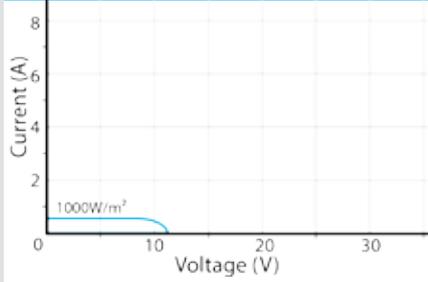
TECHNICAL DRAWING

BACK VIEW



Model - PM003

CURRENT VOLTAGE CURVE PM003



OPERATING CONDITIONS

Maximum system Voltage - V	1000 VDC
Operating Temperature	- 40 to + 85 °C
Maximum Static Load (Wind/Hail or Snow)	5400 Pa (113 psf)
Maximum series fuse rating (A)	15



PHOTON ENERGY SYSTEMS LIMITED

* Measured at Standard Test Conditions (STC):
Irradiance of 1000W/m², AM 1.5, and
Cell temperature 25° C
** All Dimensions are in mm.

PACKAGING DETAILS

No. of Modules per pallet	24
Number of pallets per 40ft container	24

ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC)

Nominal Power - P _{max} (Watts)	3
Power tolerance (%)	± 2
Module Efficiency / Fill Factor (%)	9
Voltage at Maximum Power - V _{mp} (V)	8.2
Current at Maximum Power - I _{sc} (A)	0.37
Open Circuit Voltage - V _{oc} (V)	10
Short Circuit Current - I _{sc} (A)	0.42

MODULE DATA

L X W X D (mm)	230 x 195 x 22
Weight (Kg)	0.6
Area - Sq.m	0.045
Frame Material	Silver White color Anodised Aluminium channel
Glass	3.2 mm Tempered Low Iron Textured toughened glass
Junction Box	Solar Box-RH3, with IP 67 and 3 Bypass diodes (Make: Huber+ Shuner)
Cable connector	Radox Solar Connectors with 1m length cable (make: Huber +Suhner)
Cell encapsulation material	Ethylene Vinyl Acetate
Backside Sheet	Multi layered PET based film

CELL DATA

Cell type	Multi-Crystalline
Solar Cells per Module	18 (6 x 3)
Parent Solar Cell Size	156 x 156

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