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# **EnergyPal**

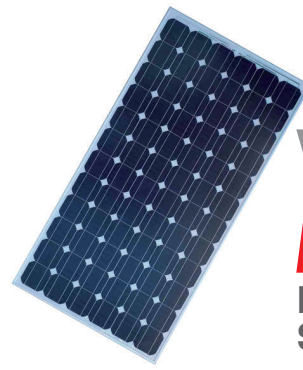
## **Solar Panel Guide Specification Data Sheet**

**Yuraku Pte Ltd.**

**A-M 230-288**

**276**

Also available on the web at  
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# YUR.POWER

## A-M230

### Monocrystalline Solar Panels

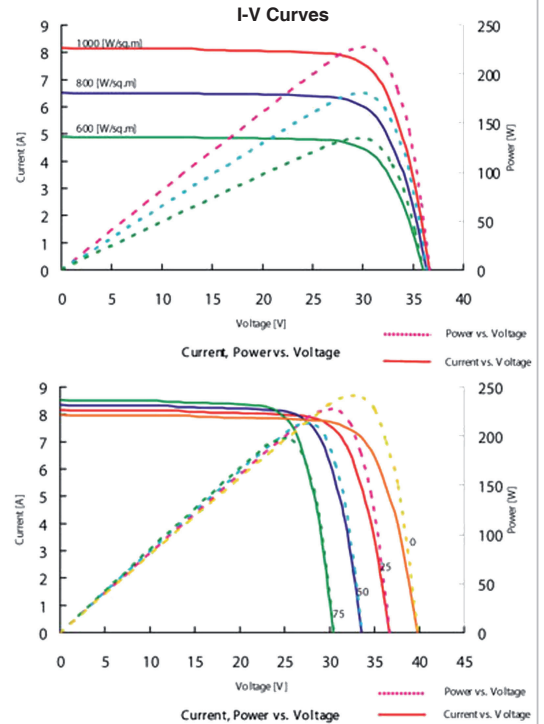
#### Specifications

• <b>Panel Type</b>	230 Wp Monocrystalline silicon photovoltaic module
• <b>Maximum Power (Pmax)</b>	230 W
• <b>Voltage @ Pmax (Vpm)</b>	29,95 V
• <b>Current @ Pmax (Ipm)</b>	7,68 A
• <b>Open Circuit Voltage (Voc)</b>	36,84 V
• <b>Short Circuit Current (Isc)</b>	8,35 A
• <b>Output Tolerance</b>	± 3 %
• <b>Maximum System Voltage</b>	1000 Vdc
• <b>Series fuse rating</b>	10 A
• <b>Application</b>	DC 24V system
• <b>Efficiency of module</b>	14,16 %
• <b>Temperature Coefficients of Pmax (%)</b>	-0,50 % /°C
• <b>Temperature Coefficients of Voc (%)</b>	-0,33 % /°C
• <b>Temperature Coefficients of Isc (%)</b>	+0,035 % /°C
• <b>Operating Temperature</b>	-40 to +85 °C
• <b>Storage Temperature</b>	-40 to +85 °C
• <b>System Cell</b>	6" Monocrystalline silicon
• <b>No. of cells &amp; connections</b>	60 pcs in series (6x10)
• <b>Module Size (WxLxH)</b>	1632 x 995 x 50 mm
• <b>Weight</b>	Approximately 20,2 Kg
• <b>Packing configuration</b>	Horizontal
• <b>Size of carton</b>	1689 x 1071 x 995 mm
• <b>Pallet quantity</b>	18 pcs / pallet
• <b>Container Load (20ft/40ft)</b>	12 pallets / 28 pallets

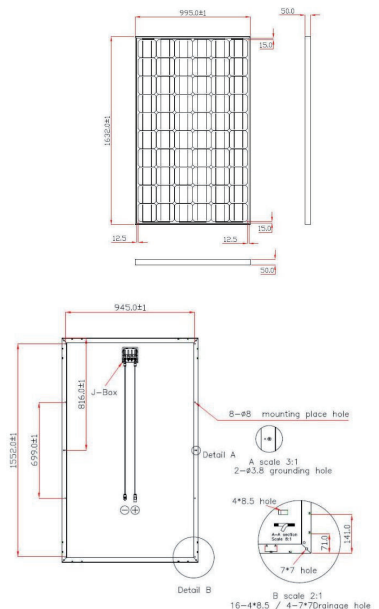
#### Construction

• <b>Front</b>	High transmission low-iron tempered glass (3.2 mm)
• <b>Back</b>	PET / PET / EVA
• <b>Encapsulates</b>	EVA
• <b>Junction Box Type</b>	IP65, waterproof
• <b>Bypass Diodes</b>	3 diodes to avoid power decreasing by shade
• <b>Output cable</b>	4 mm <sup>2</sup> cable with polarized waterproof tyco connectors (Negative 900 mm, Positive 900 mm)
• <b>Frame (Material, Corners, etc)</b>	Clear anodized aluminium, AL6063-T5
• <b>Certification</b>	IEC 61215 : 2005 + EN 61730-1 / EN 61730-2 : 2007

measured at STC (Standard Test Condition; 1000 W/m<sup>2</sup> irradiance, AM 1.5G and 25 °C)



#### Module dimension



**Warranty Notice:** 5 years on materials. 10 years of 90 % output, 25 years of 80 % output.

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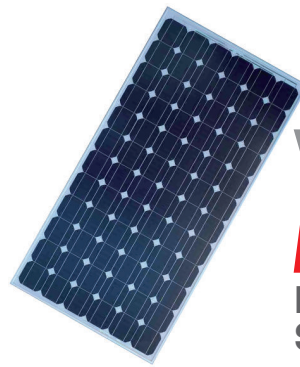
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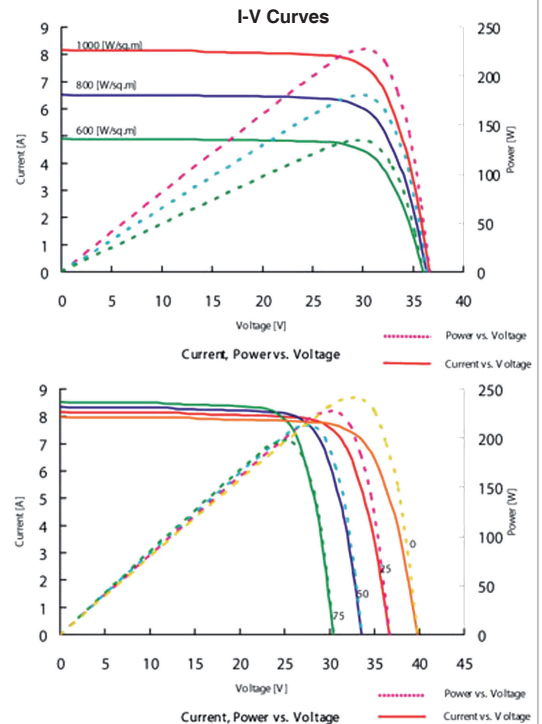
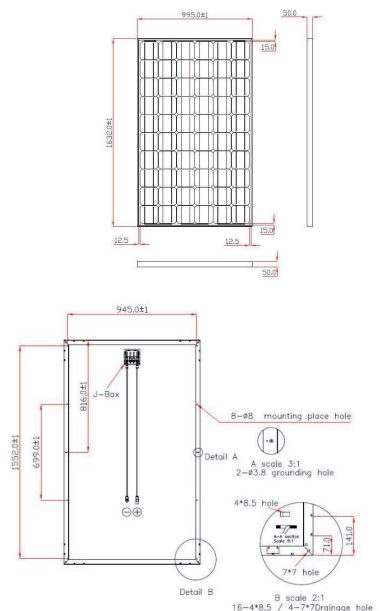

**Specifications**

• <b>Panel Type</b>	240 Wp Monocrystalline silicon photovoltaic module
• <b>Maximum Power (Pmax)</b>	240 W
• <b>Voltage @ Pmax (Vpm)</b>	30,4 V
• <b>Current @ Pmax (Ipm)</b>	7,9 A
• <b>Open Circuit Voltage (Voc)</b>	37,32 V
• <b>Short Circuit Current (Isc)</b>	8,58 A
• <b>Output Tolerance</b>	± 3 %
• <b>Maximum System Voltage</b>	1000 Vdc
• <b>Series fuse rating</b>	10 A
• <b>Application</b>	DC 24V system
• <b>Efficiency of module</b>	14,78 %
• <b>Temperature Coefficients of Pmax (%)</b>	-0,50 % /°C
• <b>Temperature Coefficients of Voc (%)</b>	-0,33 % /°C
• <b>Temperature Coefficients of Isc (%)</b>	+0,035 % /°C
• <b>Operating Temperature</b>	-40 to +85 °C
• <b>Storage Temperature</b>	-40 to +85 °C
• <b>System Cell</b>	6" Monocrystalline silicon
• <b>No. of cells &amp; connections</b>	60 pcs in series (6x10)
• <b>Module Size (WxLxH)</b>	1632 x 995 x 50 mm
• <b>Weight</b>	Approximately 20,2 Kg
• <b>Packing configuration</b>	Horizontal
• <b>Size of carton</b>	1689 x 1071 x 995 mm
• <b>Pallet quantity</b>	18 pcs / pallet
• <b>Container Load (20ft/40ft)</b>	12 pallets / 28 pallets

**Construction**

• <b>Front</b>	High transmission low-iron tempered glass (3.2 mm)
• <b>Back</b>	PET / PET / EVA
• <b>Encapsulates</b>	EVA
• <b>Junction Box Type</b>	IP65, waterproof
• <b>Bypass Diodes</b>	3 diodes to avoid power decreasing by shade
• <b>Output cable</b>	4 mm <sup>2</sup> cable with polarized waterproof tyco connectors (Negative 900 mm, Positive 900 mm)
• <b>Frame (Material, Corners, etc)</b>	Clear anodized aluminium, AL6063-T5
• <b>Certification</b>	IEC 61215 : 2005 + EN 61730-1 / EN 61730-2 : 2007

measured at STC (Standard Test Condition; 1000 W/m<sup>2</sup> irradiance, AM 1.5G and 25 °C)


**Module dimension**


**Warranty Notice:** 5 years on materials. 10 years of 90 % output, 25 years of 80 % output.

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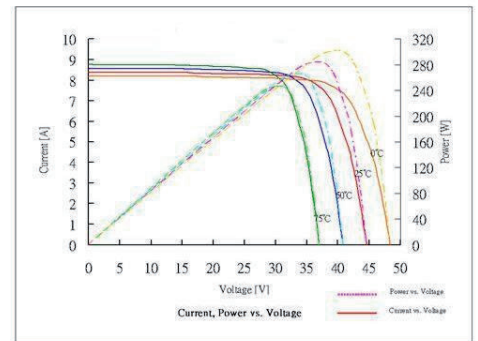
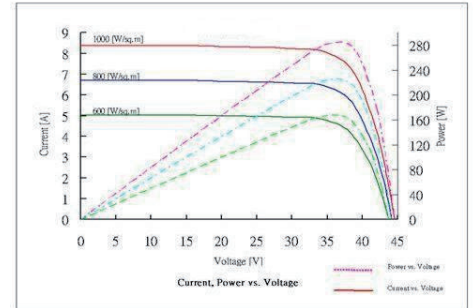
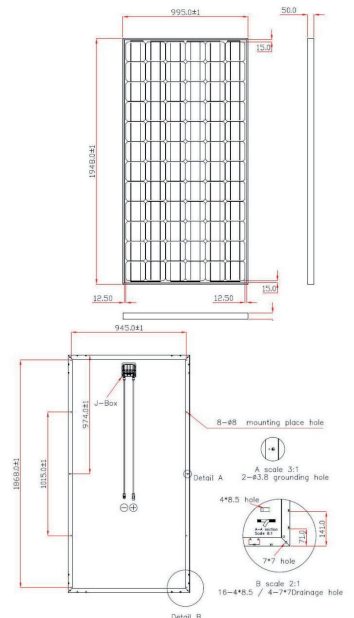

**Specifications**

• <b>Panel Type</b>	276 Wp Monocrystalline silicon photovoltaic module
• <b>Maximum Power (Pmax)</b>	276 W
• <b>Voltage @ Pmax (Vpm)</b>	36,07 V
• <b>Current @ Pmax (Ipm)</b>	7,65 A
• <b>Open Circuit Voltage (Voc)</b>	44,78 V
• <b>Short Circuit Current (Isc)</b>	8,33 A
• <b>Output Tolerance</b>	± 3 %
• <b>Maximum System Voltage</b>	1000 Vdc
• <b>Series fuse rating</b>	10 A
• <b>Application</b>	DC 36V system
• <b>Efficiency of module</b>	14,24 %
• <b>Temperature Coefficients of Pmax (%)</b>	-0,5 % /°C
• <b>Temperature Coefficients of Voc (%)</b>	-0,33 % /°C
• <b>Temperature Coefficients of Isc (%)</b>	+0,035 % /°C
• <b>Operating Temperature</b>	-40 to +85 °C
• <b>Storage Temperature</b>	-40 to +85 °C
• <b>System Cell</b>	6" Monocrystalline silicon
• <b>No. of cells &amp; connections</b>	72 pcs in series (6x12)
• <b>Module Size (WxLxH)</b>	1948 x 995 x 50 mm
• <b>Weight</b>	Approximately 22,95 Kg
• <b>Packing configuration</b>	Horizontal
• <b>Size of carton</b>	2005 x 1071 x 955 mm
• <b>Pallet quantity</b>	18 pcs / pallet
• <b>Container Load (20ft/40ft)</b>	10 pallets / 22 pallets

**Construction**

• <b>Front</b>	High transmission low-iron tempered glass (3.2 mm)
• <b>Back</b>	PET / PET / EVA
• <b>Encapsulates</b>	EVA
• <b>Junction Box Type</b>	IP65, waterproof
• <b>Bypass Diodes</b>	3 diodes to avoid power decreasing by shade
• <b>Output cable</b>	4 mm <sup>2</sup> cable with polarized waterproof tyco connectors (Negative 900 mm, Positive 900 mm)
• <b>Frame (Material, Corners, etc)</b>	Clear anodized aluminium, AL6063-T5
• <b>Certification</b>	IEC 61215 : 2005 + EN 61730-1 / EN 61730-2 : 2007

*measured at STC (Standard Test Condition; 1000 W/m<sup>2</sup> irradiance, AM 1.5G and 25 °C)*

**I-V Curves**

**Module dimension**


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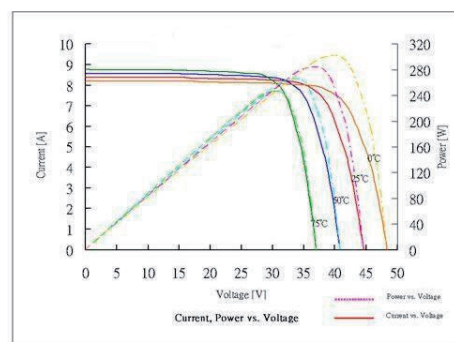
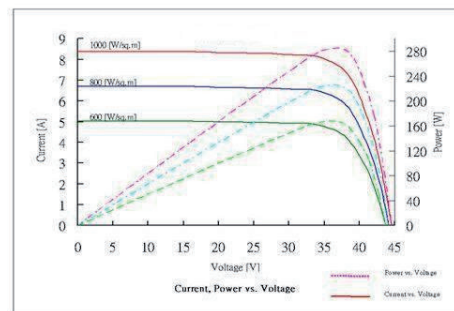
## A-M288

### Monocrystalline Solar Panels

#### Specifications

• <b>Panel Type</b>	288 Wp Monocrystalline silicon photovoltaic module
• <b>Maximum Power (Pmax)</b>	288 W
• <b>Voltage @ Pmax (Vpm)</b>	36,5 V
• <b>Current @ Pmax (Ipm)</b>	7,89 A
• <b>Open Circuit Voltage (Voc)</b>	45,0 V
• <b>Short Circuit Current (Isc)</b>	8,57 A
• <b>Output Tolerance</b>	± 3 %
• <b>Maximum System Voltage</b>	1000 Vdc
• <b>Series fuse rating</b>	10 A
• <b>Application</b>	DC 36V system
• <b>Efficiency of module</b>	14,86 %
• <b>Temperature Coefficients of Pmax (%)</b>	-0,5 % /°C
• <b>Temperature Coefficients of Voc (%)</b>	-0,33 % /°C
• <b>Temperature Coefficients of Isc (%)</b>	+0,035 % /°C
• <b>Operating Temperature</b>	-40 to +85 °C
• <b>Storage Temperature</b>	-40 to +85 °C
• <b>System Cell</b>	6" Monocrystalline silicon
• <b>No. of cells &amp; connections</b>	72 pcs in series (6x12)
• <b>Module Size (WxLxH)</b>	1948 x 995 x 50 mm
• <b>Weight</b>	Approximately 22,95 Kg
• <b>Packing configuration</b>	Horizontal
• <b>Size of carton</b>	2005 x 1071 x 955 mm
• <b>Pallet quantity</b>	18 pcs / pallet
• <b>Container Load (20ft/40ft)</b>	10 pallets / 22 pallets

I-V Curves

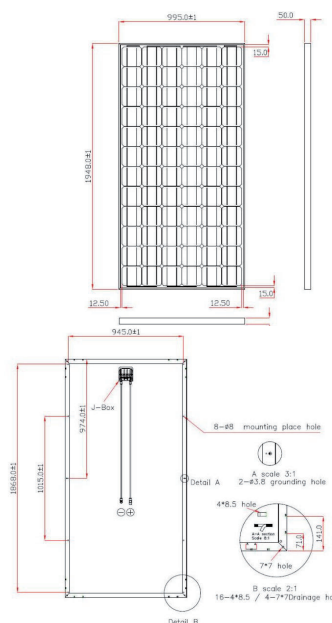


#### Construction

• <b>Front</b>	High transmission low-iron tempered glass (3.2 mm)
• <b>Back</b>	PET / PET / EVA
• <b>Encapsulates</b>	EVA
• <b>Junction Box Type</b>	IP65, waterproof
• <b>Bypass Diodes</b>	3 diodes to avoid power decreasing by shade
• <b>Output cable</b>	4 mm <sup>2</sup> cable with polarized waterproof tyco connectors (Negative 900 mm, Positive 900 mm)
• <b>Frame (Material, Corners, etc)</b>	Clear anodized aluminium, AL6063-T5
• <b>Certification</b>	IEC 61215 : 2005 + EN 61730-1 / EN 61730-2 : 2007

measured at STC (Standard Test Condition; 1000 W/m<sup>2</sup> irradiance, AM 1.5G and 25 °C)

#### Module dimension



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