



**Solar Systems**  
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# SAMSUNG DELIVERS HIGH EFFICIENCY

## SP + series

PV-MBA1AG244 / PV-MBA1AG247 / PV-MBA1AG250



### High Efficiency

Samsung solar modules deliver high efficiency, requiring less installation space and lower BOS costs.



### Positive Power Output Tolerance

Samsung solar modules and cells avoid any power loss due to its positive output tolerance (0 ~ +2%) and narrow sorting range.



### Superior Durability

Samsung solar modules are certified to withstand high pressure: wind loads (2,400Pa), snow loads (5,400Pa).



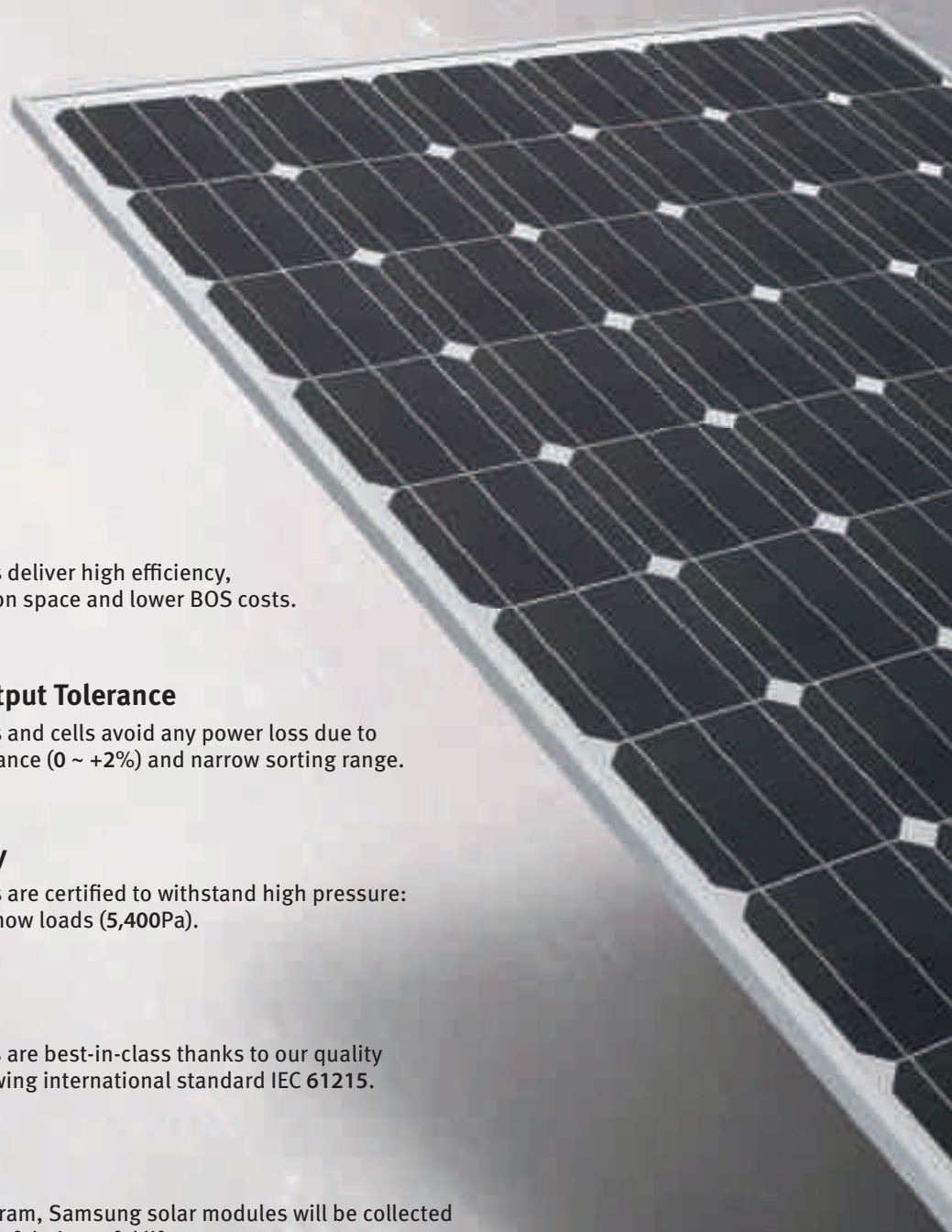
### Strict Quality Test

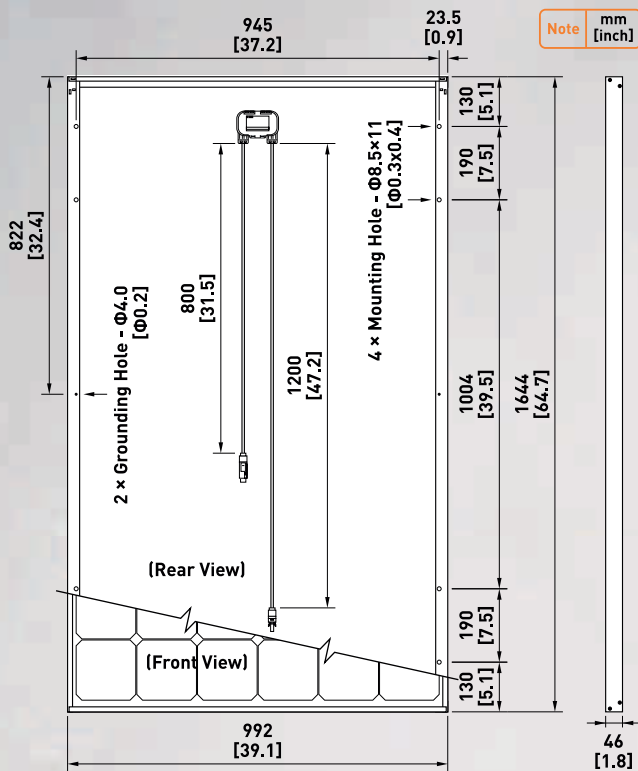
Samsung solar modules are best-in-class thanks to our quality assurance system following international standard IEC 61215.



### Eco-Friendly

Following PV Cycle program, Samsung solar modules will be collected and recycled at the end of their useful life.





#### Physical characteristics

Cells per module	60	
Cell type	Mono-crystalline silicon	
Module dimensions	1644x992x46mm (64.7x39.1x1.8 inches)	
Module weight	20.2kg (44.5 lbs)	
Front Glass	Low iron tempered glass	
Junction box	Connector type	MC4
	IP grade	IP65
	Output cables	(-) 800mm, (+) 1200mm (-) 31.5 inches, (+) 47.2 inches

#### Temperature coefficients

NOCT	45 ± 2°C
TC I <sub>sc</sub>	0.033%/K
TC V <sub>oc</sub>	-0.327%/K
TC P <sub>max</sub>	-0.444%/K

(NOCT : Nominal Operating Cell Temperature)

#### Packing configuration

Container	40'HC
Pieces per pallet	20
Pallets per container	26

PV-MBA1AG244 PV-MBA1AG247 PV-MBA1AG250

#### Measured at STC : Irradiance 1000W/m<sup>2</sup>, AM 1.5, and cell temperature 25°C

Maximum power	P <sub>max</sub> (Wp)	244	247	250
Maximum power voltage	V <sub>mp</sub> (V)	30.3	30.4	30.6
Maximum power current	I <sub>mp</sub> (A)	8.06	8.13	8.17
Open circuit voltage	V <sub>oc</sub> (V)	37.3	37.5	37.8
Short circuit current	I <sub>sc</sub> (A)	8.55	8.59	8.62
Module efficiency		14.96%	15.15%	15.33%

#### Measured at NOCT : Irradiance 800W/m<sup>2</sup>, ambient temperature 20°C, wind speed 1m/s

Maximum power	P <sub>max</sub> (Wp)	176	179	182
Maximum power voltage	V <sub>mp</sub> (V)	27.9	28.1	28.4
Maximum power current	I <sub>mp</sub> (A)	6.52	6.56	6.65
Open circuit voltage	V <sub>oc</sub> (V)	33.9	34.2	34.5
Short circuit current	I <sub>sc</sub> (A)	6.79	6.89	6.97

\* Power output may vary by 0% / +2% and other electrical parameters by ±3%.

#### System integration parameters

Maximum system voltage (IEC)	1,000 V
Maximum system voltage (UL)	600 V
Maximum series fuse rating	15 A
Limiting reverse current	15 A

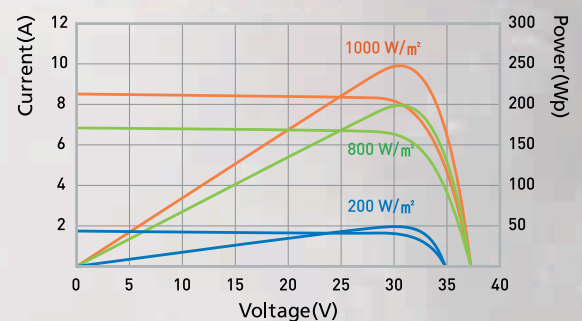
#### Safety ratings & Warranties

Fire Safety Classification	Class C
Certifications	IEC 61215, IEC 61730, UL 1703
Warranty	10 years limited product warranty
Performance guarantee	10 years limited warranty of 90% power output
	25 years limited warranty of 80% power output

#### Qualification test

Temp cycling range	-40°C to 85°C for 200cycles
Damp heat test	85°C and 85% relative humidity for 1000hr
Front load test (Snow)	5400Pa
Rear static load test (Wind)	2400Pa
Hailstone impact test	25mm hail at 23m/s from 1m distance

#### I-V curve



\* All data subject to change without prior notice.

#### Dealer information box



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