

# EM-P60M 440-460

**BIFACIAL MODULE WITH  
DUALGLASS**  
P-TYPE

**POSITIVE POWER TOLERANCE**

IEC61215(2021), IEC61730(2023)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018: Occupational health and safety management systems



## KEY FEATURES



### SMBB technology

Better current collection to improve module power output and reliability.



### Bifacial power generation

Power generation can reach up to 25% maximum, significantly improving power generation gain and reducing LCOE.



### Anti-PID technology

Excellent Anti-PID performance via highly reliable cell and material technology



### Low attenuation technology

Lower LID / LETID attenuation with high reliable N-type module

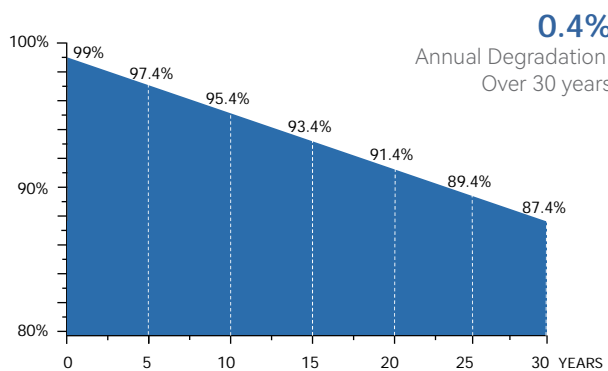


### Excellent temperature coefficient

Ensure high power generation in low temperature areas.



## LINEAR PERFORMANCE WARRANTY

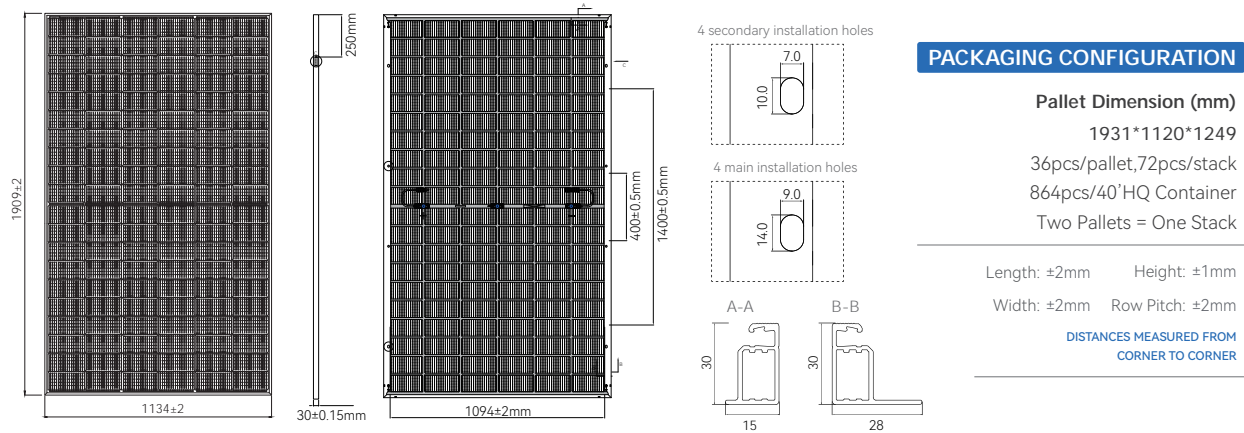


**15**  
YEARS  
Year Product Warranty

**30**  
YEARS  
Year Linear Power Warranty



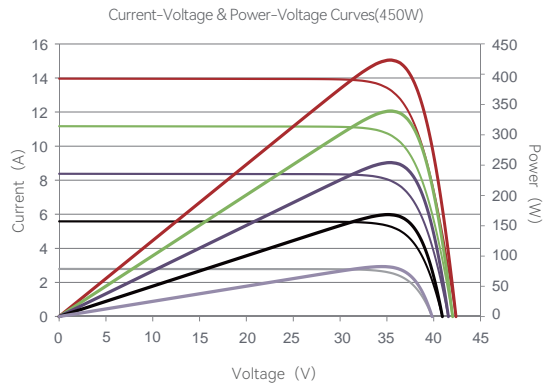
ASSEMBLY DRAWING



Mechanical Characteristics

Cell Type	P type Mono-crystalline
No. of cells	120 (6x20)
Dimensions	1909x1134x30mm
Weight	28.3kg
Front Glass	2.0mm, Anti-Reflection Coating
Back Glass	2.0mm, Glazed glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm <sup>2</sup> (+): 300mm, (-): 200mm or Customized Length

Electrical Performance & Temperature Dependence



MODULE TYPE	EM-P60M440		EM-P60M445		EM-P60M450		EM-P60M455		EM-P60M460	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	440Wp	333Wp	445Wp	337Wp	450Wp	341Wp	455Wp	345Wp	460Wp	348Wp
Maximum Power Voltage (Vmp)	34.2V	32.57V	34.4V	32.76V	34.6V	32.95V	34.8V	33.14V	35.0V	33.33V
Maximum Power Current (Imp)	12.87A	10.29A	12.94A	10.35A	13.01A	10.4A	13.07A	10.46A	13.14A	10.51A
Open-circuit Voltage (Voc)	41.2V	38.87V	41.4V	39.06V	41.6V	39.25V	41.8V	39.43V	42.0V	39.62V
Short-circuit Current (Isc)	13.79A	11.12A	13.86A	11.18A	13.93A	11.23A	14.0A	11.29A	14.07A	11.35A
Module Efficiency STC (%)		20.33%		20.56%		20.79%		21.02%		21.25%
Operating temperature(°C)	-40°C~+85°C									
Maximum system voltage	1500VDC (IEC)									
Maximum series fuse rating	25A									
Power tolerance	0~+5W									
Temperature coefficients of Pmax	-0.35%/°C									
Temperature coefficients of Voc	-0.31%/°C									
Temperature coefficients of Isc	0.05%/°C									
Nominal operating cell temperature (NOCT)	44°C±2°C									
Refer. Bifacial Factor	70±5%									

STC : Irradiance : 1000W/m<sup>2</sup> Cell Temperature : 25°C AM=1.5

NOCT : Irradiance : 800W/m<sup>2</sup> Ambient Temperature : 20°C AM=1.5 Wind Speed 1m/s