



# 108BB 410W HC Series

mSolar 10BB Half-Cell Black  
Monocrystalline PERC PV Module



### Excellent efficiency

10 busbar technology increases power by decreasing the distance between busbars and the finger grid line



### Improved weak illumination response

More power output even in lower light conditions such as overcast days or off-peak sunlight hours



### Anti PID

Panels rigorously tested to limit power degradation caused by 'stray' currents



### High wind and snow resistance

5,400Pa Snow Load  
2,400Pa Wind Load



### 25-year warranty

M Solar modules are guaranteed to retain at least 84.3% of the initial power output



### Appealing Aesthetics

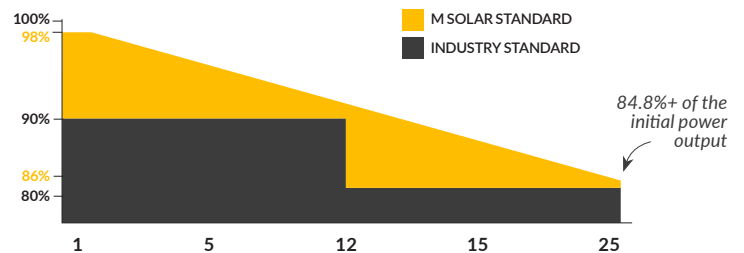
Fully black module creates a sleek, uniform array



25-year product warranty, 25-year output warranty



0.5% annual degradation over 25 years



CEC



UL 61730 | IEC 61215 | IEC 61730  
ISO9001, ISO14001, ISO45001

# 108BB 410W HC Series

msolar 10BB Half-Cell, All-Black Monocrystalline PERC PV Module

## Electrical Characteristics | STC\*

Module Type	TXI10-400108BB	TXI10-405108BB	TXI10-410108BB
Nominal Power Watt Pmax (W)*	400	405	410
Power Output Tolerance Pmax (W)	0~+5	0~+5	0~+5
Maximum Power Voltage Vmp (V)	31.01	31.21	31.45
Maximum Power Current Imp (A)	12.90	12.98	13.04
Open Circuit Voltage (V)	37.07	37.23	37.32
Short Circuit Current Isc (A)	13.97	13.87	13.95
Module Efficiency (%)	20.48	20.74	21.00

\*STC (Standard Test Condition): Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C, AM 1.5  
\*Measuring tolerance: ±

## Electrical Characteristics | NMOT\*

Maximum Power Watt Pmax (Wp)	270	274	278
Maximum Power Voltage Vmpp (V)	29.26	29.47	29.72
Maximum Power Current Imp (A)	10.32	10.38	10.43
Open Circuit Voltage Voc (V)	34.88	35.12	35.23
Short Circuit Current Isc (A)	11.03	11.10	11.16

\*NMOT(Nominal module operating temperature): Irradiance 800W/m<sup>2</sup>. Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

## Mechanical Data

Solar Cells	Mono PERC, 182mm half cells
Cells orientation	108 (6x9+6x9)
Module dimension	67.80x44.65x1.38 in. (1,722x1,134x35 mm)
Weight	46.30 lb (21.00 kg)
Glass	3.2mm, High Transmission, Low Iron & Semi-Tempered Glass
Junction Box	IP 68, 3 Diodes
Cables	1,200mm
Connectors	MC4 EVO2

## Temperature Ratings

NOCT	42°C±2°C
Temperature coefficient of Pmax	-0.350%/°C
Temperature coefficient of Voc	-0.275%/°C
Temperature coefficient of Isc	+0.045%/°C

## Working Conditions

Maximum System Voltage	1500VDC
Operating Temperature	-40°C ~+85°C
Maximum Series Fuse	25A
Maximum Load (Snow/Wind)	5,400Pa / 2,400Pa

Fire Rating

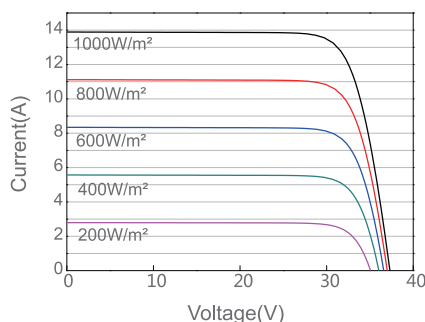
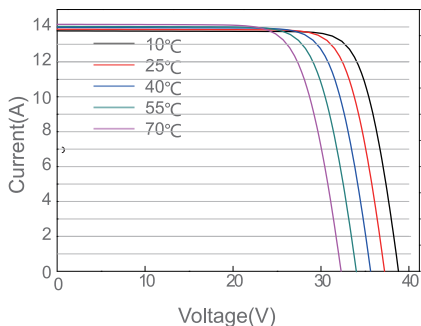
UL Type 1\*\*

\*Do not connect Fuse in Combiner Box with two or more strings in parallel connection  
\*Remark: Electrical data in this catalog do not refer to a single module and they are not part

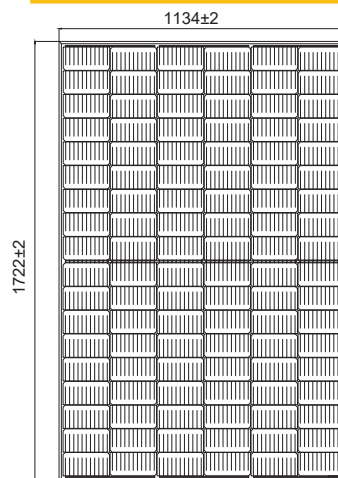
of the offer. They only serve for comparison among different module types.  
\*\*Please note, the 'Fire Class' Rating is designated for the full installed PV system,

which includes, but is not limited to, the module, the type of mounting used, pitch and roof composition.

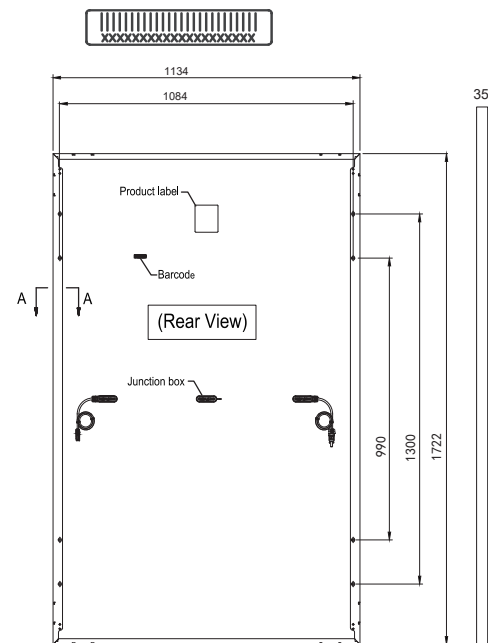
## I-V Curves of PV Module (405W)



## Dimensions (MM)



Front

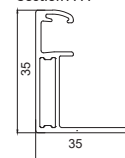


Back

Side

Tolerance:  
Length: ±2mm  
Width: ±2mm  
Height: ±1mm  
Pitch-row: ±1mm

Section A-A



## Packaging Details

31 Panels per pallet	Pallet Stack Weight	Truck Weight
26 Pallets per truck	2,934 lbs. (1341.98 kg)	38,461.2 lbs. (17,445.7 kg)

**msolar**