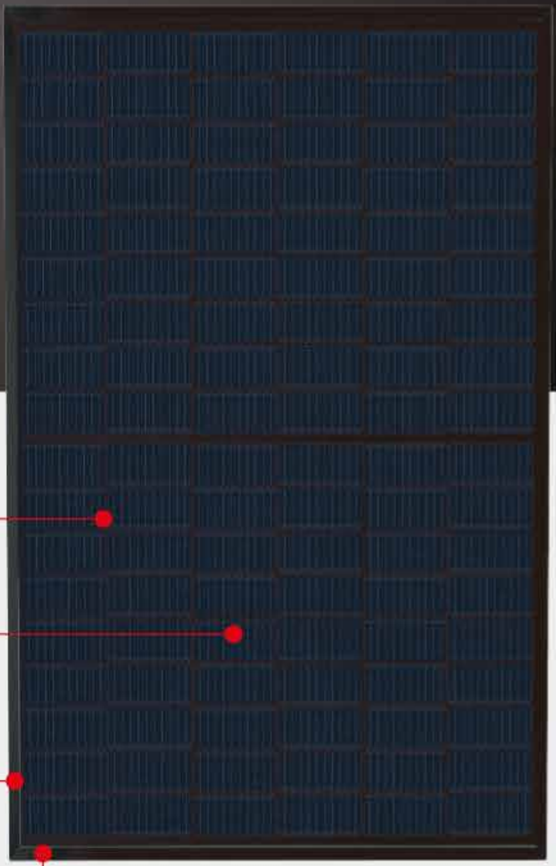
MONO Module

AMPS
American Made Power Solution

AMPS-410P-54BB
108 PCS HALF-CUT BLACK
400W-415W

Domestic Content Available



High Purity Monocrystalline Material

- Top Class Module Efficiency
- Better Performance Under Cold & Hot Weather
- Outstanding Degradation Prevention

High Transmittance, Low Iron Solar Glass

- Enhanced module efficiency
- Further reduces light absorption and reflection loss
- Great durability and better mechanical strength

Weatherproof Edge Sealants

- Prevents water ingress and provides humidity resistance
- Dust & dirt protection and stronger chemical Resistance
- Better shock absorption and great UV Resistance.

Ultradurable Aluminum Frame

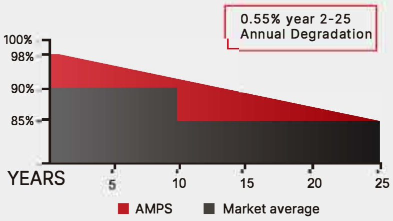
- Enhanced mechanical stability
- Impact and environmental resistance
- Wide mounting compatibility and easy accessibility

25 Years Product Warranty,
25 Years Linear Power Warranty,
0.5% Annual Degradation over Year 2 – Year 25

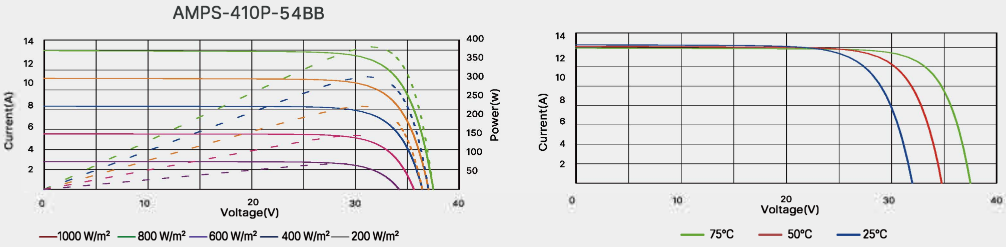
Domestic Content: Rooftop

MLPE: Up to 13.1%; String(Fixed): Up to 16.4%
Frame | Encapsulant | Backsheet | Junction Box | Bus Ribbons

Linear Power WARRANTY



IV CURVES



ELECTRICAL CHARACTERISTICS AT STC

Type	AMPS-400P-54BB	AMPS-405P-54BB	AMPS-410P-54BB	AMPS-415P-54BB
Maximun Power (Pmax)	400W	405W	410W	415W
Open Circuit Voltage (Voc)	37.0V	37.25V	37.5V	37.8V
Short Circuit Current (Ise)	13.78A	13.86A	13.94A	13.88A
Voltage at Maximum Power (Vmp)	31.05V	31.24V	31.43V	31.6V
Current at Maximum Power (Imp)	12.89A	12.97A	13.05A	13.14A
Module Efficiency (%)	20.49	20.74	21.00	21.25
Operating Temperature	-40°C to +85°C			
Maximum Systerm Voltage	1000V DC/1500V DC			
Fire Resistance Rating	Type 1 (in accordance with UL 1703)/Class C(IEC61730)			
Maximum Series Fuse Rating	25A/30A			

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5; Tolerance of Pmax:±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICS AT NOCT

Maximun Power (Pmax)	300W	304W	308W	312W
Open Circuit Voltage (Voc)	34.2V	34.4V	34.6V	34.8V
Short Circuit Current (Ise)	11.10A	11.15A	11.20A	11.25A
Voltage at Maximum Power (Vmp)	28.2V	28.4V	28.6V	28.8V
Current at Maximum Power (Imp)	10.64A	10.71A	10.77A	10.84A

NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 mis

MECHANICAL DATA

Cell type	Monocrystalline PERC 182*91mm
Number of cells	108 (6x18)
Module dimensions	1722x1134x35mm (67.80 x 44.65 x 1.18 inches)
Weight	21.5kg (47.4 lbs)
Front cover	3.2mm (0.13 inches) tempered glass with AR coating
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm² (0.006in²), Portrait: 1200mm (47.24 inches)
Maximum Load Capacity	5400 Pa Snow Load / 5400 Pa Wind Load
Connector	Stäubli EVO2

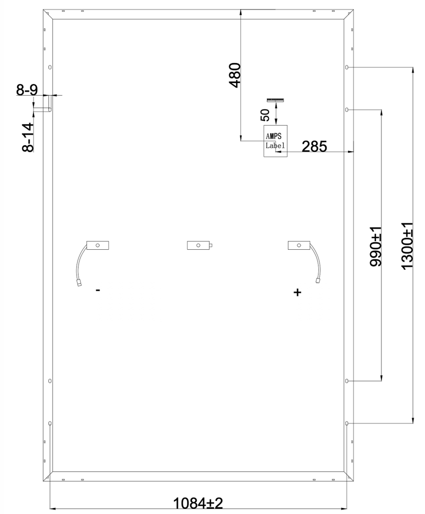
TEMPERATURE CHARACTERISTICS

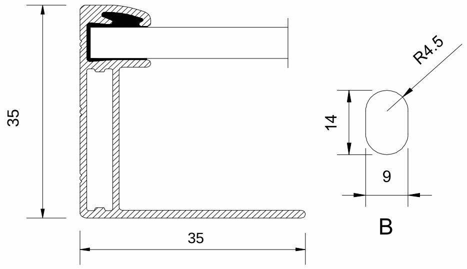
Nominal Operating Cell Temperature (NOCT)	43°C (±2°C)
Temperature Coefficients of Pmax	-0.36%/°C
Temperature Coefficients of Voc	-0.28%/°C
Temperature Coefficients of Ise	0.05%/°C

PACKAGING

Standard packaging	31 pcs/pallet
Module quantity per 53' container	744 pcs
Module quantity per 40' container	558 pcs

ENGINEERING DRAWINGS



Unit: mm