

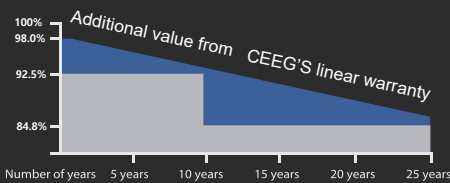
# Mars Series Half cell Modules

The power output shall not be less than 98.0% of the minimum power output stated in the product datasheet in the first year of the product's life cycle.

The loss of power output shall not exceed 0.55% per year thereafter, ending with 84.80% in the 25th year.

■ CEEG    ■ Standard warranty

CEEG's NEW linear performance warranty



# CEEG460-120M

High efficiency PERC tech for esthetic applications

Module Fire Performance: Type 1 (UL 1703)

Fire Resistance Rating: Class C (IEC 61730)

CEEG445-120M

CEEG450-120M

CEEG455-120M

CEEG460-120M

**21.26%**

Module efficiency

**460W**

Highest power output

**12 Year**

Material & workmanship warranty

**25 Year**

Linear power output warranty



Industry leading conversion efficiency



Certificated to withstand wind (2400Pa) and snow load (5400Pa)



Positive tolerance offer



Excellent performance under weak light condition



Passed salt mist & ammonia corrosion, blowing sand and hail testing



Good temperature coefficient enables better output in hot climates



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## Electrical Characteristics at Standard Test Conditions (STC)

Module Type	CEEG 445-120M	CEEG 450-120M	CEEG 455-120M	CEEG 460-120M
Maximum Power(Pmpp)[W]	445	450	455	460
Positive Power Tolerance[W]	0~5	0~5	0~5	0~5
Open Circuit Voltage(Voc)[V]	41.10	41.25	41.40	41.55
Short Circuit Current(Isc) [A]	13.75	13.82	13.89	13.96
Maximum Power Voltage(Vmpp)[V]	34.60	34.75	34.90	35.05
Maximum Power Current(Imp)[A]	12.87	12.95	13.04	13.13
Module Efficiency	20.62%	20.85%	21.08%	21.32%

Electrical data relates to standard test conditions(STC): irradiance 1000W/m<sup>2</sup>; AM1.5; cell temperature 25°C measuring uncertainty of power is within ±3%. Certified in accordance with IEC61215, IEC61730-1/2 and UL1703.

## Electrical Characteristics at Nominal Operating Cell Temperature(NOCT)

Module Type	CEEG 445-120M	CEEG 450-120M	CEEG 455-120M	CEEG 460-120M
Maximum Power(Pmpp)[W]	337	340	344	348
Open Circuit Voltage(Voc)[V]	38.59	38.73	38.87	39.02
Short Circuit Current(Isc) [A]	11.06	11.11	11.17	11.22
Maximum Power Voltage(Vmpp)[V]	32.21	32.35	32.49	32.63
Maximum Power Current(Imp)[A]	10.45	10.52	10.59	10.66

Electrical data relates to nominal operating cell temperature(NOCT): irradiance 800W/m<sup>2</sup>; wind speed 1m/s; cell temperature 45°C ambient temperature 20°C measuring uncertainty of power is within ±3%.

## Temperature Characteristics

Voltage Temperature Coefficient	-0.28%/°C
Current Temperature Coefficient	+0.048%/°C
Power Temperature Coefficient	-0.35%/°C

## Maximum Ratings

Maximum System Voltage(V)	1000/1500
Series Fuse Rating(A)	25
Reverse Current Overload(A)	25

## Mechanical Characteristics

Dimensions	1909×1134×35mm - frame thickness upon request
Weight	24.2kg
Frame	Anodized aluminum profile-black frame upon request
Front Glass	Toughened low iron glass,3.2mm
Cell Encapsulation	EVA(Ethylene-Vinyl-Acetate)
Back Sheet	Composite film-black back sheet upon request
Cell	120(6×20) monocrystalline solar semi-cells (182×91)
Junction Box	Rated current≥25A, IP≥65, TUV&UL
Cable	Length 300mm,1×4mm <sup>2</sup>
Connector	MC4/compatible with MC4

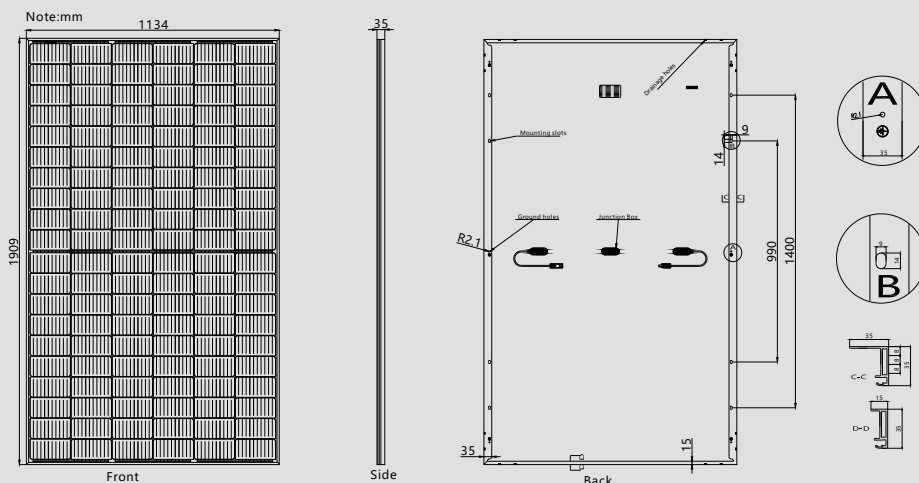
## Packaging

Container 20'	216pcs.
Container 40'	432pcs.
Container 40'HC	744pcs.

## System Design

Temp.Range	-40°F to +185°F(-40°C to +85°C)
Hail	Max. diameter of 0.98"(25mm)with impact speed of 51.2mph(23m/s)
Max.Capacity	Wind 2400Pa, snow 5400Pa-7200Pa upon request
Application Class	A
Safety Class	II

## Dimensions



## I-V Curves

