

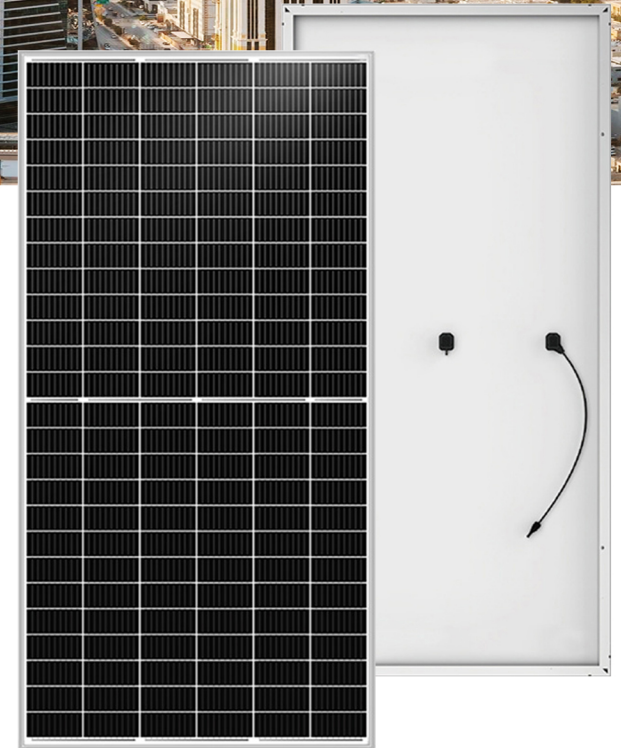
Harvest the Sunshine

LEEN
450W

LEEN-144EG1M6 450W

MONOCRYSTALLINE MODULE 425W~450W

- EXCELLENT MODULE CONVERSION EFFICIENCY OF UP TO 20.70%
- UP TO +2% POSITIVE POWER OUTPUT GUARANTEED.
- REDUCING EQUIPMENT LOSS INCREASES THE POWER GENERATION IN OVERALL SYSTEM.
- BOS COST REDUCTION FOR 1500 VDC SYSTEM BY CONNECTING MORE MODULES IN A STRING.
- SPLIT JUNCTION BOXES REDUCE PANEL TEMPERATURE RESULTING INCREASED RELIABILITY.
- IMPROVED PERFORMANCE IN PARTIALLY SHADED CONDITION.
- LOSS MINIMIZATION DUE TO EXCELLENT TEMPERATURE CO-EFFICIENT.
- BETTER PERFORMANCE EVEN AT LOW IRRADIANCE CONDITION.
- HIGHER SPECIFIC YIELD.



LEEN-144EG1M6 450W

MONOCRYSTALLINE MODULE 425W~450W

Technical Data for LEEN_144EG1_MS450 Monocrystalline Module

Electrical Parameter at STC

Parameter	144EG1-MS450
Power rating – Pmax(Wp)	450 445 440 435 430 425
Efficiency (%)	0-2 0-2 0-2 0-2 0-2 0-2
Efficiency (%)	20.70 20.47 20.24 20.01 19.78 19.55
Open circuit voltage – Vmp(V)	42.78 42.38 42.09 41.65 41.55 41.11
Short circuit current – Imp(A)	10.54 10.51 10.48 10.48 10.42 10.36
Maximum power voltage – Voc(V)	49.08 48.84 48.57 48.12 47.82 47.59
Maximum power current – Isc(A)	11.14 11.12 11.08 11.03 11.01 10.96
Standard Test Conditions (STC) of irradiance 1000 W/m ² , spectrum AM 1.5 temperature of 25°C. Except Pmax, all other parameters have a tolerance of ±3%.	
Operating Conditions	
Operating temperature range	-40°C to + 85°C
Maximum system voltage	1500/1000 VDC
Operating temperature	45± 2°C
Maximum diameter	Maximum diameter of 25 mm with velocity 23 m/s
Temperature Coefficients (TC)	
Power Coefficient (Voc)	-0.36% /°C
Power Coefficient (Imp)	0.07% /°C
Power Coefficient	-0.38% /°C

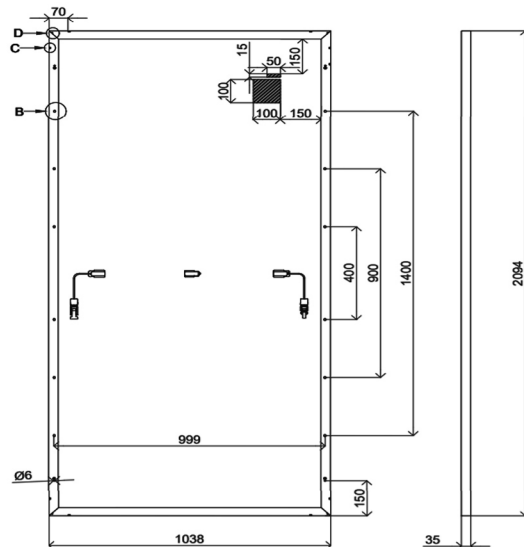
Mechanical Specification

Solar cells	144 pcs monocrystalline Silicon(PERC), 9BB
Encapsulation	Ultra - clear PID free EVA (Ethylene-Vinyl-Acetate)
Backside	UV protected reflective backsheet
Frame	Silver Anodized Aluminium Alloy
Front glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Dimensions	(L) 2094mm x (W) 1038 mm x (H) 35mm
Weight	~26 kg
J-box	IP 68 certified, 3 diodes junction box
Cable	Solar cable 400 mm length, 4 mm ²
Connectors	MC4 compatible connectors
Application Class	Class A
Electrical Safety	Class II
Fire Safety	Class C (Type 1)
Surface load	(Snow load 5400 Pa, wind load 2400 Pa).

Guarantees and certifications

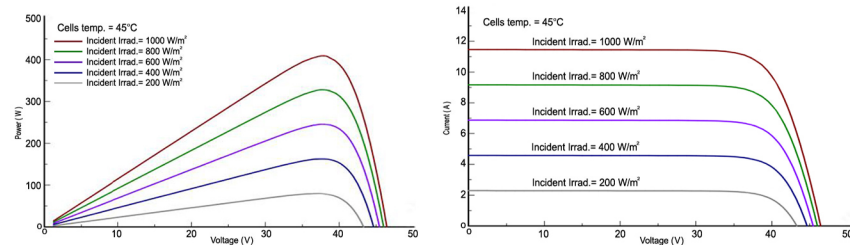
Product warranty**	10 years
Performance guarantee**	Limited warranty for power output :- 90% for 10 years and 80% for 25 years

Drawing



IV Curve

(Measurements are in mm)



- For handling & installation instructions refer Masdar Solar Installation Manual available on Company website.
- Before placing order confirm your requirement with our sales representative.
- The electrical data given here is for reference purpose only.
- Dispose-off the product as E-Waste after end of its working life.
- ** Refer to Masdar Solar's warranty document for terms and conditions.
- Due to constant product modifications, Masdar Solar reserves the right to amend the above specifications without prior notice.

Harvest the Sunshine

LEEN
550W

LEEN 550W

144EG1M10

525~550W

- Based On M10-182mm wafer, best choice for ultra-large power plants
- Advanced module technology delivers superior module efficiency
 - M10 Gallium-doped Wafer
 - Smart Soldering
 - 10-Busbar Half-cut Cell
- Globally validated bifacial energy yields
- High module quality ensures long-term reliability

12

12-year Warranty for
Materials and Processing

30

30-year Warranty for Extra
Linear Power Output

Complete System and
Product Certifications

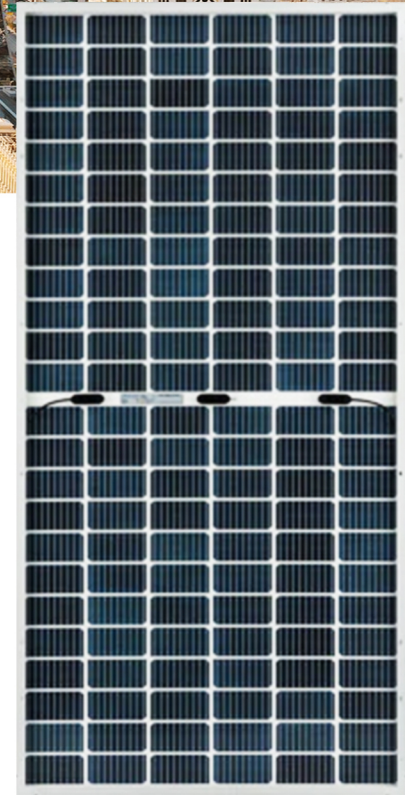
IEC 61215, IEC 61730, UL 61730

ISO 9001:2015:ISO Quality Management System

ISO 14001:2015:ISO Environment Management System

TS62941:Guideline for module design qualification and type approval

ISO 45001:2018:Occupational Health and Safety

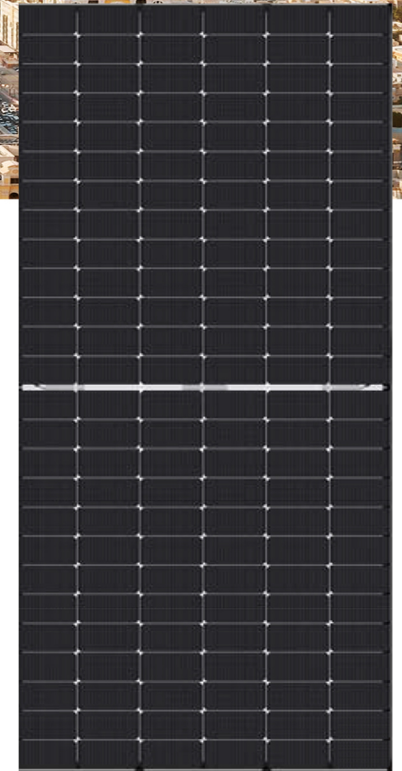


Harvest the Sunshine

590-610 Watt

BIFACIAL MODULE WITH
DUAL GLASS

**LEEN
600W**



N-Type

Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018
Occupational health and safety management systems



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Enhanced Mechanical Load

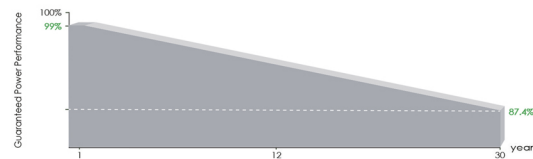
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



Higher Power Output

Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.

LINEAR PERFORMANCE WARRANTY



12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30



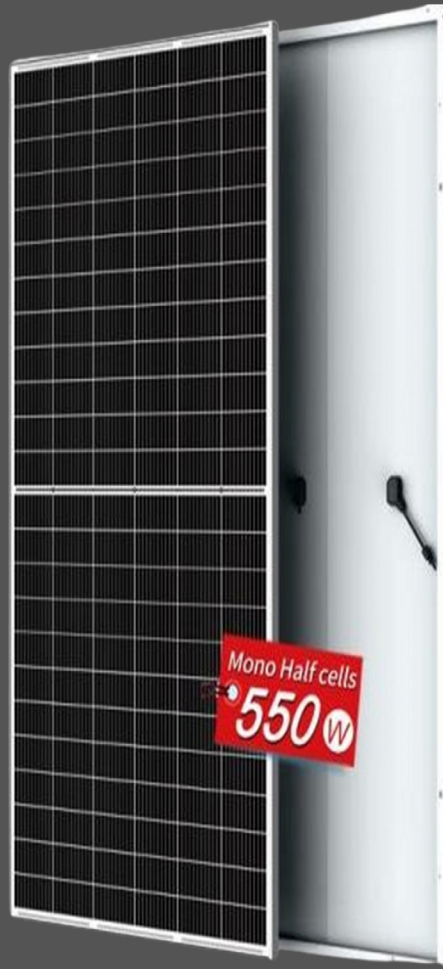
Our Company Project



LEEN
450

144 Cells 9 BB

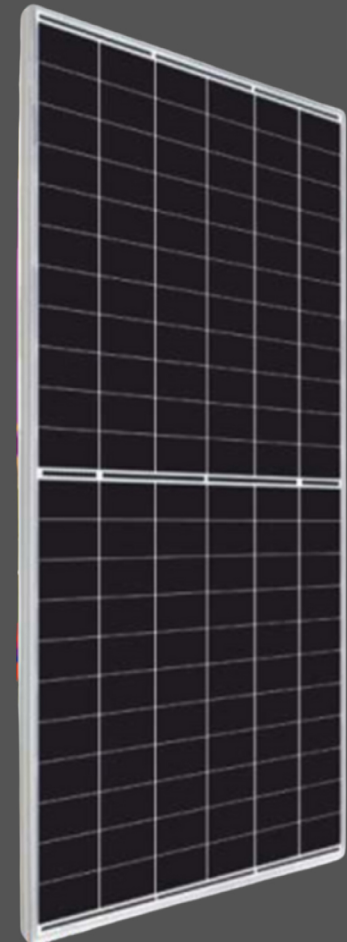
All with A grade for on-grid & off-grid
used for residential
, public rooftop & ground mounting



LEEN
550

144 Cells 10 BB

All with A grade for on-grid & off-grid
used for residential
, public rooftop & ground mounting



LEEN
660

132 Cells MBB

All with A grade for on-grid & off-grid
used for residential
, public rooftop & ground mounting



Technical Features



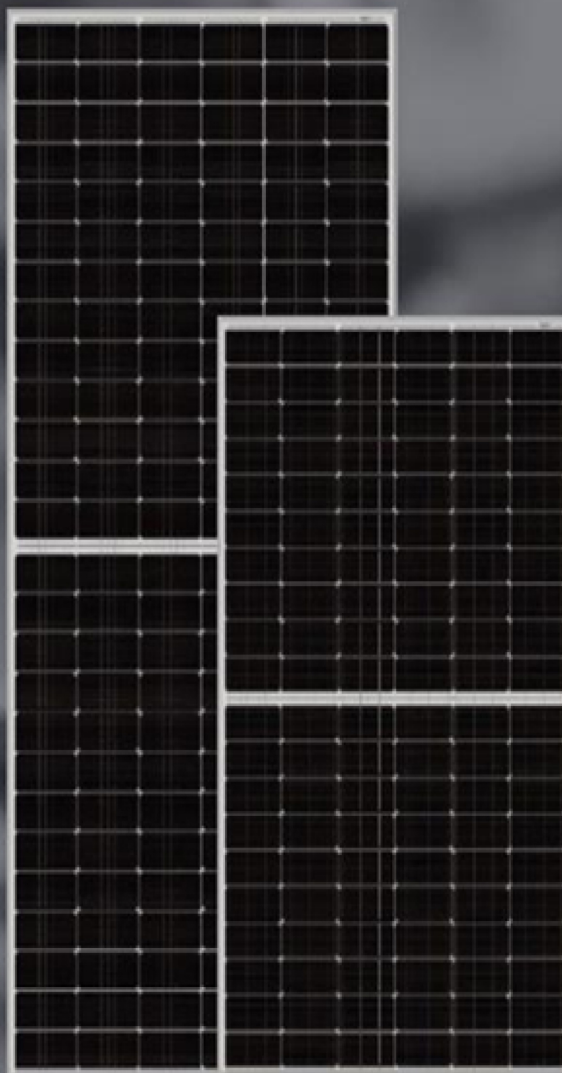
Not affected by shading

When the lower half of a half-cut module is shaded by horizontal PV arrays, power generated by the upper half will not be affected.



Adaptable to high temperatures and irradiation levels

In high temperature and high irradiation environments, the output of a half-cut module is higher.



Anti-hotspot

When hot spots occur, the hot spot temperature of a half-cut module is 10-20°C lower compared to a normal module in the same environment and application scenario.



Low working temperature

Current running through the module is halved as the module uses half-cut cells, the lower cell energy consumption helping to reduce operating temperature.

