MACWIN®

SOLAR ENERGY

P-TYPE M10

525W to 560W

CLEAR **VISION**

CLEAN **ENERGY**

High Efficiency

Excellent Module Conversion Efficiency of up to 23.24%

Better Weak Light Performance

Delivers higher power output even in low-light conditions such as cloudy, rainy, or foggy days.

5%-10% Additional Power Generation

More than 5%-10% additional power gain compared to the regular modules.

High Saving

Lower LCOE, reduced BOS cost, shorter payback time.

ZERO LID (Light Induced Degradation)

No-LeTID
No-LID

Excellent anti-LeTID. Low power degradation, high energy yield.

PID Resistance

Excellent Anti-PID Performance Guarantee.

CERTIFICATIONS

IEC-61701, IEC-61853-PART-1, IEC-61853-PART-2 IAM& LETID,
IS -16170 -PART-1, IEC-62716, IEC-62804, IEC 60905, IEC-61215, IEC-63342, IEC 61701, IEC 62716

MADE IN INDIA

12 YEARS — 12 Years Warranty For Materials And Processing

30 YEARS — 30 Years Warranty For Linear Power Output

BIS Certified

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P-TYPE M10 TECHNICAL DATA

ELECTRICAL PERFORMANCE [Note : Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty < ±3%. Average value of NOCT: 45.08 ± 2 °C]

ELECTRICAL CHARACTERISTICS	MSE525WC		MSE530WC		MSE535WC		MSE540WC		MSE545WC		MSE550WC		MSE555WC		MSE560WC	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Nominal Maximum Power (Pmax)	525 W	388.64	530 W	392.35	535 W	396.05	540 W	399.75	545 W	403.45	550 W	407.15	555 W	410.85	560 W	414.55
Optimum Operating Voltage (Vmp)	41.28 V	38.50 V	41.51 V	38.71 V	41.75 V	38.94 V	41.97 V	39.14 V	42.20 V	39.36 V	42.42 V	39.56 V	42.64 V	39.77 V	42.89 V	40.00 V
Optimum Operating Current (Imp)	12.72 A	10.08 A	12.77 A	10.12 A	12.82 A	10.16 A	12.86 A	10.16 A	12.92 A	10.24 A	12.97 A	10.27 A	13.02 A	10.31 A	13.06 A	10.35 A
Open Circuit Voltage (Voc)	50.02 V	46.78 V	50.21 V	46.96 V	50.40 V	47.13 V	50.61 V	47.33 V	50.80 V	47.51 V	50.90 V	47.60 V	51.18 V	47.86 V	51.37 V	48.04 V
Short Circuit Current (Isc)	13.20 A	10.63 A	13.24 A	10.66 A	13.28 A	10.69 A	13.33 A	10.73 A	13.36 A	10.76 A	13.39 A	10.78 A	13.44 A	10.82 A	13.49 A	10.86 A
Module Efficiency	20.33 %		20.53 %		20.73 %		20.92 %		21.12 %		21.31%		21.50 %		21.70 %	

STACKING STANDARD	20FT	40FT
No. of Modules per Container:	336	616
No. of Pallets per Container:	12	22
No. of Modules per Pallet/Weight:	28 Nos/840 Kg	
Pallet Dimensions in mm:	2320(L) *1000(w)*1275(H)	

MECHANICAL SPECIFICATIONS

Dimensions	(L) 2278 mm x (w) 1134 mm x (H) 35 mm
Weight(kg)	~28 Kg
Solar cells	144 pcs monocrystalline Silicon (PERC), Multi BB
Frame	Silver Anodized Aluminium Alloy
Backside	UV protected reflective backsheet
Encapsulate	Ultra - clear PID free EVA (Ethylene-Vinyl-Acetate)
Solar Glass	3.2 mm, High Transmission, AR Coated Tempered Glass
Junction Box	IP 68 certified, 3 diodes, Split junction box
Series Fuse Rating	25 A
Cable	Solar cable 400 mm length, 4 mm^2
Connectors	MC4 compatible connectors
Application Class Rating	Class A
Safety Class Rating	Class II
Fire Safety	Class C (Type 1)
Surface load	Snow load 5400 Pa, Wind load 2400 Pa

MAXIMUM OPERATING CONDITIONS

Temperature range	-40°C to +85°C
Maximum System Voltage	1500 VDC
NOCT	45 ± 2°C
Hail Resistance	Max. diameter of 25mm with velocity 23m/s

TEMPERATURE COEFFICIENTS

Current α (Isc) :	0.048%/°C
Voltage β (Voc) :	-0.28%/°C
Power γ (Pmax) :	-0.34%/°C

PACKAGING CONFIGURATION

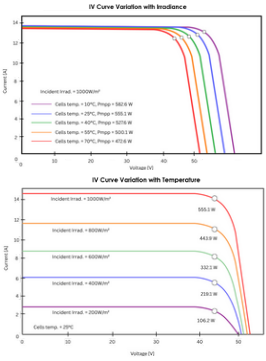
Number of Modules per Pallet	31
No of pallet	20
No of module, 40ft HC container	620

Caution: Please read the safety and installation instructions before using the product.

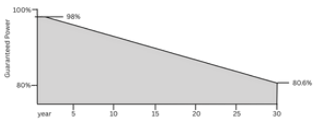
Warranty: Linear performance warranty for 30 years, with a degradation of up to 1% in the first year and 0.4% per year from year 2 to year 30. Please read the MACWIN'S warranty documents thoroughly.

Disclaimer: Specifications provided in this datasheet are subject to change without prior notice due to continuous innovation in product development and R&D activities.

REFERENCE IV CURCE DETAIL:



LINEAR PERFORMANCE WARRANTY:



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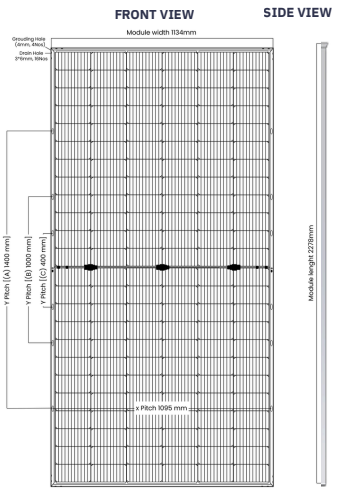

MACWIN SOLAR PVT. LTD. reserves the right to make any adjustments to the information described here. The dataset contained in this specification does not form a representative sample of a single module's data. @T&C Apply.

This data was reviewed and updated as of 28th August 2025