

9 BUS BAR MONO PERC (HALF CUT)



SOLAR MODULE

POWER OUTPUT WATT	MAXIMUM EFFICIENCY	POSITIVE POWER TOLERANCE	CELLS (HALF CUT)
430-460Wp	20.72%	0~+4.99Wp	M6 144



Cost Effective



Better Field Reliability



**Better Performance Even During
Partial Shadow Conditions**



**Less Energy Loss With
Micro-Cracks**



**Increased Shade Tolerance
Half-Cell Module**

APPLICATIONS



**Rooftop residential
systems**



**On-grid large scale
utility systems**



**On-grid rooftop
industrial and
commercial systems**

TOLLFREE NUMBER

18002121716

HVR SOLAR PVT. LTD.

Corporate Office : 1107, Aggarwal Corporate Heights, Netaji Subhash Place, Pitampura, Delhi-110034
Factory: Plot No. 34-35, Phase-1, HSIIDC Barhi Industrial Estate, Sonapat, Haryana - 131101



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GENERAL

MODULE SERIES	430Wp	435Wp	440Wp	445Wp	450Wp	460Wp
Dimension L x W (mm)	2115 X 1050	2115 X 1050	2115 X 1050	2115 X 1050	2115 X 1050	2115 X 1050
Cell Size (mm)	83 x 166	83 x 166	83 x 166	83 x 166	83 x 166	83 x 166
No of Cell	144	144	144	144	144	144
Max Series Fuse Rating (A)	30	30	30	30	30	30
Max Sysstem Voltage (V)	1500	1500	1500	1500	1500	1500

ELECTRICAL CHARACTERISTICS AT STC

Max Power (Wp)	434.16	438.48	442.08	446.40	450.00	460.00
Max Voltage (V)	42.26	42.34	42.48	42.62	42.77	42.84
Max Current (A)	10.34	10.37	10.42	10.49	10.55	10.65
Open Circuit Voltage (V)	49.18	49.25	49.39	49.54	49.68	49.68
Short Circuit Current (A)	10.96	10.98	11.02	11.06	11.10	11.15
FF	81.08	81.18	81.32	81.64	81.84	82.36
Module Efficiency (%)	19.55	19.74	19.91	20.10	20.26	20.72

ELECTRICAL CHARACTERISTICS AT NOCT

Max Power (Wp)	321.28	324.48	327.14	330.34	333.00	340.460
Max Voltage (V)	38.88	38.95	39.08	39.21	39.35	39.41
Max Current (A)	8.27	8.30	8.34	8.39	8.44	8.52
Open Circuit Voltage (V)	46.23	46.29	46.43	46.56	46.70	46.70
Short Circuit Current (A)	9.86	9.88	9.92	9.95	9.99	10.04

MECHANICAL DATA

L X W X H	2115 X 1050 X 40mm
WEIGHT	25.1 Kg
JUNCTION BOX	IP 67/ IP 68 Split Type JB
CABLE & CONNECTORS	Solar Cable 350 / 450 mm x 2 Nos Black with MC4 Connectors
APPLICATION CLASS	Class A (Safety Class II)
SUBSTRATE (GLASS)	3.2mm High Transmission Low Iron Content
SOLAR CELLS & ORIENTATION	144 Half Cut Mono PERC type M6- 9 Busbar
CELL ENCAPSULANT	EVA (Ethylene Vinyl Acetate)- FC/UFC
BACKSHEET	Composite Film- White/Black
FRAME	Anodised Aluminium Frame with Twin wall Profile- Silver/Black
MECHANICAL LOAD TEST	Sustain Heavy wind & snow loads (2400Pa & 5400 Pa or 550 kg/m ²). Maximum diameter of 24mm with Hail impact of 83 Km/Hr.

TEMPERATURE COEFFICIENTS AT OPERATING CONDITIONS

Tc OF OPEN CIRCUIT VOLTAGE (α)	-0.27%/K
Tc OF SHORT CIRCUIT CURRENT (β)	+0.03%/K
Tc OF POWER (γ)	-0.35%/K
Max System Voltage	1500V
NOCT	45°C to 2°C
TEMPERATURE RANGE	-40°C to 85°C

MECHANICAL DATA

DIMENSION (mm)

A	2115
B	1050
C	1010
D	250
E	250
F	1115
G	250
H	250
I	30
J	40

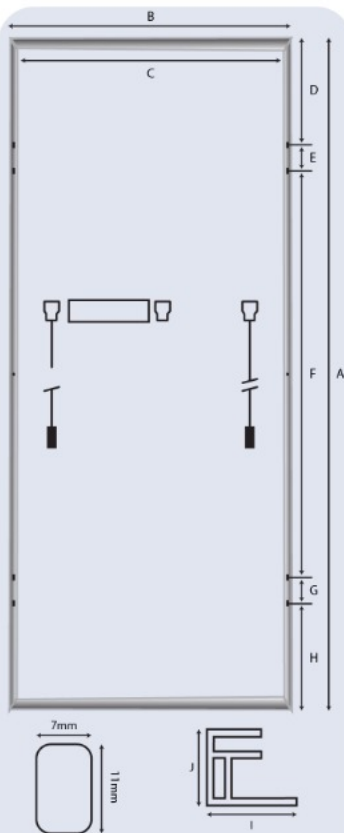
WARRANTY AND CERTIFICATIONS

Performance Warranty** : Linear Power Warranty For 27 Years
With 2% for 1st Year Degradation and 0.55% from 2 to 27 years

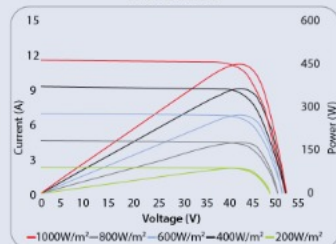
⚠ Caution: read safety and detail installation manual before using the product (refer our website)

** Refer to HVR Solar warranty documents for terms and conditions.

** Specifications included in this datasheet are subject to change without notice, Electrical data without guarantee.
Please confirm your requirements with the company representative while placing your order.



I-V Curve



Performance Warranty

