PRODUCT
DATASHEET

ISH
ENERGY OF ISH AND POWER OF YOURS
ISH SOLAR

ISH SUPREME

ISH-TG12R-66H

610-650 WATT

Bifacial Module With Dual Glass

Product of **INDIA**



12 Years
Product Warranty

30 Years
Linear Power Warranty

1%
First-Year Degradation

0.4%
Annual Degradation
(Over 30 years)

CERTIFICATIONS

IEC
IS 14286 (Part 1/ Sec 1): 2023
IS/IEC 61730-1:2023
IS/IEC 61730-2:2023
IEC 61215-1-1:2021
IEC 62804 - PID
IEC 61853 - Pan File
IEC 62716 - Ammonia
IEC 61701 - Salt Mist Corrosion

ISO 9001:2015
14001:2015
45001:2018

CE

N-Type Technology
Up to 30% Additional Power Gain when compared with conventional P-type module

Higher Power Generation
Excellent anti-PID performance via optimized process and materials control. Lower susceptibility to LID & LETID

Lower LCOE
Lower balance of systems cost. Improved value proposition of the product with competitive ROI

0% Negative Power Tolerance
Positive power tolerance of upto 0~ 4.99Wp. Module current binning radically reduces string mismatch losses

Rigorous Testing Criteria
Four Stage EL inspection by AI to ensures high quality defect free Solar modules

Optimized Heat Resistance
Optimized temperature co-efficient via advanced graphical patterned busbar and multi cell technology

Electrical Data At 1000W/m², 25° C, Ambient Temperature, 1.5 m/s Wind Velocity

Model Name	ISHTG12R66H610	ISHTG12R66H615	ISHTG12R66H620	ISHTG12R66H625	ISHTG12R66H630	ISHTG12R66H635	ISHTG12R66H640	ISHTG12R66H645	ISHTG12R66H650
Peak Power Pmax (Wp)	610	615	620	625	630	635	640	645	650
Max Voltage Vmpp (V)	40.67	40.79	40.88	40.99	41.05	41.16	41.27	41.45	41.54
Max Current Impp (A)	15.00	15.08	15.17	15.25	15.35	15.43	15.51	15.57	15.65
Open Circuit Voltage Voc (V)	46.93	47.06	47.19	47.32	47.45	47.52	47.79	48.06	48.34
Short Circuit Current Isc (A)	15.88	15.92	15.95	16.00	16.05	16.11	16.15	16.25	16.33
Module Efficiency (%)	22.58	22.77	22.95	23.14	23.32	23.51	23.69	23.88	24.06

Electrical Data At NOCT At 800W/m², 20° C, Ambient Temperature, 1 m/s Wind Velocity

Peak Power Pmax (Wp)	452.11	455.82	459.42	463.21	466.32	470.57	474.47	478.00	481.80
Max Voltage Vmpp (V)	37.52	37.64	37.72	37.82	37.88	37.98	38.08	38.24	38.33
Max Current Impp (A)	12.05	12.11	12.18	12.25	12.33	12.39	12.46	12.50	12.57
Open Circuit Voltage Voc (V)	44.50	44.62	44.74	44.87	44.99	45.06	45.31	45.57	45.83
Short Circuit Current Isc (A)	12.78	12.81	12.83	12.87	12.92	12.96	13.00	13.08	13.16

Electrical Characteristics With Different Rear Side Power Gain

Pmax (Wp)	641	645	651	656	661	666	672	677	682
Efficiency (5%)	23.7	23.90	24.09	24.29	24.48	24.68	24.87	25.07	25.26
Pmax (Wp)	701	707	713	718	725	730	736	741	747
Efficiency (15%)	25.96	26.18	26.39	26.61	26.81	27.03	27.24	27.46	27.66
Pmax (Wp)	762	768	775	781	787	793	800	806	812
Efficiency (25%)	28.22	28.46	28.68	29.92	29.15	29.38	29.61	29.85	30.07

The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

Operating Condition

Power Tolerance	0~+5W
Maximum System Voltage	1500
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature (NOCT)	42±2 °C
Max. Surface Load Capacity, Pa	5400
Max. Wind Speed Capacity, Pa	2400
Safety Class	Class II
Hail Impact Velocity, m/sec	23

Mechanical Characteristics

Cell Type	N-Type TOPCon
No. Of Cells	132 (66 x 2) Pcs
Dimensions	2382 x 1134 x 35mm
Weight	33.4 kg
Front Glass	2.0 mm, Low Iron, Heat Strengthened AR Coated
Back Glass	2.0 mm, Low Iron, Heat Strengthened Glass
Frame	T6 Anodized Aluminum Alloy
Junction Box	IP 68, Split Junction Box With Individual Bypass Diodes
Output Cables	4.0 mm² (+): 400mm, (-): 400mm Or Customized Length

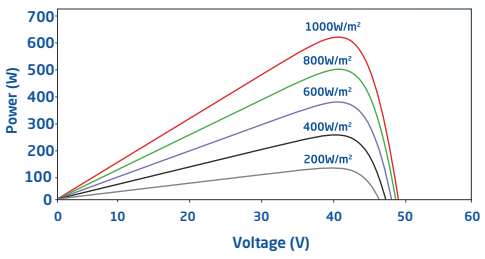
Packaging Configuration

Container	40'HC
Height Of Modules (mm)	35
Number Of Modules Per Pallet	31
Number Of Pallets Per Container	20
Number Of Modules Per Container	620

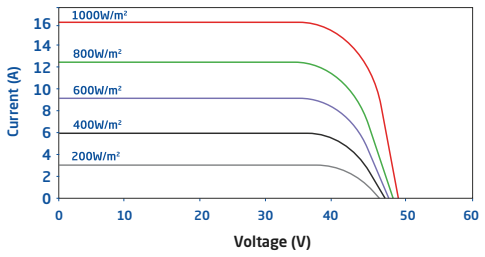
TEMPERATURE COEFFICIENTS

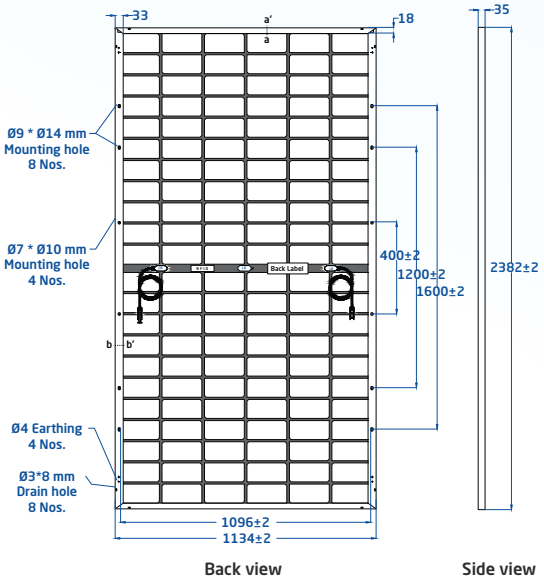
Tc Of Open Circuit Voltage (B)	-0.25%/°C
Tc Of Short Circuit Current (A)	0.045%/°C
Tc Of Power (Γ)	-0.3%/°C
Temperature Range	-40°C TO + 85°C

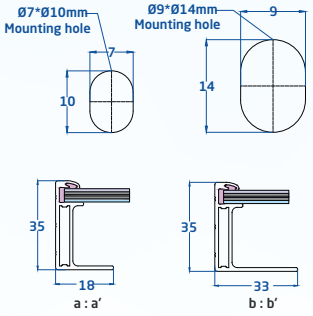
Power-Voltage Curves (ISHTG12R66H650)



Current-Voltage Curves (ISHTG12R66H650)

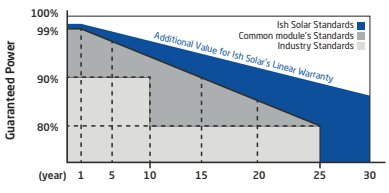






All dimensions are in mm.

Linear Performance Warranty



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- Warranty Statement
- Cleaning Manual
- Operation Manual
- Maintenance Manual

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