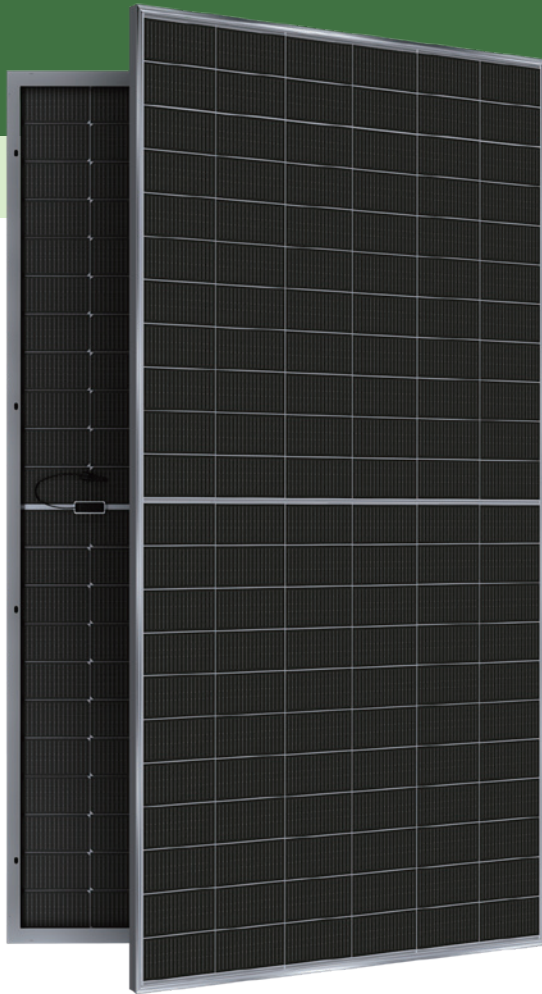


CORE Series Bifacial Modules

Power Range | 610-630W
Maximum Efficiency | 23.32%

Power Output Tolerance | 0W ~ +5W



FEATURES



Outstanding Performance

- More than 23% industry leading efficiency
- More power per square foot for tight roofs
- Excellent temperature coefficient for hot climates
- Bifacial design captures reflected light with no extra cost



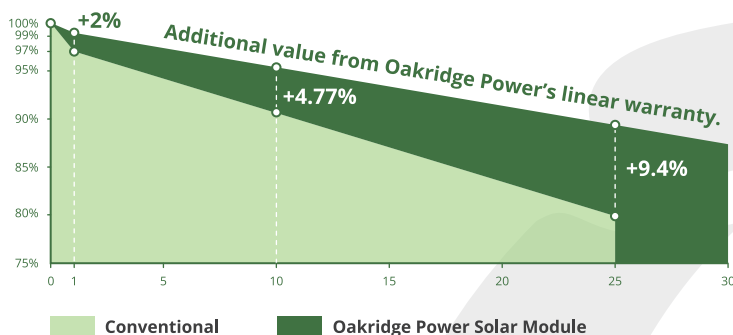
Long-Term Reliability

- Advanced dual-glass structure resists moisture and PID
- First year degradation under 1% from day one
- 30 year power warranty plus 12 year product warranty



Lifetime Investment Return

- Higher energy harvest reduces balance-of-system costs
- More power and lower degradation shorten your payback period
- Lower Levelized Cost of Energy over 30 years



Linear power output warranty

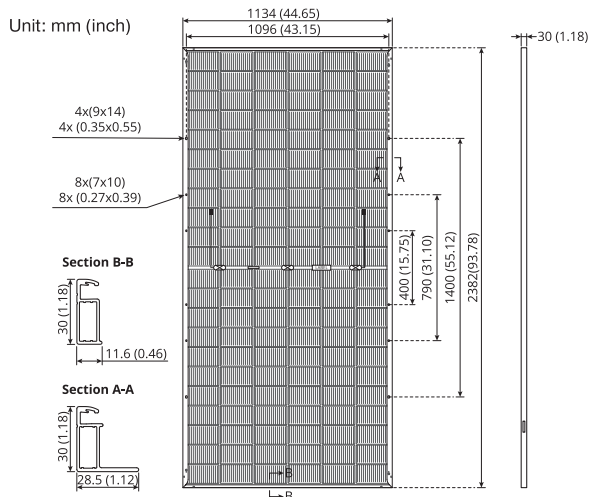


Guarantee on product material and workmanship

1st-year ≤ 1%

2nd~30th year ≤ 0.40% /year

Physical Characteristics



Mechanical Description

No. of Half cells	132pcs(6×22)
Dimension	2382×1134×30mm (93.78 × 44.65 × 1.18in)
Weight	32.5kg (71.65lbs)
Front Glass	2.0mm, highly transparent tempered glass with anti-reflective coating
Rear Glass	2.0mm, tempered glass
Frame	Anodized aluminum alloy
Junction Box	IP68 rated
Cable	4mm ² , portrait: 400mm(+) / 200mm (-), landscape: 1400mm (+) / 1400mm (-), can be customized
Diode Quantity	3 pcs
Connector	MC4 Compatible

Temperature Characteristics

Nominal Module Operating Temperature	44±2°C	Temperature Coefficient (V _{oc})	-0.25%
Temperature Coefficient (I _{sc})	+0.043%	Temperature Coefficient (P _{MAX})	-0.30%

Maximum Parameters

Load Rating	Front Side 5400pa Rear Side 2400pa	Maximum System Voltage	1500V DC
Operating Temperature	-40~+85°C	Maximum Fuse Rating	35A

Packaging Information

Modules Per Pallet	36 pcs/pallet	Per Container	15 pallet/container, 540 pcs/ 40'HQ container
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Electrical Performance Parameters

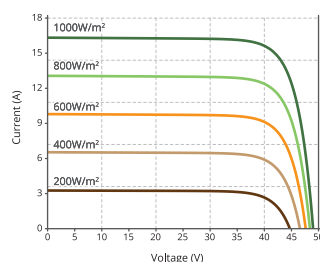
Model Type		OPA-HBDW610-210R(66)			OPA-HBDW615-210R(66)			OPA-HBDW620-210R(66)			OPA-HBDW625-210R(66)			OPA-HBDW630-210R(66)		
Testing Condition		STC	NMOT	BNPI	STC	NMOT	BNPI	STC	NMOT	BNPI	STC	NMOT	BNPI	STC	NMOT	BNPI
Nominal Max. Power	P _{MAX} (W)	610	460	673	615	464	679	620	468	685	625	472	688	630	476	695
Max. Power Voltage	V _{MP} (V)	40.64	38.10	40.69	40.76	38.26	40.83	40.88	38.43	40.97	40.99	38.60	41.06	41.12	38.77	41.23
Max. Power Current	I _{MP} (A)	15.01	12.08	16.54	15.09	12.13	16.63	15.17	12.18	16.71	15.25	12.23	16.78	15.33	12.28	16.87
Open Circuit Voltage	V _{OC} (V)	48.69	46.20	48.70	48.82	46.33	48.83	48.95	46.46	48.96	49.08	46.59	49.09	49.21	46.72	49.22
Short Circuit Current	I _{SC} (A)	15.89	12.82	17.53	15.98	12.89	17.63	16.06	12.96	17.73	16.15	13.03	17.83	16.23	13.10	17.91
Module Efficiency	(%)	22.58			22.77			22.95			23.14			23.32		

* STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5; NMOT: Irradiance 800W/m², Ambient Temperature 20°C, Air Mass AM1.5, Wind Speed 1m/s; Power measurement tolerance ±3%.

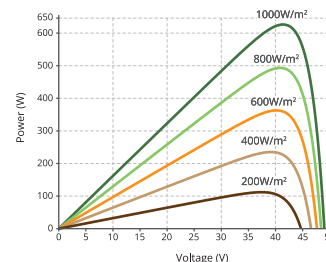
Bifacial Output-rearside Power Gain

5%	Maximum Power	P _{MAX} (W)	641	646	651	656	662
	Module Efficiency	(%)	23.71	23.91	24.10	24.29	24.49
10%	Maximum Power	P _{MAX} (W)	671	677	682	688	693
	Module Efficiency	(%)	24.84	25.04	25.25	25.45	25.66
25%	Maximum Power	P _{MAX} (W)	763	769	775	781	788
	Module Efficiency	(%)	28.23	28.46	28.69	28.92	29.15

Current-Voltage Curve (630W)



Power-Voltage Curve (630W)



Data contained in these specifications is subject to change without notice.

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