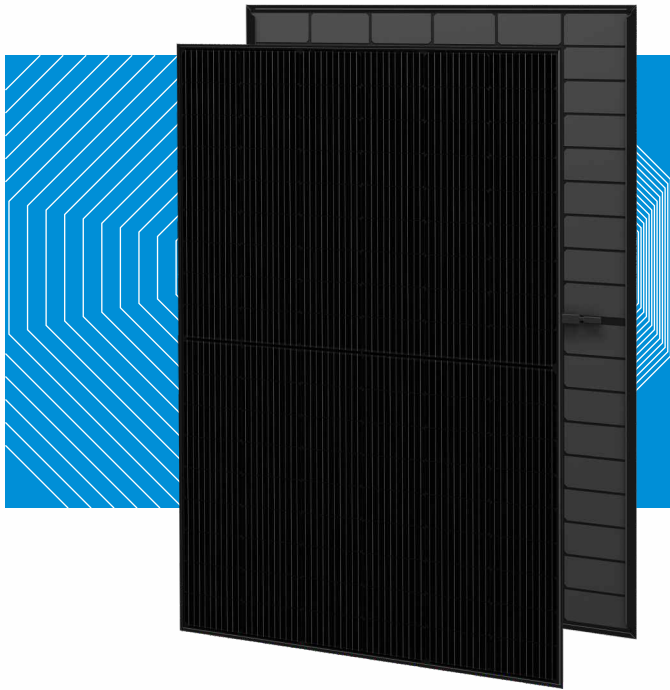


**RAYTECH
DOUBLE-GLASS BIFACIAL MODULE**

**54 LAYOUT
P-TYPE/MONO/BIFACIAL**
**395-420W
POWER OUTPUT**
**21.5%
MAX. EFFICIENCY**


BLACK

 10%
TRANSPARENCY




COMPANY PROFILE

Ningbo Raytech New Energy Materials Co., Ltd. (referred to as Raytech) is a national high-tech enterprise focusing on "new energy and new materials", integrating R&D, design, manufacturing sales and service. The company's main team has been focusing on the R&D and manufacturing of double-glass solar panels since 2009. its production bases are located in Zhejiang, Jiangsu, and Shandong. The company has an independent technology R&D team, a national key laboratory, and a fully automatic productionline for intelligent manufacturing. The product and quality control standards have reached the industry-leading level.

The company's products have obtained: TuV certification, UL certification, Australian CEC accreditation, Brazil INMETRO certification, the first batch of "Double Glass Leader Certification" in China, ISO9001 international quality system certification, 3C certification and many other authoritative certifications.

Raytech adheres to the business philosophy of "centering on user value and oriented to win-win cooperation", adheres to the principle of "pragmatic, inclusive, refined, and innovative", and carries the vision of "let the golden sunshine restore its natural color" to serve and contribute to the promotion of diversified applications of clean energy.

PRODUCT FEATURES

- 
Optimized Power Gain
 - 25% Max. Rear-side Power Gain;
 - Half-Cell Cutting Technology to Lower the Output Power Losses Brought by Shading;
 - Integrates Multiple-Busbar(MBB) Tech, Higher Power Output
- 
Working Condition Compatibility & Safety
 - High Resistance to High Temp., High Humidity, Sand, Acid and Alkali Environment;
 - 5400Pa Snow Loading, 2400Pa Wind Loading;
 - Frames with Light Double Glass to meet customer's Requirements of Lightness and Safety
- 
Higher-Than-Ever ROI
 - 1500V System Voltage, Lower BOS Cost;
 - Annual Degradation < 0.45%, 30-year Linear Performance Warranty;

CERTIFICATION

CONTACT US

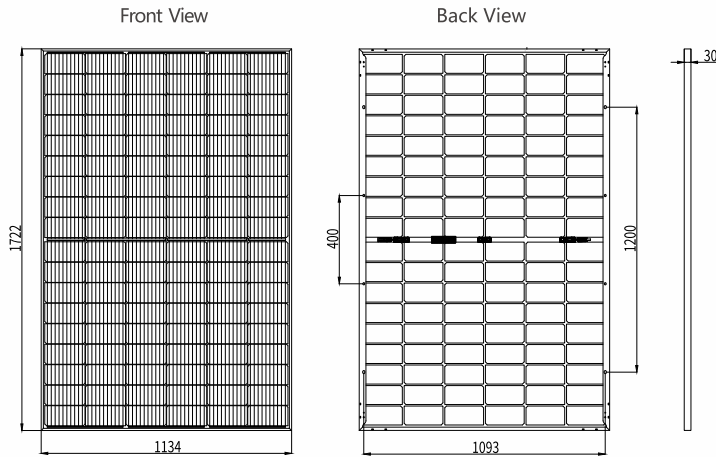
Ningbo Raytech New Energy Materials Co.,Ltd
 Address: Huyong Industry Park, 18 Qiyuan Road, Hangzhou Bay New District, Ningbo City, Zhejiang, China
 Tel: +86-400-155-9909
 Website: www.raytech-energy.com
 Email: sales@raytm.cn



Scan the code to browse our website

P-type Bifacial Double-Glass Module: 395-420W

ENGINEERING DRAWING



MECHANICAL SPECIFICATIONS

Cell Type	Mono crystalline
Solar Cells	108(6*18)
Module Dimension [mm]	1722*1134*30
Weight [Kg]	24.5
Front Glass [mm]	2.0 Semi tempered coated glass
Interlayer	EVA/POE/PVB
Backsheet	2.0 Semi tempered glass
Junction Box	Ip68 Rated, 3 by-pass diodes
Connector	Multi-Contact MC4(or equivalent)
Frame	30mm Aluminum Frame
Maximum Load Capacity [Pa]	2400(wind load)/5400(snow load)

ELECTRICAL CHARACTERISTICS

Product model		BPDMN54H(S)-395		BPDMN54H(S)-400		BPDMN54H(S)-405		BPDMN54H(S)-410		BPDMN54H(S)-415		BPDMN54H(S)-420	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power at STC [Pmax]	[W]	395	295	400	299	405	302	410	306	415	310	420	314
Open Circuit Voltage [Voc]	[V]	36.85	34.79	37.04	34.96	37.17	35.09	37.34	35.25	37.56	35.46	37.73	35.62
Short Circuit Current [Isc]	[A]	13.64	11.01	13.73	11.09	13.83	11.17	13.93	11.25	14.01	11.31	14.08	11.37
Voltage at Maximum Power point[Vm]	[V]	30.94	28.59	31.12	28.76	31.30	28.92	31.48	29.09	31.67	29.26	31.87	29.45
Current at Maximum Power point[Im]	[A]	12.77	10.31	12.85	10.38	12.94	10.45	13.02	10.52	13.10	10.59	13.18	10.65
Power Tolerance	[%]	20.2		20.5		20.7		21.0		21.3		21.5	
Module Efficiency	[W]	0~+5											

STC: Air Mass AM1.5, Ir-radiance 1000W/m Cell temperature 25°C. NMOT: Air Mass AM1.5, Ir-radiance 800W/m Ambient temperature 20°C, wind speed 1m/s. Power Tolerance :±3%

COMPREHENSIVE ELECTRIC PARAMETERS (TAKING 410W AS AN EXAMPLE)

Back Gain	Pmax(W)	Voc(V)	Lsc(A)	Vmp(V)	Lmp(A)
5%	431	37.4	14.63	31.5	13.68
10%	451	37.4	15.32	31.5	14.32
15%	472	37.4	16.02	31.6	14.94
20%	492	37.5	16.72	31.6	15.57
25%	513	37.5	17.41	31.6	16.23

Bifaciality=75±5%

WORKING CONDITIONS

Maximum System Voltage	[V]	1000/1500 DC(IEC)
Operating Temperature	[°C]	-40~+85
Nominal Operating Cell Temperature	[°C]	45±3
Maximum rated current	[A]	30
Fire rating	-	Class C

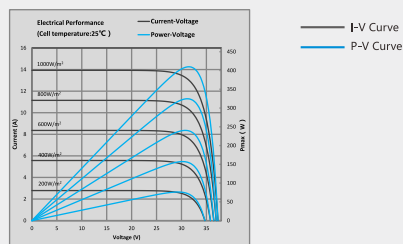
TEMPERATURE COEFFICIENTS

Temperature Coefficient of Pmax	[%/°C]	-0.35
Temperature Coefficient of Voc	[%/°C]	-0.28
Temperature Coefficient of Isc	[%/°C]	0.046

PACKAGE CONFIGURATION

Per box 36 pieces 40"HQ936 pieces

ELECTRICAL CURVES



LINEAR PERFORMANCE WARRANTY

NO MORE THAN 0.45% ANNUAL DEGRADATION OVER 30 YEARS

