

FLAMINGO G12R/132D 610-640W

Supreme Quality



High Efficiency

Module efficiency up to 23.7% based on N-Type wafer and TOPCon technology



Excellent Energy Yield

More power output in field operation due to better thermal behaviors, weak-light performance and bifaciality



Anti-degradation

Unsusceptible to LID, LeTID and less annual degradation due to special characteristics of N-Type



Quality Guarantee

High module quality ensures long-term reliability

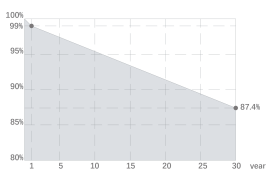
Module Characteristics

12-Year
Product Warranty

30-Year
Linear Power Warranty

1%
First Year Degradation

0.4%
Annual Power Degradation



At least 87.4% of nominal power up to 30 years



IEC 61215(2021) / IEC 61730(2023)
ISO 9001: 2015: ISO Quality Management System
Anti-PID / Ammonia / Salt-mist / Dust and sand
Made in China

640W

Maximum Power

23.7%

Highest Conversion Efficiency

1%

First Year Degradation

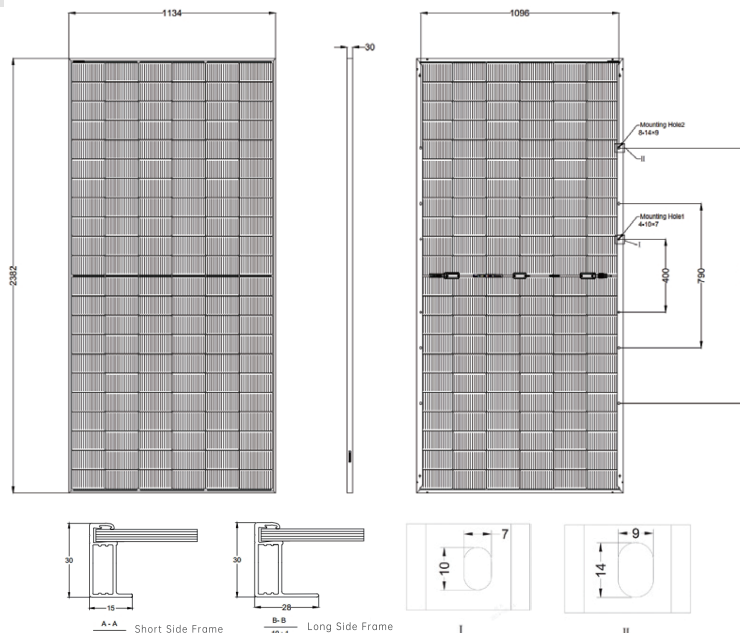
0.4%

2-30 Years Annual Power Attenuation

Mechanical Parameters

Cell Type	N-Type TOPCon
No. of cells	132 (2×66)
Output Cables	TüV 1×4mm ² (+)300mm,(-)200mm in length or customized length
Glass	Front: 2.0mm, AR-coating, semi-tempered Rear: 2.0mm, semi-tempered
Frame	Anodized aluminum alloy frame
Weight	32.4 kg (71.43 lbs)
Dimension	2382×1134×30mm
Packaging	37 pcs per pallet 148 pcs per 20' HC, 740 pcs per 40' HC
Protection Class	Class II
Fire Rating	IEC Class A

Engineering Drawings



* Length:±2mm Width:±2mm Height:±1mm Row Pitch:±2mm

Electrical Characteristics (STC Test)

Module Type	GK-4-66HTBD-610M		GK-4-66HTBD-615M		GK-4-66HTBD-620M		GK-4-66HTBD-625M		GK-4-66HTBD-630M		GK-4-66HTBD-635M		GK-4-66HTBD-640M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	610	462	615	466	620	469	625	473	630	477	635	480	640	484
Open-circuit Voltage (Voc/V)	48.00	45.49	48.17	45.65	48.34	45.81	48.51	45.97	48.68	46.13	48.85	46.29	49.02	46.45
Short-circuit Current (Isc/A)	16.07	12.96	16.14	13.02	16.21	13.16	16.28	13.12	16.35	13.17	16.42	13.22	16.49	13.27
Maximum Power Voltage (Vmp/V)	40.22	38.06	40.35	38.16	40.48	38.31	40.63	38.46	40.73	38.58	40.85	38.70	40.98	38.82
Maximum Power Current (Imp/A)	15.18	12.16	15.25	12.20	15.33	12.27	15.41	12.31	15.48	12.36	15.55	12.41	15.62	12.46
Module Efficiency (%)	22.6		22.8		23.0		23.1		23.3		23.5		23.7	

Note: 1. STC: Irradiance 1000W/M², Cell Temperature 25°C, AM=1.5 2. NOCT: Irradiance 800W/M², Ambient Temperature 20°C, AM=1.5, Wind Speed 1M/S

Different Rearside Power Gain (Reference to 625W)

Rearside Power Gain	5%	10%	20%
Maximum Power at STC (Pmax)	656.3	687.5	750.0
Open-circuit Voltage (Voc/V)	48.5	48.5	48.5
Short-circuit Current (Isc/A)	17.1	17.9	19.5
Maximum Power Voltage (Vmp/V)	40.6	40.6	40.6
Maximum Power Current (Imp/A)	16.2	17.0	18.5
Module Efficiency (%)	24.3	25.4	27.8

*The above data is for reference only. When signing a contract, the latest version of the product specification shall prevail.

Working Parameters

Operating Temperature	-40°C~ +85°C
Power Tolerance	0~ +5W
Maximum System Voltage	1500V(IEC)
NMOT	45±2°C
Maximum Series Fuse Rating	35A
Bifacial Factor	80±5%
Junction Box	IP68

Temperature Ratings (STC)

Temperature coefficient of Isc	+ 0.045%/°C
Temperature coefficient of Voc	- 0.25%/°C
Temperature coefficient of Pmax	- 0.29%/°C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm hailstone at 23m/s

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Product data is updated as of May 2024. Gokin Solar Co., Ltd. reserves the right to change specifications.