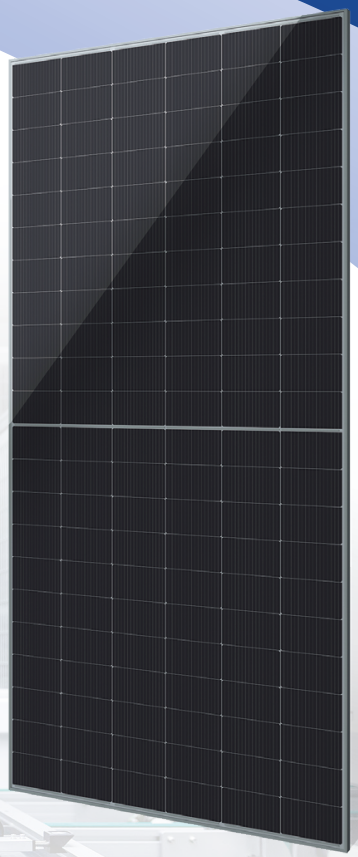
Gokin

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

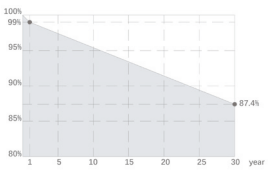
Unsusceptible to LID, LeTID and less annual degradation due to special charateristics of N-Type

Quality Guarantee

High module quality ensures long-term reliability

Module Characteristics

12-Year	30-Year	1%	0.4%
Product Warranty	Linear Power Warranty	First Year Degradation	Annual Power Degradation



At least 87.4% of nominal power up to 30 years

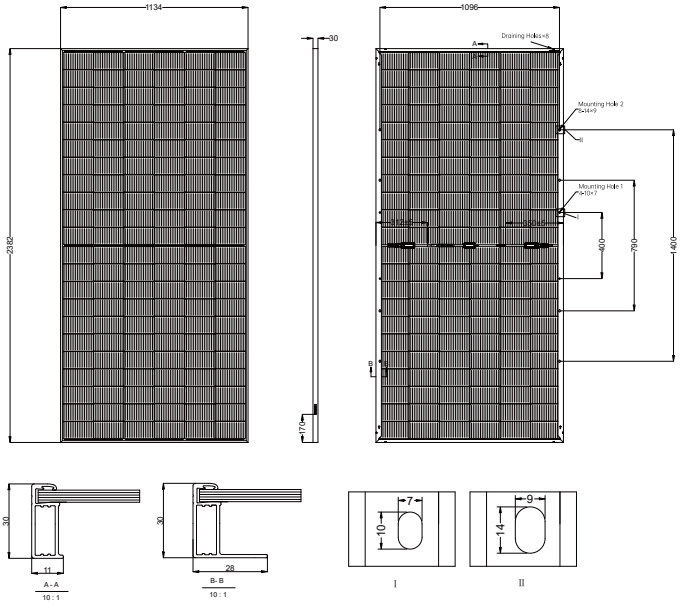
IEC 61215(2021) / IEC 61730(2023)
ISO 9001: 2015: ISO Quality Management System
Anti-PID / Ammonia / Salt-mist / Dust and sand
Made in China

640W	23.7%	1%	0.4%
Maximum Power	Highest Conversion Efficiency	First Year Degradation	2-30 Years Annual Power Attenuation

Mechanical Parameters

Cell Type	N-Type TOPCon
No. of cells	132 (6×22)
Output Cables	TüV 1×4mm²
	(+)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	32.4kg (71.43lbs)
Dimension	2382×1134×30mm
Packaging	37 pcs per pallet
	148 pcs per 20' GP, 740 pcs per 40' HC
Protection Class	Class II
Fire Rating	IEC Class C

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	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI	STC	BNPI
Maximum Power (Pmax/W)	610	675	615	680	620	685	625	690	630	695	635	700	640	705
Open-circuit Voltage (Voc/V)	48.00	48.10	48.17	48.27	48.34	48.44	48.51	48.61	48.68	48.78	48.85	48.95	49.02	49.12
Short-circuit Current (Isc/A)	16.07	17.72	16.14	17.79	16.21	17.97	16.28	18.05	16.35	18.12	16.42	18.19	16.49	18.26
Maximum Power Voltage (Vmp/V)	40.22	40.35	40.35	40.47	40.48	40.58	40.63	40.73	40.73	40.81	40.85	40.93	40.98	41.06
Maximum Power Current (Imp/A)	15.18	16.74	15.25	16.81	15.33	16.89	15.41	16.97	15.48	17.04	15.55	17.11	15.62	17.18
Module Efficiency (%)	22.6		22.8		23.0		23.1		23.3		23.5		23.7	

Note: 1、STC: Irradiance 1000W/M², Cell Temperature25℃, AM=1.5 2、BNPI: Irradiance of front 1000W/M², rear 135W/M²

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℃~ +70℃
Power Tolerance	0~ +5W
Maximum System Voltage	1500V(IEC)
NMOT	45±2℃
Maximum Series Fuse Rating	35A
Bifacial Factor	80±5%
Junction Box	IP68

Temperature Ratings (STC)

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

Mechanical Loading

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

Gokin

GK-4-66HTBD-SF-DG-F3 EN

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Note: Please read the safety and installation manual before using the product. We reserve the right of final interpretation. The specifications in this datasheet are subject to change without notice.

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