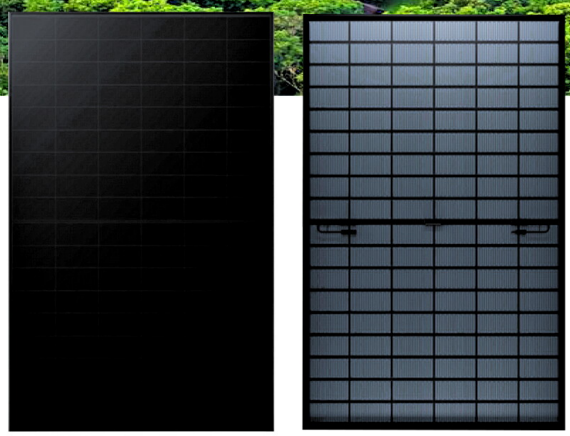
FLAGSUN



FLAGSUN®

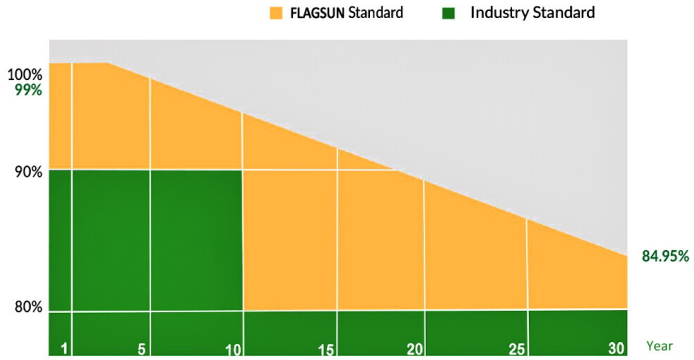
465-490W HPBC Ultra Black

Half-Cell Layout



- HPBC Cell Technology
- Excellent Anti-PID Low LID Performance
- Less Hot Spot Shading Effects
- Higher Power Output Lower BOS & LCOE

Linear performance Warranty



Comprehensive Certificates

- ISO14001:2015 EMS
- SA8000:2014 SMS
- ISO9001:2015 QMS
- IEC61215/IEC61730 Standard Quality

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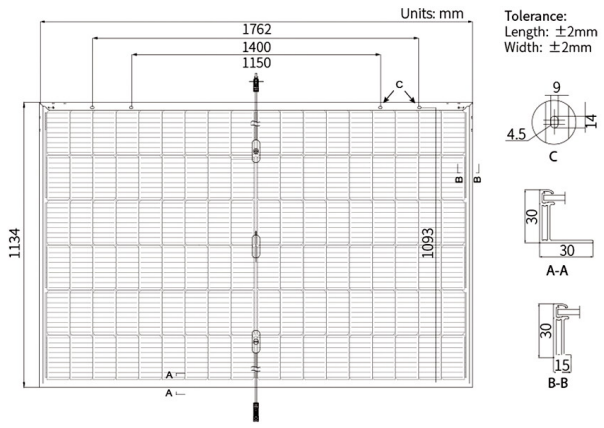
FLAGSUN® HPBC I 465-490 Ultra Black

MECHANICAL CHARACTERISTICS

Solar Cells	HPBC
No. of Cells	108 (6x18)
Dimensions	1762 x 1134 x 30(35)mm
Weight	24.0kg
Front Glass	2.0mm coated semi-tempered glass
Back Glass	2.0mm semi-tempered glass
Junction Box	Ip68 rated (3 by pass diodes)
Output Cables	4.0mm²
	900mm (+) / 900mm (-) or customized
Frame Size	30/35mm
Connectors	Mc4 compatible
Mechanical load test	5400Pa



ELECTRICAL PARAMETERS

POWER CLASS	FSBH-465-M10	FSBH-470-M10	FSBH-475-M10	FSBH-480-M10	FSBH-485-M10	FSBH-490-M10
	STC	STC	STC	STC	STC	STC
Maximum power (Pmax)	465W	470W	475W	480W	485W	490W
Open Circuit Voltage (Voc)	39.96V	40.07V	40.18V	40.29V	40.40V	40.52V
Short Circuit Current (Isc)	14.83A	14.93A	15.03A	15.13A	15.23A	15.33A
Voltage at Maximum power (Vmpp)	32.93V	33.05V	33.16V	33.28V	33.40V	33.51V
Current Maximum Power (Impp)	14.13A	14.23A	14.33A	14.43A	14.53A	14.63A
MODULE EFFICIENCY (%)	23.2%	23.5%	23.7%	24.0%	24.2%	24.5%

STC: Irradiance 1000W/m², cell temperature 25°C, AM1.5

ELECTRICAL PARAMETERS

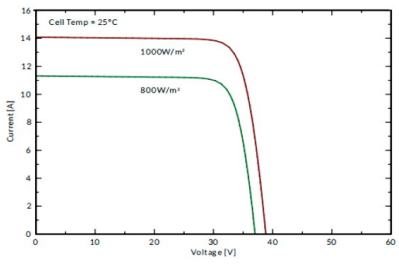
POWER CLASS	FSBH-465-M10	FSBH-470-M10	FSBH-475-M10	FSBH-480-M10	FSBH-485-M10	FSBH-490-M10
	NOCT	NOCT	NOCT	NOCT	NOCT	NOCT
Maximum power (Pmax)	354W	358W	362W	365W	369W	373W
Open Circuit Voltage (Voc)	37.97V	38.08V	38.18V	38.29V	38.39V	38.51V
Short Circuit Current (Isc)	11.92A	12.00A	12.08A	12.16A	12.24A	12.32A
Voltage at Maximum power (Vmpp)	31.30V	31.41V	31.52V	31.63V	31.74V	31.85V
Current Maximum Power (Impp)	11.33A	11.41A	11.49A	11.57A	11.65A	11.73A
MODULE EFFICIENCY (%)	23.2%	23.5%	23.7%	24.0%	24.2%	24.5%

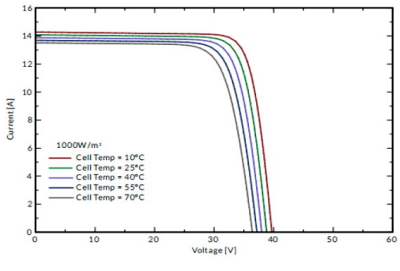
NOCT: Irradiance 800W/m², cell temperature 20°C, AM1.5,1m/s

PACKING CONFIGURATION

Container	40'HC
Pieces per pallet	36
Pallets per container	26
Pieces per container	936

I-V CURVE FSBH-490-M10/I-V





OPERATING CHARACTERISTICS

Operating Module Temperature	-40°C to +85°C
Maximun System Voltage	1500 DC (IEC)
Maximun Series Fuse Rating	30A
Power Tolerance	0/+5W

TEMPERATURE CHARACTERISTICS

Nominal Operating Temperature (NMOT)	45±2°C
Temperature Coefficient of Pmax	-0.29%°C
Temperature Coefficient of Voc	-0.25%°C
Temperature Coefficient of Isc	+0.045%°C

Note: The specifications, data and technical characteristics provided in this data sheet are subject to changes due to continuous R&D, product innovation and improvement. FLAGSUN SOLAR reserves the right to modify the information any time without prior notice.