

# Harmony series

**640~665Watt**

UL-\*\*\*M-132DDGB

- **Advanced:** N-TaiRay + HPBC 2.0 + 0BB
- **Value-Added:** Power Leads by 30W+, A+ Anti-Shading
- **Aesthetic:** No Frontal Gridlines, Scenario Integration
- **Safe:** Prevent Localized Overheating, Less Micro-Crack

**15**

15-year Warranty for  
Materials and Processing

**30**

30-year Warranty for Extra  
Linear Power Output



## Complete System and Product Certifications

IEC 61215, IEC 61730

ISO9001:2015: ISO Quality Management System

ISO14001: 2015: ISO Environment Management System

ISO45001: 2018: Occupational Health and Safety

IEC62941: Guideline for module design qualification and type approval

**24.62%**  
MAX MODULE  
EFFICIENCY

**0~3%**  
POWER  
TOLERANCE

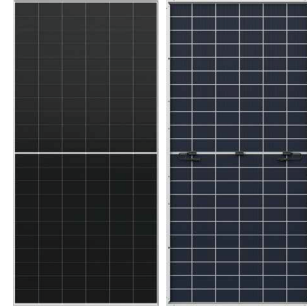
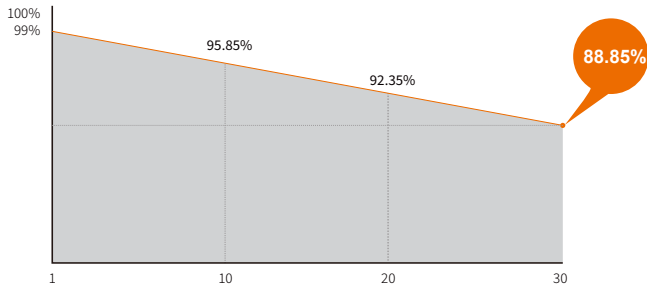
**<1%**  
FIRST YEAR  
POWER DEGRADATION

**0.35%**  
YEAR 2-30  
POWER DEGRADATION

**BC-CELL**  
LOWER OPERATING  
TEMPERATURE

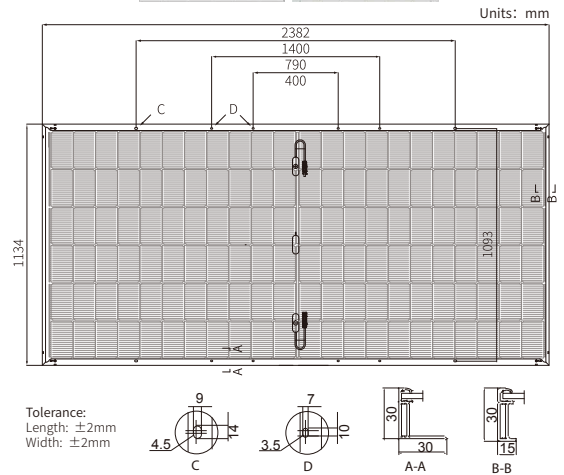
### Additional Value

#### 30-Year Power Warranty



### Mechanical Parameters

Cell Orientation	132 (6×22)
Junction Box	IP68, three diodes
Output Cable	4mm <sup>2</sup> , +400, -200mm/±1400mm length can be customized
Glass	Dual glass, 2.0+2.0mm semi-tempered glass
Frame	Anodized aluminum alloy frame
Weight	33.5kg
Dimension	2382×1134×30mm
Packaging	36pcs per pallet / 144pcs per 20' GP / 720pcs per 40' HC



### Electrical Characteristics STC : AM1.5 1000W/m<sup>2</sup> 25°C Test uncertainty for Pmax: ±3%

Module Type	UL-640M-132DDGB	UL-645M-132DDGB	UL-650M-132DDGB	UL-655M-132DDGB	UL-660M-132DDGB	UL-665M-132DDGB
Testing Condition	STC	STC	STC	STC	STC	STC
Maximum Power (Pmax/W)	640	645	650	655	660	665
Open Circuit Voltage (Voc/V)	49.52	49.62	49.72	49.82	49.92	50.02
Short Circuit Current (Isc/A)	16.38	16.46	16.54	16.62	16.70	16.78
Voltage at Maximum Power (Vmp/V)	40.78	40.88	40.98	41.08	41.18	41.28
Current at Maximum Power (Imp/A)	15.69	15.78	15.86	15.94	16.03	16.11
Module Efficiency(%)	23.69	23.88	24.06	24.25	24.43	24.62

### Electrical characteristics with different rear side power gain (Taking 645W as the baseline)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
677	49.62	17.28	40.88	16.57	5%
710	49.62	18.11	40.88	17.36	10%
744	49.72	18.93	40.98	18.15	15%
776	49.72	19.75	40.98	18.94	20%
808	49.72	20.58	40.98	19.73	25%

### Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Maximum System Voltage	DC1500V (IEC)
Maximum Series Fuse Rating	35A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Bifaciality	75±5%
Fire Rating	IEC Class C

### Mechanical Loading

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

### Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.200%/°C
Temperature Coefficient of Pmax	-0.260%/°C



Specifications included in this datasheet are subject to change without notice.

Ulica Solar reserves the right of final interpretation.

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Website