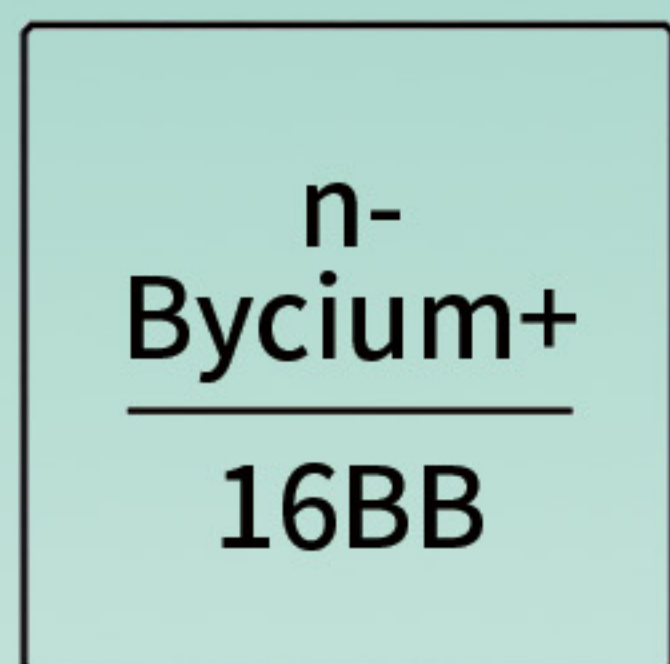




# ROC N-type Series Modules **430-445W**

## YSM-54HG N-type Bifacial Double-Glass (All-Black) PV Module

### Better Cells



Multi-Busbar  
Half-Cut Technology

# 26%



High Cell Conversion  
Efficiency

### More Reliable Modules



Superior  
Power  
Generation



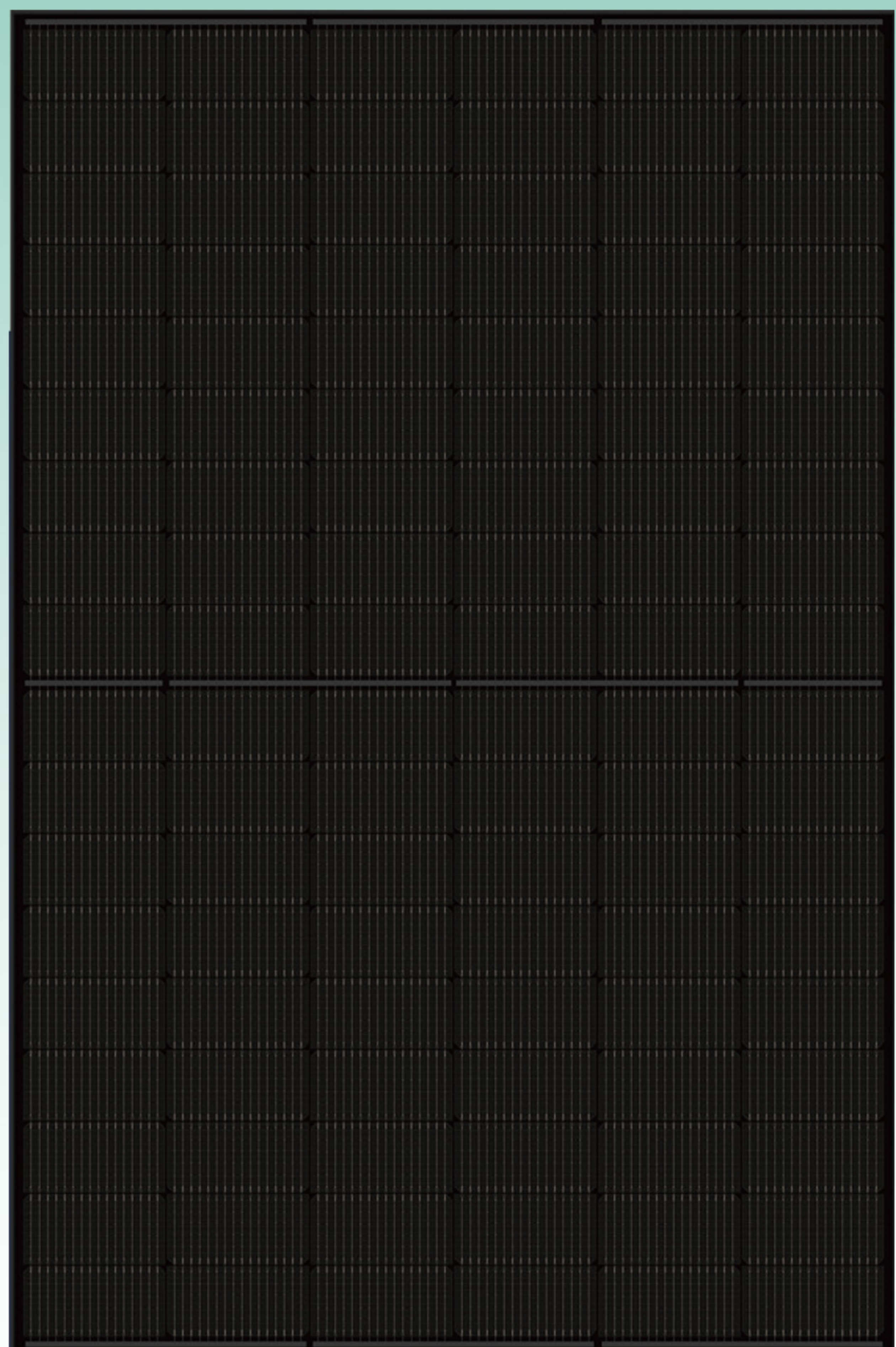
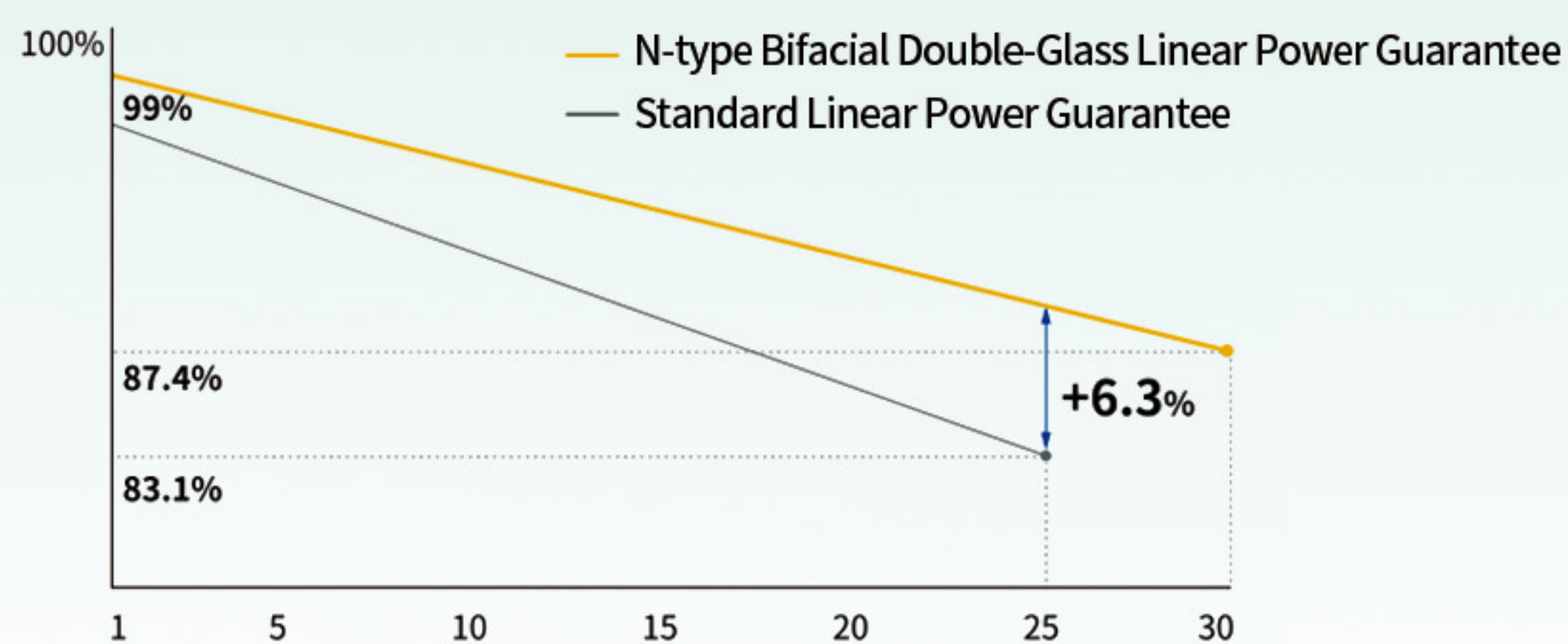
Reduced  
Light-Induced  
Degradation



Excellent  
Low-Light  
Response



Outstanding  
Temperature  
Coefficient  
Characteristic



**12** 12-Year Product  
Material  
and Manufacturing  
Process Warranty

**30** 30-Year Linear  
Power Output  
Warranty

First Year: 1%  
Subsequent Years: 0.4%

### Comprehensive Product and System Certification

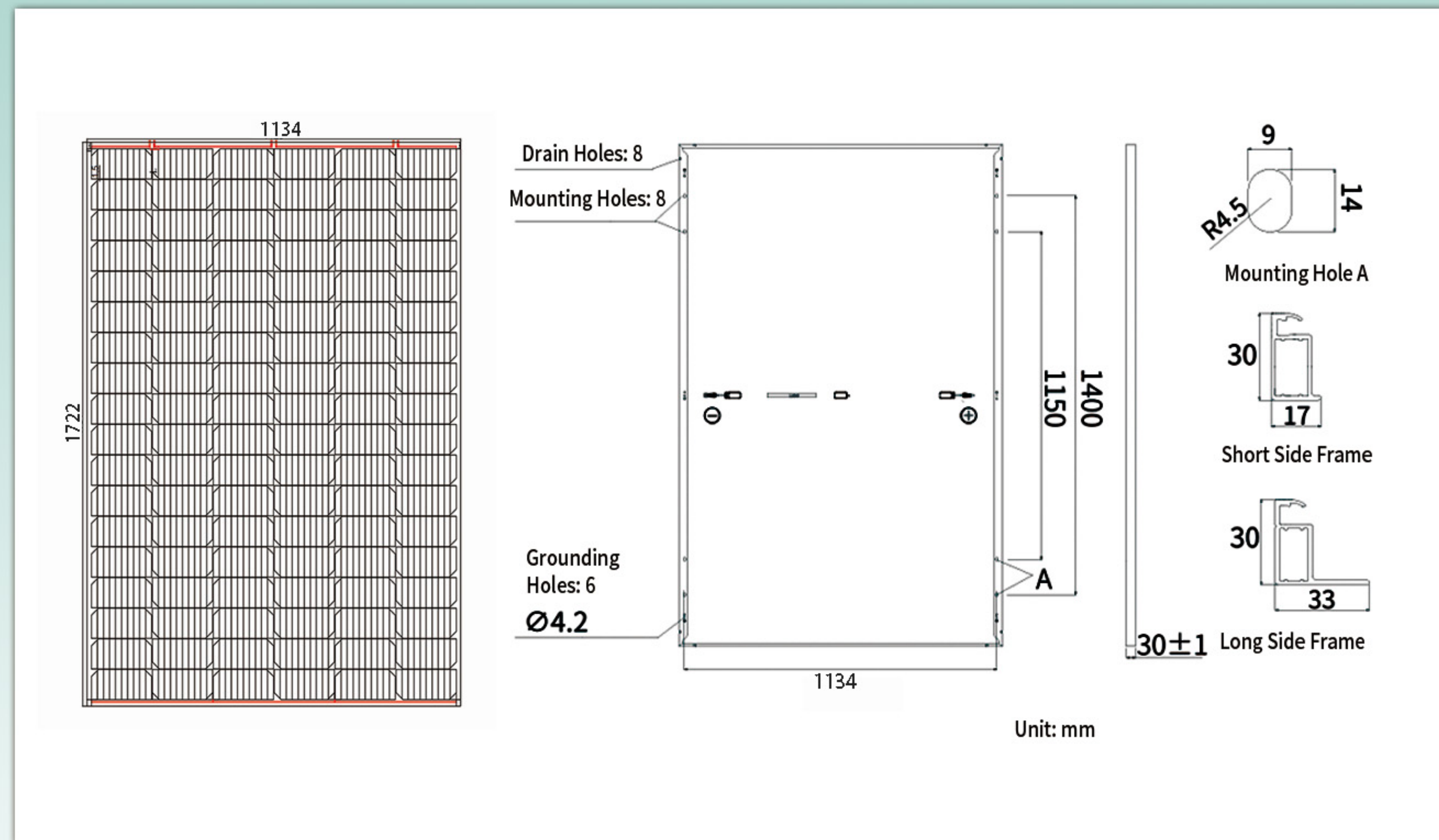
- IEC 61215, IEC 61730
- ISO9001:2015 Quality Management System
- ISO14001:2015 Environmental Management System
- ISO45001:2018 Occupational Health and Safety Management System
- IEC62941:2019 Terrestrial PV Module - PV Module Manufacturing Quantity System



Note: Warranty insurance is optional. Please contact our local sales staff for more information.



# YSM-54HG N-type Bifacial Double-Glass (All-Black) PV Module



## Mechanical Parameters

Cell	Monocrystalline N-Type
Weight	21.5kg
Dimensions	1722±2mmx1134±2mm×30±1mm
Cable Cross-Sectional Area	4mm <sup>2</sup> (IEC), 12 AWG(UL)
No. of cells	108(6×18)
Junction Box	IP68, featuring 3 diodes
Connector	QC4.10-351/MC4-EVO2A
Cable Length (Including Connectors)	300mm(+)/400mm(-)
Front Glass/Back Glass	2.0 mm/2.0 mm
Packaging Information	36 modules per pallet, 936 modules per 40HQ container

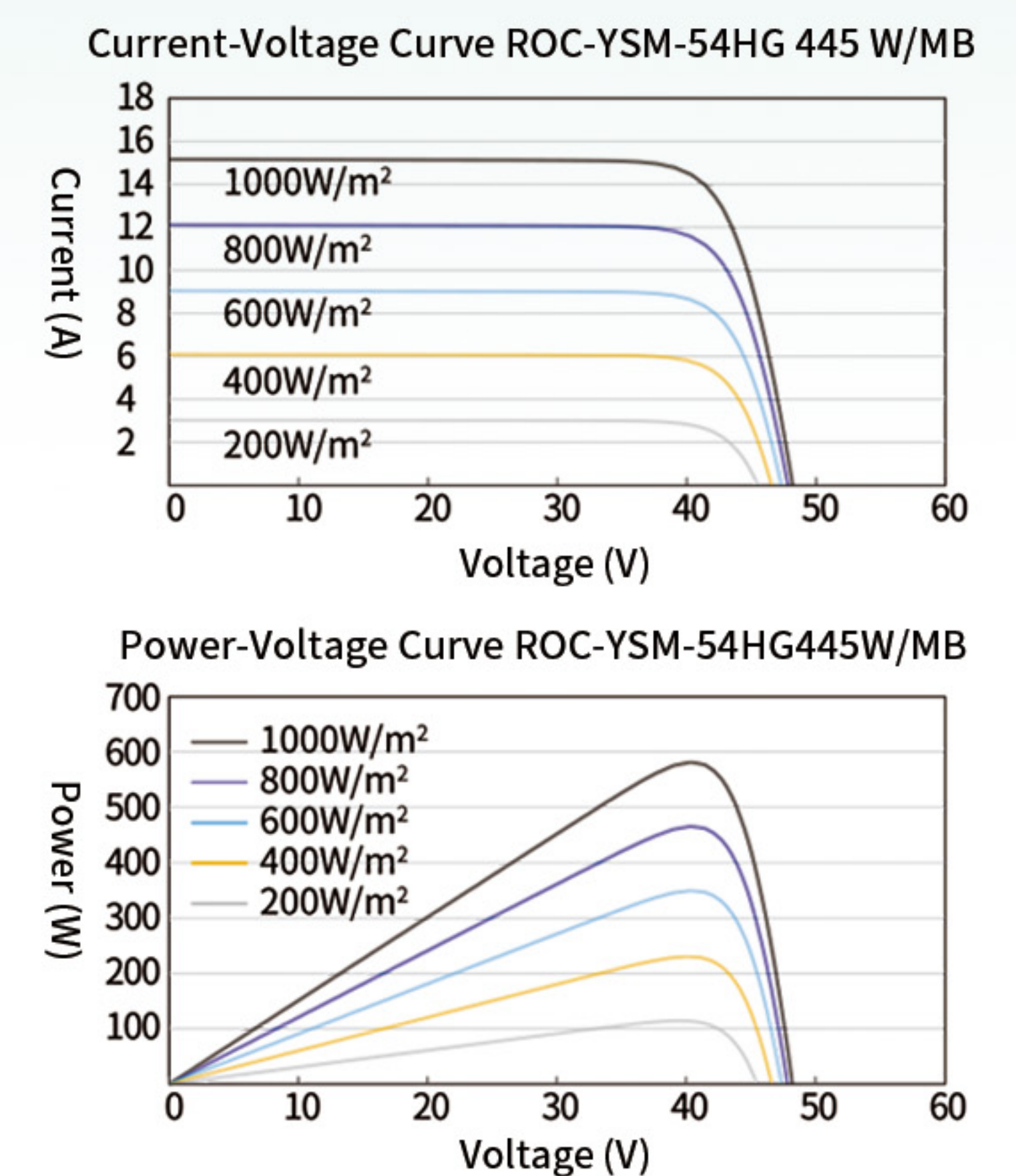
Note: Frame color and cable length can be customized upon request.

## Electrical Performance Parameters (STC)

Model	ROC-YSM-54HG 420/MB	ROC-YSM-54HG 425/MB	ROC-YSM-54HG 430/MB	ROC-YSM-54HG 435/MB	ROC-YSM-54HG 440/MB	ROC-YSM-54HG 445/MB
Maximum Power (Pmax) [W]	420	425	430	435	440	445
Open Circuit Voltage (Voc) [V]	38.28	38.56	38.84	39.11	39.38	39.65
Operating Voltage at Maximum Power Point (Vmp) [V]	32.38	32.64	32.88	33.13	33.27	33.64
Short Circuit Current (Isc) [A]	13.65	13.7	13.75	13.8	13.85	13.9
Operating Current at Maximum Power Point (Imp) [A]	12.97	13.02	13.08	13.13	13.18	13.23
Module Efficiency [%]	21.5	21.8	22	22.3	22.5	22.8
Power Tolerance	0+3%					
Short Circuit Current Temperature Coefficient (αIsc)	+0.045%/°C					
Open Circuit Voltage Temperature Coefficient (βVoc)	-0.250%/°C					
Maximum Power Temperature Coefficient (γPmp)	-0.2909%/°C					
Standard Test Conditions (STC)	Irradiance: 1000 W/m <sup>2</sup> ; Cell Temperature: 25°C; Spectrum: AM 1.5G					

Note: During production, relevant parameters may vary slightly within specified ranges.

## Characteristic Curve



## Electrical Performance Parameters under 10% Light Irradiation Intensity Ratio

Model	ROC-YSM-54HG 420/MB	ROC-YSM-54HG 425/MB	ROC-YSM-54HG 430/MB	ROC-YSM-54HG 435/MB	ROC-YSM-54HG 440/MB	ROC-YSM-54HG 445/MB
Maximum Power (Pmax) [W]	454	459	464	470	475	481
Open Circuit Voltage (Voc) [V]	38.28	38.56	38.84	39.11	39.38	39.65
Operating Voltage at Maximum Power Point (Vmp) [V]	32.38	32.64	32.88	33.13	33.37	33.64
Short Circuit Current (Isc) [A]	14.74	14.8	14.85	14.9	14.96	15.01
Operating Current at Maximum Power Point (Imp) [A]	14.01	14.06	14.12	14.18	14.24	14.29
Irradiation Intensity Ratio (Back/Front)	10%					

## Application Conditions

Maximum System Voltage	1500VDC
Operating Temperature	-40°C ~ +85°C
Maximum Fuse Rated Current	30A
Maximum Static Load, Front	5400Pa (112 lb/ft <sup>2</sup> )
Maximum Static Load, Rear Side	2400Pa (50 lb/ft <sup>2</sup> )
Cell Rated Operating Temperature	45±2°C
Back Face Efficiency **	80%±10%
Security Level	Class II
Fire Performance	UL Type 29/Class C

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