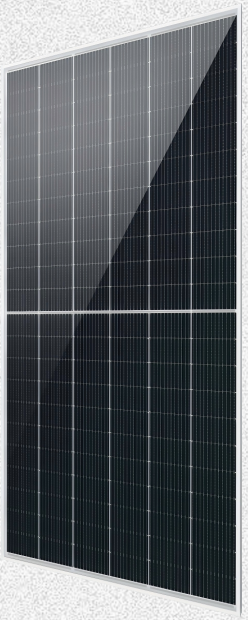
# G12R-66

## ZY640G12RNHB-132

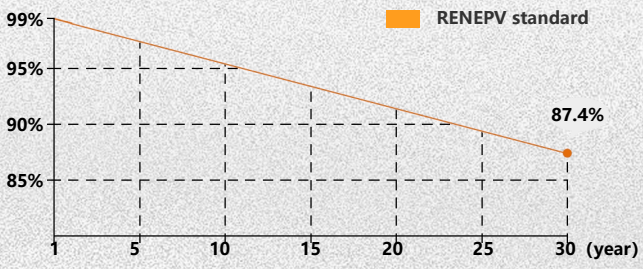
## N-type Bifacial Module



## Key Features

- Outstanding performance in weak-light conditions
- Lower operating temperature
- Half-cell and MBB design
- Extended wind and snow load tests
- Withstanding harsh environment
- Use scenario customization

### Quality Certification




First year power degradation < 1%

Annual degradation < 0.4%

12 years Product Warranty

30 years Performance Warranty (Bifacial)

### Product Guarantee

ISO 9001:2015 Quality management systems

ISO 14001:2015 Environment management systems

ISO 45001:2018 Occupational health and safety management systems

IEC 61215/IEC 61730/IEC 61701/IEC 62716

TUV/CE/MCS

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# Mono-crystalline Solar PV Modules

www.renepv.com

**M210R-66N TOPCon** 640W

ZY640G12RNHB-132

23.7% Module efficiency

TOPCon Mono-crystalline Bifacial Module

## Electrical Specifications

| | | | |
|---|---|---|---|
| Module Type | | | ZY640G12RNHB-132 |
| STC: AM1.5 Temperature 25°C Irradiance 1000 W/m² | Peak Power(Pmax)±3% | (W) | 640 |
| | Power Sorting | (W) | 0~+4.99 |
| | Max.Power Voltage(Vmp) | (V) | 40.94 |
| | Max.Power Current(Imp) | (A) | 15.64 |
| | Open-circuit Voltage(Voc)±3% | (V) | 48.53 |
| | Short-circuit Current(Isc)±3% | (A) | 16.56 |
| NMOT: AM1.5 Temperature 20°C Wind speed 1m/s Irradiance 800 W/m² | Peak Power(Pmax)±3% | (W) | 481.3 |
| | Max.Power Voltage(Vmp) | (V) | 38.07 |
| | Max.Power Current(Imp) | (A) | 12.64 |
| | Open-circuit Voltage(Voc)±3% | (V) | 45.13 |
| | Short-circuit Current(Isc)±3% | (A) | 13.50 |
| Operating Temperature | | (℃) | -40~+85 |
| Max. Series Fuse Rating | | (A) | 30 |
| Max. System Voltage(DC) | | (V) | 1500 (IEC) |

## Mechanical Specifications

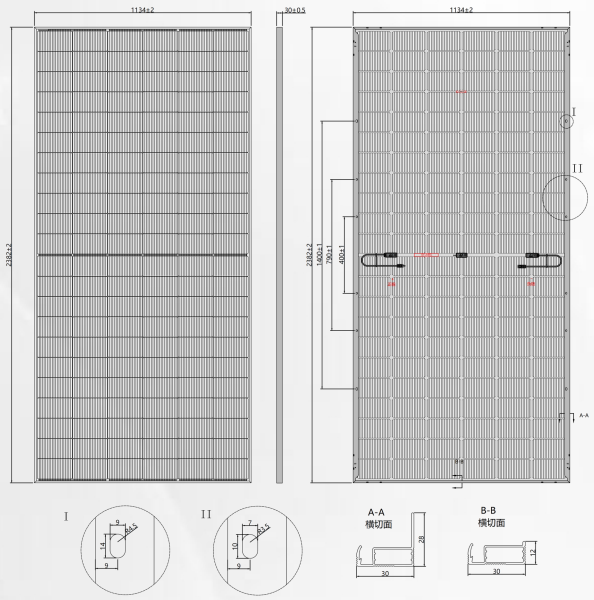
| | |
|---|---|
| Solar Cells | N-Topcon-Mono-210R |
| Arrangement | Type-6*11*2 |
| Front Glass | 2.0mm tempered glass |
| Back Glass | 2.0mm tempered glass |
| Frame | Anodized aluminium alloy |
| Junction Box | IP68, 3 diodes |
| Cables | 4.0mm² photovoltaic cables |
| Connectors | MC4 compatible/DC 1500V |
| Maximum Load Capacity | Snow-5400Pa/Wind-2400Pa |
| Safety Rate | Class II (IEC) |
| Fire Rate | Class C (TUV) |
| Bifaciality | 80±5% |

## Packing Configuration

| | | | |
|---|---|---|---|
| Package Weight | | 1142Kg/pallet | |
| Package Size | | 2395*1140*1265mm | |
| 20'GP Container | / | / | / |
| 40'HQ Container | 37 pcs/pallet | 20 pallets/40'HQ | 740 pcs |

## Dimensions of PV Module

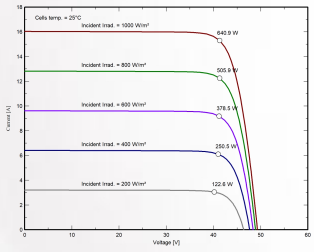
| | |
|---|---|
| Module Dimensions | 2382*1134*30mm |
| Module Weight | 30.06 kg(±3%) |



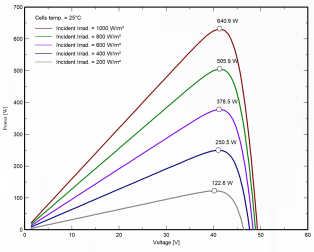
## Temperature Characteristics

| | | |
|---|---|---|
| Temperature Coeffcient (Pmax) | δ[%/℃] | -0.30 |
| Temperature Coefficient (Voc) | β[%/℃] | -0.25 |
| Temperature Coefficient (Isc) | α[%/℃] | +0.05 |
| Nominal Operating Cell Temperature | NMOT | 45℃±2℃ |

## I-V & P-V Curves



Current-Voltage Characteristic



Power-Voltage Characteristic

## Different Backside Power Gain

| Power Gain | | 5% | 15% | 25% |
|---|---|---|---|---|
| Maximum Power(Pmax) | (W) | 672.0 | 736.0 | 800.0 |
| Max.Power Voltage(Vmp) | (V) | 40.94 | 40.94 | 40.94 |
| Max.Power Current(Imp) | (A) | 16.41 | 17.98 | 19.54 |
| Open-circuit Voltage(Voc) | (V) | 48.53 | 48.53 | 48.53 |
| Short-circuit Current(Isc) | (A) | 17.53 | 19.20 | 20.87 |

© The Electrical performance parameters are neither just referred to one panel, nor are a part of the contract; They are only used as reference Product Specifications are subject to change without notice, all technical changes Zhongyi New Energy reserves the right of final interpretation.

Version: 2026.07