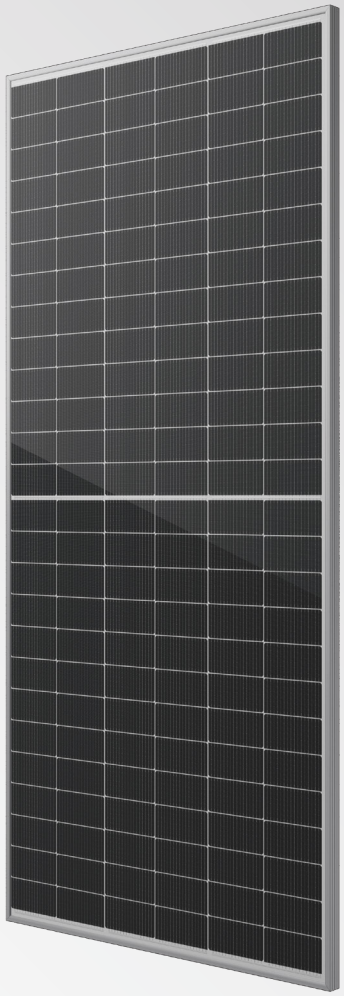
Making more power

HiMAX 5N

# 610-640W

## SP640M-78H

N-type TOPCon Solar Module



### 10-30% Additional Power Generation

30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module.

### ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.

### Higher Reliability

Adpoted SunPal lastest S-TOPCon 2.0 technology, No polysilicon wrap around, Full electrical isolation, Zero leakage current; Much Safer for roof.

### Better Weak Illumination Response

Higher power output even under low-light environments like on cloudy or foggy days.

### Better Temperature Coefficient

Higher power generation under working conditions, thanks to passivating contact cell technology.

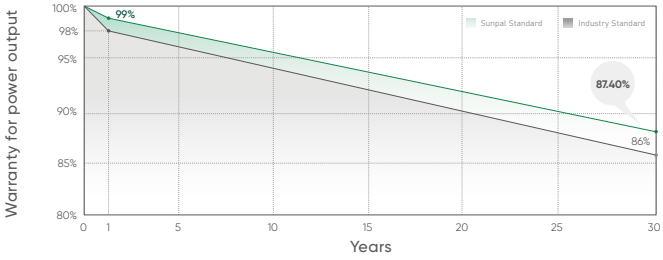
### Quality Management System and Product Certification

IEC61215/61730, IEC62804(PID), IEC61701(Salt).
IEC62716 (Ammonia), IEC60068-2-68(Sand).
ISO 9001:2015/quality management system.
ISO 14001:2015/environmental management system.
ISO 45001:2018/occupation health safety management system.
ISO 50001:2011/energy management system.
IEC TS 62941-2016/PV industry quality management system.

### Quality Guarantee

25 YEAR Materials Warranty

30 YEAR Power Warranty

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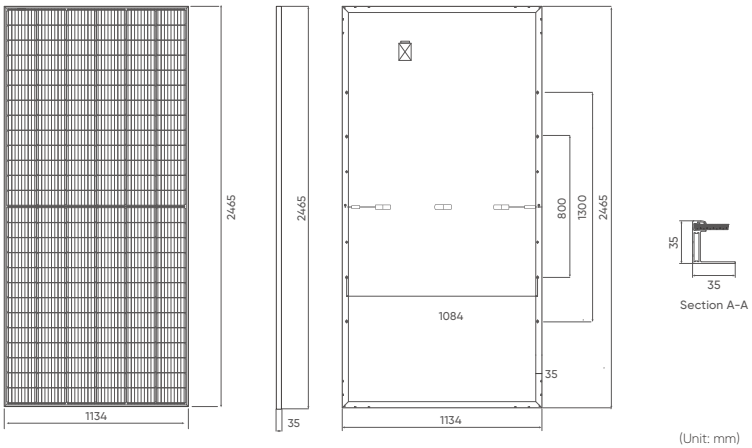
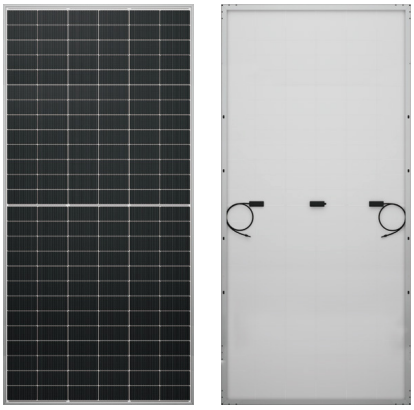
# HiMAX 5N 610-640W

## Drawings




(Unit: mm)

## Product Image



## Mechanical Characteristics

| | |
|---|---|
| Solar Cells | N-type Mono |
| No. of Cells | 156(6×26) |
| Dimensions | 2465 × 1134 × 35mm |
| Weight | 30.0kg |
| Glass | 3.2mm coated tempered glass |
| Frame | Anodized aluminium alloy |
| Junction Box | Ip68 rated (3 by pass diodes) |
| Output Cables | 4mm2, 300mm (+) / 300mm (-), Length can be customized |
| Connectors | Mc4 compatible |
| M echanical load test | 5400Pa |
| Packaging | 31pcs/box, 124pcs/20'GP, 496pcs/40'HQ |

## Operating Characteristics

| | |
|---|---|
| Operating Module Temperature | -40°C to +85°C |
| Maximun System Voltage | 1500 DC (IEC) |
| Maximun Series Fuse Rating | 25A |
| 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 |

## Electrical Parameters (STC*)

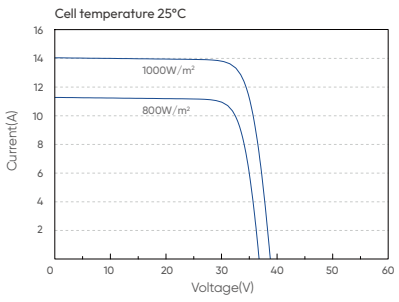
| Module Type: **SP640M-78H** | 610 | 615 | 620 | 625 | 630 | 635 | 640 |
|---|---|---|---|---|---|---|---|
| Maximum power (Pmax/W) | 610 | 615 | 620 | 625 | 630 | 635 | 640 |
| Open Circuit Voltage (Voc/V) | 55.25 | 55.40 | 55.55 | 55.70 | 55.84 | 55.98 | 56.12 |
| Short Circuit Current (Isc/A) | 14.10 | 14.17 | 14.24 | 14.31 | 14.38 | 14.45 | 14.52 |
| Voltage at Maximum power (Vmpp/V) | 45.73 | 45.86 | 45.99 | 46.13 | 46.26 | 46.39 | 46.52 |
| Current Maximum Power (Impp/A) | 13.34 | 13.41 | 13.48 | 13.55 | 13.62 | 13.69 | 13.76 |
| MODULE EFFICIENCY (%) | 21.82 | 22.00 | 22.18 | 22.36 | 22.54 | 22.72 | 22.90 |

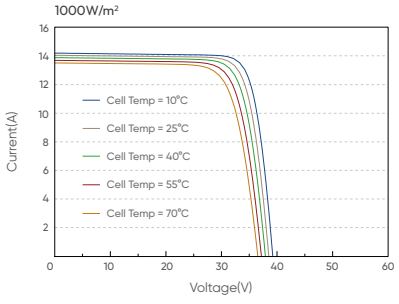
## Electrical Parameters (NMOT*)

| Maximum power (Pmax) | 459 | 463 | 467 | 471 | 475 | 479 | 483 |
|---|---|---|---|---|---|---|---|
| Open Circuit Voltage (Voc/V) | 52.50 | 52.66 | 52.82 | 52.98 | 53.13 | 53.28 | 53.43 |
| Short Circuit Current (Isc/A) | 11.41 | 11.47 | 11.53 | 11.59 | 11.65 | 11.71 | 11.77 |
| Voltage at Maximum power (Vmpp/V) | 42.34 | 42.48 | 42.61 | 42.74 | 42.87 | 43.00 | 43.13 |
| Current Maximum Power (Impp/A) | 10.84 | 10.90 | 10.96 | 11.02 | 11.08 | 11.14 | 11.20 |

1. Standard Test Conditions [STC]: irradiance 1000W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Nominal Module Operating Temperature (NMOT): Irradiance 800W/m²; wind speed 1m/s , ambient temperature 20°C.
3. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

## I-V Curve

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