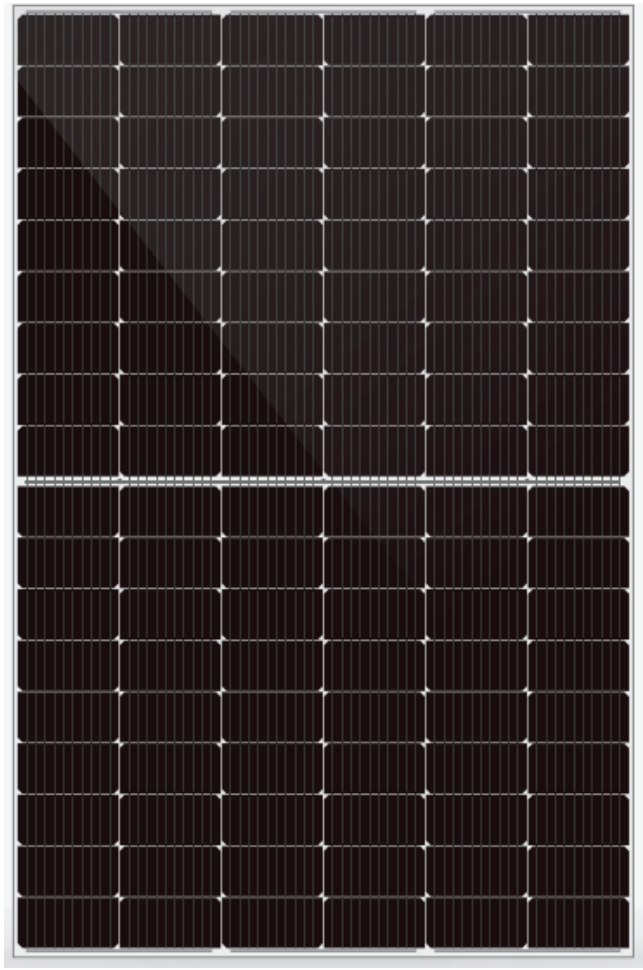
Smart:watts

Mono Perc

# SW-72L9

Half-Cell High Efficiency PV Module



**Quality Guarantee**

12-year Material & technology warranty
25-year Linear power output warranty

# 430 ~ 460W

Max Module Efficiency - 21.39%

### Optimal Process Design
166mm+9BB+Half-cut, higher power output

### Select Grade A Crystalline Silicon Solar Cells
Grade A crystalline silicon solar cells make high-power output with cost-effective

### Stable Generation Performance
Guaranteed 0~+5W positive tolerance and slower power attenuation: first year ≤2%, 0.55% per year from 2-25

### Process Upgraded
PID Resistant
Lower risk of hot spot and stronger anti-PID ablity

### Higher Power Gains and Lower Losses
Excellent low irradiance performance and low shadow loss

### Strong Environmental Adaptability and Great Durability
2400Pa 5400Pa
Certified by Dust-Sand, Salt-Mist, Ammonia etc. weather resistance tests and enhanced mechanical load: wind load (2400 Pascal) and snow load (5400 Pascal)

## Comprehensive Products and System Certificates

IEC 61215 / IEC 61730 / CE / FIDE / INMETRO

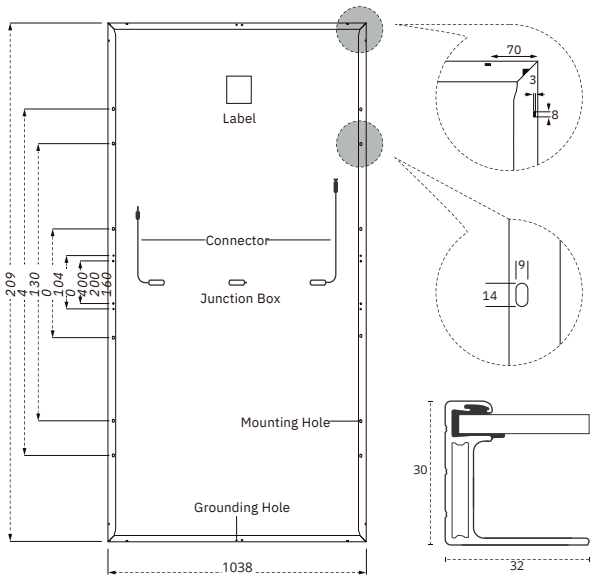
2018/International standards for occupational health & safety

ISO 14001-
2015/Standards for environmental management system

ISO 9001-
2015/Quality management system

# SW-72L9 **430~460W**

## Design




## Mechanical Specification

| | |
|---|---|
| Cells Type | Dimension (L×W×T) |
| Mono 166×83mm | 2094×1038×30mm |
| Weight | Packing |
| 23.5kg | 36pcs/pallet, 792pcs/40HQ |

| | |
|---|---|
| *Cable (Including connector)* | 4.0mm2, Portrait: 300mm(+)/400mm(-) Landscape: 1400mm(+)/1400mm(-) |
| *No.of Cells* | 144 (6×24) |
| *Glass* | 3.2mm High Transmission, Antireflection Coating |
| *Junction box* | IP68, 3 Bypass Diodes |
| *Connector* | MC4 Compatible |

## Operating Parameters

| | |
|---|---|
| *Maximum system voltage* | 1500V DC |
| *Operating Temperature* | -40 ~ +85°C |
| *Maximum series fuse rating* | 20A |
| *Snow load, frontside* | 5400Pa |
| *Wind load, backside* | 2400Pa |
| *Nominal operating cell temperature* | 45°C±2°C |
| *Application level* | Class A |

## STC-Electrical Characteristics

| Module Type | SW-72L9 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Maximum Power (Pmax)* | 430 | 435 | 440 | 445 | 450 | 455 | 460 | 465 |
| *Open-circuit Voltage (Voc)* | 48.70 | 48.85 | 49.00 | 49.15 | 49.30 | 49.45 | 49.60 | 49.75 |
| *Maximum Power Voltage (Vmp)* | 41.51 | 41.66 | 41.81 | 41.96 | 42.11 | 42.26 | 42.41 | 42.56 |
| *Short-circuit Current (Isc)* | 11.23 | 11.26 | 11.29 | 11.32 | 11.35 | 11.38 | 11.41 | 11.44 |
| *Maximum Power Current (Imp)* | 10.36 | 10.44 | 10.52 | 10.61 | 10.69 | 10.77 | 10.85 | 10.93 |
| *Module Efficiency (%)* | 19.78 | 20.01 | 20.24 | 20.47 | 20.70 | 20.93 | 21.16 | 21.39 |
| *Temperature Coefficient of Isc* | 0.05%/°C | | | | | | | |
| *Temperature Coefficient of Voc* | -0.31%/°C | | | | | | | |
| *Temperature Coefficient of Pmax* | -0.35%/°C | | | | | | | |

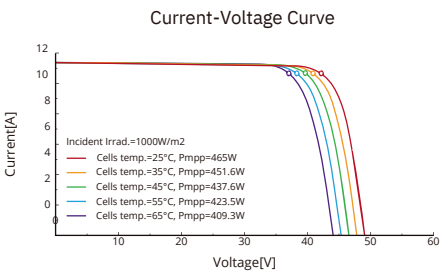
*Standard Test Environment : Irradiance 1000W/m, Cell temperature 25°C, Spectrum AM1.5*

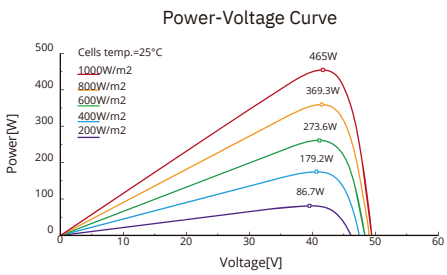
## NOCT-Electrical Characteristics

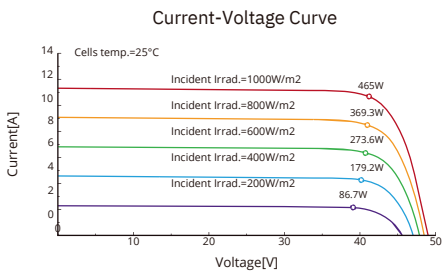
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Maximum Power (Pmax)* | 320 | 324 | 327 | 331 | 335 | 339 | 342 | 346 |
| *Open-circuit Voltage (Voc)* | 45.7 | 45.8 | 46.0 | 46.1 | 46.2 | 46.4 | 46.5 | 46.7 |
| *Maximum Power Voltage (Vmp)* | 38.9 | 39.1 | 39.2 | 39.4 | 39.5 | 39.6 | 39.8 | 39.9 |
| *Short-circuit Current (Isc)* | 9.07 | 9.10 | 9.12 | 9.15 | 9.17 | 9.20 | 9.22 | 9.24 |
| *Maximum Power Current (Imp)* | 8.22 | 8.28 | 8.35 | 8.41 | 8.48 | 8.54 | 8.60 | 8.67 |

*Standard Test Environment : Irradiance 800W/m2, Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s*

## I-V Curve (SW-72L9-465W)





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