



HIT photovoltaic module

HIP-210NKHE1 HIP-205NKHE1

The SANYO HIT (Heterojunction with Intrinsic Thin layer) solar cell is made of a thin mono crystalline silicon wafer surrounded by ultra-thin amorphous silicon layers. This product provides the industry's leading performance and value using state-of-the-art manufacturing techniques.



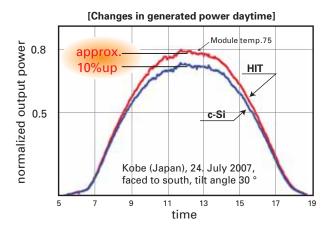
Benefit in Terms of Performance

The HIT cell and module have very high conversion efficiency in mass production.

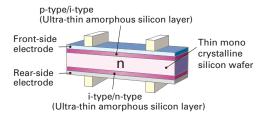
| Model | Cell Efficiency | Module Efficiency | |
|--------------|-----------------|-------------------|--|
| HIP-210NKHE1 | 18.9% | 16.7% | |
| HIP-205NKHE1 | 18.4% | 16.3% | |

High performance at high temperatures

Even at high temperatures, the HIT solar cell can maintain higher efficiency than a conventional crystalline silicon solar cell.



HIT Solar Cell Structure



Development of HIT solar cell was supported in part by the New Energy and Industrial Technology Development Organization (NEDO).

Environmentally-Friendly Solar Cell

More Clean Energy

HIT can generate more clean Energy than other conventional crystalline solar cells.

Special Features

SANYO HIT solar modules are 100% emission free, have no moving parts and produce no noise. The dimensions of the HIT modules allow space-saving installation and achievement of maximum output power possible on given roof area.





Electrical and Mechanical Characteristics HIP-210NKHE1,HIP-205NKHE1

| | | Models HIP-xxxNKHE1 | |
|---------------------------------|---------|---------------------|--------|
| Electrical data | 210 | 205 | |
| Maximum power (Pmax) | [W] | 210 | 205 |
| Max. power voltage (Vmp) | [V] | 41.3 | 40.7 |
| Max. power current (Imp) | [A] | 5.09 | 5.05 |
| Open circuit voltage (Voc) | [V] | 50.9 | 50.3 |
| Short circuit current (Isc) | [A] | 5.57 | 5.54 |
| Warranted minimum power (Pmin) | [W] | 199.5 | 194.8 |
| Maximum over current rating | [A] | 15 | |
| Output power tolerance | [%] | +10/-5 | |
| Maximum system voltage | [V] | 1000 | |
| Temperature coefficient of Pmax | [%/°C] | -0.30 | |
| Voc | [V/°C] | -0.127 | -0.126 |
| Isc | [mA/°C] | 1.67 | 1.66 |

Note 1: Standard Test Conditions: Air mass 1.5, Irradiance = $1000W/m^2$, Cell temperature = $25^{\circ}C$

Note 2: The values in the above table are nominal

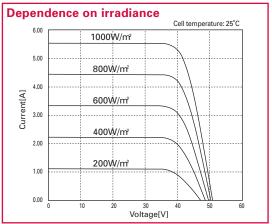
Dimensions and weight Type T

Warranty

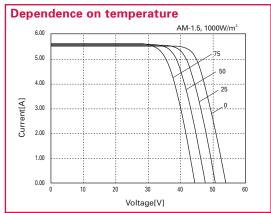
Power output: 20 years (80% of minimum output power) Product workmanship: 2 years

(Based on contract terms)

Reference data for model HIP-210NKHE1



Reference data for model HIP-210NKHE1



Certificates

Under process of certificate IEC61730

Please consult your local dealer for more information.

⚠ CAUTION! Please read the operating instructions carefully before using the products.

Due to our policy of continual improvement the products covered by this brochure may be changed without notice.

SANYO Component Europe GmbH Clean Energy Division

Stahlgruberring 4
81829 Munich, Germany
Tel.+49-(0)89-460095-0
Fax.+49-(0)89-460095-170
http://www.sanyo-component.com
email: info.solar@sanyo-component.com



SANYO Electric Co.,Ltd Clean Energy Company

http://www.sanyo.co.jp/clean/solar/hit_e/index_e.html email: homepage_solar@sanyo.com