SOLAR ACCESS

SHARP

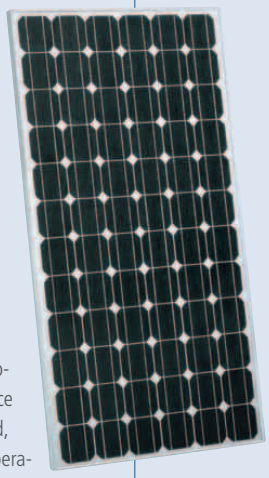
NT Series (72 cells)
175 W | 170 W

Monocrystalline silicon photovoltaic modules

SAY YES TO SOLAR POWER!

Because it protects the climate.

Innovations from a photovoltaic pioneer



As a solar specialist with 50 years' experience in photovoltaics (PV), Sharp makes significant contributions to ground-breaking progress in solar technology.

Sharp photovoltaic modules in the NT series are designed for applications with high power requirements. These quality monocrystalline modules produce a continuous, reliable yield, even under demanding operational conditions.

All Sharp NT series modules offer system integration which is optimal both technically and economically, and are suitable for installations in on and off-grid PV systems.

Brief details for the installer

- 126 mm x 126 mm monocrystalline solar cells
- 72 cells in series
- 2,400 N/m² mechanical load-bearing capacity (245 kg/m²)
- 1,000 V DC maximum system voltage
- IEC/EN 61215, IEC/EN 61730, Class II (VDE: 40021391)

Product features

- High-performance photovoltaic modules made of monocrystalline (126 mm)² silicon solar cells with module efficiencies of up to 13.5 %.
- Bypass diodes which minimise the loss in output when shading occurs.
- Textured cell surface for particularly high electricity yields.
- BSF structure (Back Surface Field) to optimise cell efficiency.
- Use of tempered white glass, EVA plastic, and weather protection film, as well as an anodised aluminium frame with drainage holes for long-term use.
- Output: connection cable with waterproof plug connector.

Quality from Sharp

Benchmarks are set by the quality standards of Sharp Solar. Continual checks guarantee a consistently high level of quality. Every module undergoes visual, mechanical, and electrical inspection. This is recognisable by means of the original Sharp label, the serial number, and the Sharp guarantee:

- 2 year product guarantee
- 10 year performance guarantee for a power output of 90 %
- 25 year performance guarantee for a power output of 80 %

The detailed guarantee conditions and additional information can be found at **www.sharp.eu**.

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Mechanical data

Cell	Monocrystalline (126 mm)² Sharp silicon solar cells
Quantity and wiring of cells	72 in series
Dimensions	1,575 x 826 x 46 mm (1.30 m²)
Weight	17 kg
Connection type	Cable with plug connector (MC-3)

Limit values

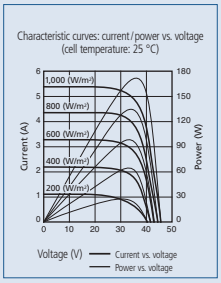
Operating temperature (cell)	– 40 to + 90	°C
Storage temperature	– 40 to + 90	°C
Maximum system voltage	1,000	V DC
Maximum mechanical load	2,400	N/m²
Over-current Protection	10	A

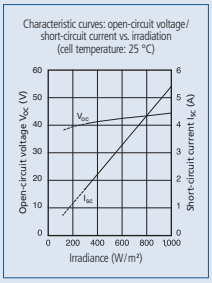
Electrical data

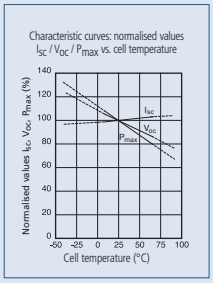
Made in EU **Made in Japan**		**NT-175 (E1)** **NT-R5 (E3E)**	**NT-170 (E1)** **NT-R0 (E3E)**	
Maximum power	P_{max}	175 W_p	170 W_p	
Open-circuit voltage	V_{oc}	44.4	44.2	V
Short-circuit current	I_{sc}	5.40	5.30	A
Voltage at point of maximum power	V_{mpp}	35.4	35.0	V
Current at point of maximum power	I_{mpp}	4.95	4.86	A
Module efficiency	η_m	13.5	13.1	%
NOCT		47.5	47.5	°C
Temperature coefficient – open-circuit voltage	αV_{oc}	– 156	– 156	mV / °C
Temperature coefficient – short-circuit voltage	αI_{sc}	+ 0.053	+ 0.053	% / °C
Temperature coefficient – power	αP_{max}	– 0.485	– 0.485	% / °C

The electrical data applies under standard test conditions (STCs): irradiation 1,000 W/m² with light spectrum AM 1.5 and a cell temperature of 25 °C. The rated electrical characteristics are subject to a manufacturing tolerance of – 5 % / + 10 %. NOCT conditions: irradiation of 800 W/m², ambient temperature of 20 °C and wind speed of 1 m/sec. The modules manufactured in Europe and Japan are identical in construction.

Characteristic curves NT-175 (E1)





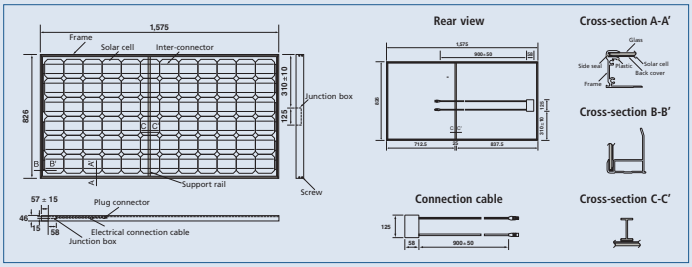


Applications

- On-grid PV systems
- Off-grid PV systems
- On-roof PV systems
- Ground-mounted PV systems

Please read our detailed installation manual carefully before installing the photovoltaic modules.

Exterior dimensions



Note

Technical data is subject to change without prior notice. Before using Sharp products, please request the latest data sheets from Sharp. Sharp accepts no responsibility for damage to devices which have been equipped with Sharp products on the basis of unverified information.

The specifications may deviate slightly and are not guaranteed. Installation and operating instructions are to be found in the corresponding handbooks, or can be downloaded from **www.sharp.eu**.

This module should not be directly connected to a load.

The reference image on the front page shows a 6 kWp system of 5ES 21 AG in Huglfing, Germany.

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