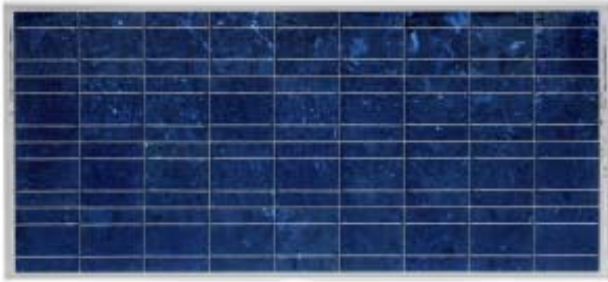


NP125GK / NP130GK



NP190GK / NP195GK / NP200GK

## Naps range of standard solar modules

Naps range of high efficiency solar (photovoltaic, PV) modules combine power, efficiency and quality construction in highly dependable solar generators. These modules are designed for easy installation in a wide range of applications, including battery charging (as in most off-grid systems), grid connection via a suitable inverter and direct drive of solar water pumps.

The 125 / 130W modules contain 36 silicon solar cells in series: the optimum module configuration for 12 Volt battery charging under the most demanding conditions. Charging of 24 and 48 Volt batteries is easily achieved by suitable series connection of modules.

The 190 / 195 / 200W modules contain 54 cells in series and are mainly designed for use in grid-connected systems. However, they can also be used in water pumping systems or for battery charging using a charge controller with dc/dc conversion and current boosting.

Featuring the highest standards of construction, Naps modules are able to withstand the harshest environments and continue to perform efficiently. Properly installed, these modules have a design life of at least 25 years. Cells are protected from dirt, moisture and impact by a tempered, low-iron glass front and laminated using EVA between this glass and a durable, multi-layered polymer backsheet for superior moisture resistance.

Naps modules are tested to meet or exceed international standards, quality and performance requirements. The modules' test performance and our years of experience providing dependable power in locations throughout the world assure you that Naps modules can meet your solar power needs today. Naps modules carry both 10 and 25 year limited power warranties.

- Electrically-matched, polycrystalline or ribbon silicon solar cells for efficient conversion of both direct and diffuse light.
- Cells coated for reduced reflection.
- Double redundant contacts on each cell for greater circuit reliability.
- Low iron content tempered glass cover provides mechanical protection and high light transmission.
- Circuit laminated between layers of ethylene vinyl acetate (EVA) for moisture resistance, UV stability, and electrical isolation.
- Tough, multi-layered polymer backsheet for resistance to abrasion, tears and punctures.
- Rugged, lightweight anodised aluminium frame with 4 mounting holes and 2 central holes for grounding screws.
- Junction box designed for easy field wiring, safety and environmental protection. Larger modules are pre-fitted with cables with quick connectors.
- Wired-in bypass diodes reduce potential loss of power or damage from partial array shading.
- Laboratory tested for a wide range of operating conditions (-40°C to + 85°C).
- Designed to meet or exceed the environmental requirements of IEC61215 (equivalent to Ispra CEC503).

## Specifications of Naps standard solar modules

	NP125GK	NP130GK	NP190GK	NP195GK	NP200GK
<b>Product code</b>	13125	13130	13190	13195	13200

<b>Power Specifications</b>	NP125GK	NP130GK	NP190GK	NP195GK	NP200GK
Maximum Power, Wp	125	130	190	195	200
Maximum Power Tolerance	+/-5%	+/-3%	+/-5%	+/-3%	+/-3%
Current (typical A at max power), Im	7.30	7.50	7.36	7.50	7.63
Voltage (typical at max power), Vm	17.1	17.3	25.8	26.0	26.2
Short Circuit Current (typical A), Isc	7.90	8.10	8.00	8.10	8.20
Open Circuit Voltage (typical), Voc	21.9	22.1	33.0	33.1	33.4

The above values refer to standard test conditions of 1000 Wm<sup>2</sup> solar irradiance, 25°C cell temperature, Air Mass 1.5.

<b>Mechanical Details</b>	NP125GK	NP130GK	NP190GK	NP195GK	NP200GK
Overall length mm	1480	1480	1475	1475	1475
Overall width mm	670	670	986	986	986
Thickness at edge mm	34	34	35	35	35
Weight kg	10.6	10.6	19.5	19.5	19.5

### **Integral mounting holes for 6mm bolts**

Long sides: centre to centre mm	740	740	790	790	790
Long sides: centre to frame end mm	370	370	342.5	342.5	342.5
Short sides: centre to centre mm	628	628	943	943	943
Short sides: centre to frame end	21	21	21.5	21.5	21.5

<b>Construction</b>	NP125GK	NP130GK	NP190GK	NP195GK	NP200GK
Cells	36	36	54	54	54
Cell type	poly	poly	poly	poly	poly
Cell dimensions mm	156x156	156x156	156x156	156x156	156x156
Cell layout	4x9	4x9	6x9	6x9	6x9
Cell electrical circuit	36Sx1P	36Sx1P	54Sx1P	54Sx1P	54Sx1P
Glass thickness	3mm	3mm	4mm	4mm	4mm
Junction boxes	1	1	1	1	1
Junction box type	S	S	S	S	S
Bypass diodes factory fitted	2	2	3	3	3

<b>Prefitted cables 4mm<sup>2</sup> with connectors</b>	no	no	yes	yes	yes
Cable option 1 (Multicontact 4mm connectors)			2 x 0.9m	2 x 0.9m	2 x 0.9m
Cable option 1 identification (add to name)			-QC90MC4	-QC90MC4	-QC90MC4
Cable option 2 (Huber+Suhner connectors)			2 x 1m	2 x 1m	2 x 1m
Cable option 2 identification (add to name)			-QC100H	-QC100H	-QC100H

<b>NOCT</b>	NP125GK	NP130GK	NP190GK	NP195GK	NP200GK
Normal Operating Cell Temperature	47	47	45	45	45

Cell temperature at 800Wm<sup>2</sup>, 20°C ambient temperature, wind speed <=1ms<sup>-1</sup>, free air access to module rear

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