

**HIGH PERFORMANCE 54 CELL POLYCRYSTALLINE
SOLAR PHOTOVOLTAIC MODULE**
CNPV-230P-54, CNPV-225P-54, CNPV-220P-54

**Optimal Premium
Series by CNPV^{POWER}**

MOREPOWER

3% Positive Tolerance

CNPV's positive tolerance on label rating power provides higher kWh for money invested.

ARC Glass

Low iron, anti reflective coated glass gives 2% Energy gain.

Triple Busbar

3 busbar design cells in modules ensures longevity and greater power output.

Cell & Module Matching

Matching gives 2% additional power gain measured at STC conditions.

Independent Performance Verification

Independently verified by Photon and Öko-Test as amongst the best kWh/kWp output worldwide.

100% Electro Luminescence

EL screening provides defect free modules.

Unique Frame

Twist resistant frame design.

International Bankability

Pre-approved with financial institutions and rapid capability ensures customers' cost of project is reduced.

**ISO9001
ISO14001
OHSAS18001**

Audited controls for high value consistency.



FOR LONGER

True Linear Warranty 25 years

Highest power warranty coverage available on a linear basis.

Workmanship Warranty 10 years

10 years global workmanship warranty.

Strength 8000Pa

Industry leading snow loading capacity.

Degradation Resistance

Superior resistance to PID.

Accredited ammonia/salt mist resistance

Long life in marine and high pollution environments.

Smart Junction Box

Long term water vapour screening and increased heatsink.

Low Carbon Footprint

One of the lowest carbon footprints over 100 years life cycle.

Green Credentials

Fully committed to recycling during production and end of product life, a dedicated member of PV cycle.

Eco Friendly Packaging

Friendly materials choice with high density packing.

ISO14001 accredited ISO

Continuous improvement in reducing environmental impact.

MUCH SAFER

AND GREENER

About CNPV

CNPV Solar Power SA, is a leading integrated manufacturer of solar photovoltaic products, that designs, manufactures and supplies highly efficient and cost effective crystalline solar photovoltaic modules. Reliability & longevity are built into our world-class crystalline solar photovoltaic modules, which undergo rigorous internal tests and external certifications (IEC61215, IEC61730, UL and CE) to ensure peak performance and safety. For further information, please visit CNPV's website at <http://www.cnpv-power.com>, please contact us at marketing@cnpv-power.com.



Electrical Data	CNPV-220P-54	CNPV-225P-54	CNPV-230P-54
Peak Power Watts-Pmax (Wp)	220	225	230
Power Output Tolerance-Pmax (%)	0/+3	0/+3	0/+3
Maximum Power Voltage-Vmp(V)	26.60	27.05	27.55
Maximum Power Current-Imp (A)	8.28	8.32	8.36
Open Circuit Voltage-Voc (V)	33.80	34.00	34.20
Short Circuit Current-Isc(A)	8.82	8.86	8.90
Encapsulated Solar Cell Efficiency-ηc	16.8	17.0	17.5
Module Efficiency-ηm (%)	15.0	15.3	15.6

Values at Standard Test Conditions STC (Air Mass AM 1.5, Irradiance 1000W/m², Cell Temperature 25°C)

Mechanical Data	
Solar Cells	Poly Crystalline 156×156mm
Cells Configuration	54 cells (6×9)
Module Dimension	1482×992×35mm(58.35"×39.06"×1.38")
Weight	16.5Kg(36.38lb)
Glass	High transmission tempered glass with ARC
Frame	Anodized aluminium alloy type 6063T5; color: Silver
J-box	IP65, 1000VDC, TUV&UL certified with 3 schottky bypass diodes
Cables/Connector	4.0mm ² (12AWG), TUV certified/IP67, Type IV

Temperature Ratings	
Nominal Operating Cell Temperature (NOCT)	45±2°C(113±3.6°F)
Temperature Coefficient of Pmax	- 0.40%/°C(-0.22%/°F)
Temperature Coefficient of Voc	- 0.32%/°C(-0.18%/°F)
Temperature Coefficient of Isc	0.05%/°C(0.028%/°F)

Warranty
10 years workmanship warranty
25 years world's first true linear performance warranty

(Please refer to CNPV product warranty for details)

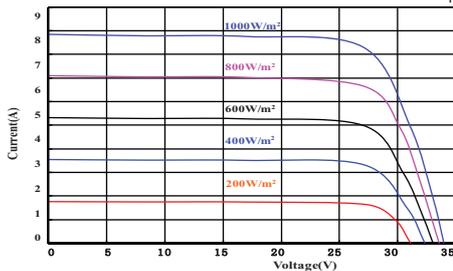
Maximum Ratings	
Operational Temperature	-40~+85°C
Maximum System Voltage	1000VDC
Maximum Series Fuse Rating	20A

Packaging Configuration	
Modules per box	30 pcs
Modules per 40 ft high cubic container	840 pcs
Modules per 20 ft container	350 pcs
Dimensions of Pallet (L×W×H)	1550×1145×1174mm
Gross Weight	540kg

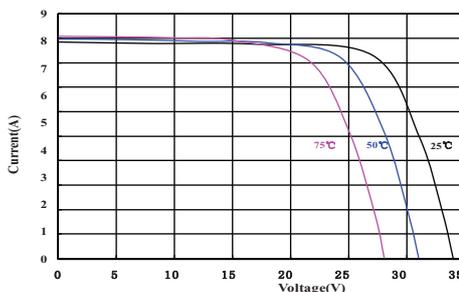


I-V Characteristics at Different Irradiance & Temperature

I-V Curves of CNPV-225P-54 at different irradiance
Cell Temp. 25°C



I-V Curves of CNPV-225P-54 at different cell temperature
Irradiance: AM.1.5, 1KW/m²



Module Efficiency Up to

15.6%

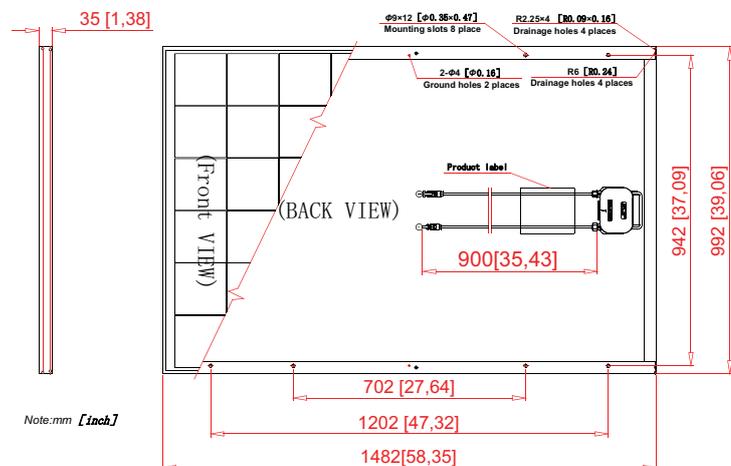
Wattage Up to

230W

Years Warranty

25

Dimensional Characteristics



DISCLAIMER: specifications included in this datasheet are subject to change without previous notice from the company. In case of any conflicts/problems that may arise due to misinterpretation, prevailing conditions are the ones described in the original version (in English).

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