



NANOSOLAR UTILITY PANEL

Higher Energy Yield at Lower System and O&M Cost



Print2Power™ Technology

- Next-gen CIGS platform enables higher power conversion efficiency



High Light Performance

- Excellent peak production profile in mid-day sun



High Performance at High Temperatures

- Low temperature coefficients mean better performance in hot climates



Lower Array Mismatch

- Improved maximum power point tracking (MPPT) reduces system losses



Positive Power Tolerance

- Up to 10% positive binning enabling more power output



High-Current, Low-Voltage Design

- Longer strings for lower wiring costs
- 25A fuse rating enables parallel circuits



Large Thin Film Panel with High Power Output

- Fewer clamps, panels and racks yield lower installation and O&M costs



Rugged Panel Design

- Resistant to high wind and snow loads
- Low breakage rate and easier installation



Industry First 1500 V Certification

- No module grounding required
- Reduces DC cabling and inverter costs



Low Potential Induced Degradation Tested (PID)

- Less degradation risk due to wet or humid conditions



ARRA & BAA Compliant



Performance

Maximum Rated Power	220W _p – 260W _p	
Tolerance ¹	P _{mpp}	0% to +10%
	V _{oc} , I _{sc} , V _{mpp} , I _{mpp}	-10% to +10%
Limited Warranty ¹	5 years material & workmanship 90% nominal power output for first 10 years 80% nominal power output for first 25 years	

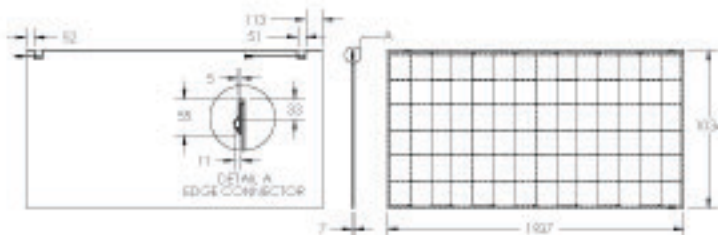
Mechanical Characteristics

Dimensions	Length: 1937 mm (76.26 in) Width: 1034 mm (40.71 in) Height: 7 mm (0.28 in)
Weight	34.7 kg (76.3 lbs)
Construction	Frameless glass/glass laminate 3 mm tempered solar glass front 3 mm tempered glass back
Solar Cells	84 CIGS cells in series
Output Cables	80 mm cable (positive) 300 mm cable (negative)
Output Terminal	MC4 compatible
Mounting Systems	Support of 2400Pa and 5400 Pa load. ⁴

Shipping Quantities

Per Pallet	40
Per 40-foot ISO Container	480-520 ⁵

Mechanical Drawing



¹ Exclude tester tolerance of +/-3%. Contact Nanosolar for full warranty terms.

² Standard Test Conditions (STC): 1000 W/m², 25°C, AM1.5G.

³ NOCT Test Conditions: 800 W/m², ambient 20°C, Wind ≤1m/s.

⁴ Please refer to NSLR Safety & Installation Guide for details.

⁵ Depending on destination region & road restrictions.

All specifications are subject to change without further notification.

Electrical Characteristics at STC²

Module Type	NS 100 B				
Rated Power (W _p)	220	230	240	250	260
V _{MPP} (V)	37.0	37.5	38.0	38.5	39.0
I _{MPP} (A)	6.0	6.1	6.3	6.5	6.7
V _{OC} (V)	47.4	47.6	47.8	47.9	48.1
I _{SC} (A)	7.2	7.2	7.2	7.3	7.3
Temp Coeff of P _{MAX} (% / K)	-0.40				
Temp Coeff of V _{OC} (% / K)	-0.30				
Max System Voltage	600V / 1000V / (1500V)				
Max Series Circuit Fuse	25A				
Nominal Operating Cell Temperature	47°C				
Grounding	No positive or negative grounding required. Panels can be connected to transformerless inverters.				

Electrical Characteristics at NOCT³

Rated Power (W _p)	220	230	240	250	260
V _{MPP} (V)	32.6	33.3	34.0	34.7	35.5
I _{MPP} (A)	5.1	5.2	5.2	5.3	5.4
V _{OC} (V)	44.4	44.5	44.5	44.6	44.7
I _{SC} (A)	5.8	5.8	5.8	5.8	5.9

Qualifying Test Conditions

Temperature Cycling	-40°C to +85°C, 200 cycles
Damp Heat	85% RH, 85°C, 1000 hr
Static Load Front & Back	2400 Pa (50 psf)
Hailstone Impact	25mm diameter at 23 m/s

Quality and Safety

IEC 61646 & 61730, conformity to CE
UL 1703, Fire Resistance Class A
Safety Class II in accordance with IEC 61140

