

**TONGWEI**

# TNC

## TNC-G12R

N-Type Bifacial Solar Cell | TW210-216N



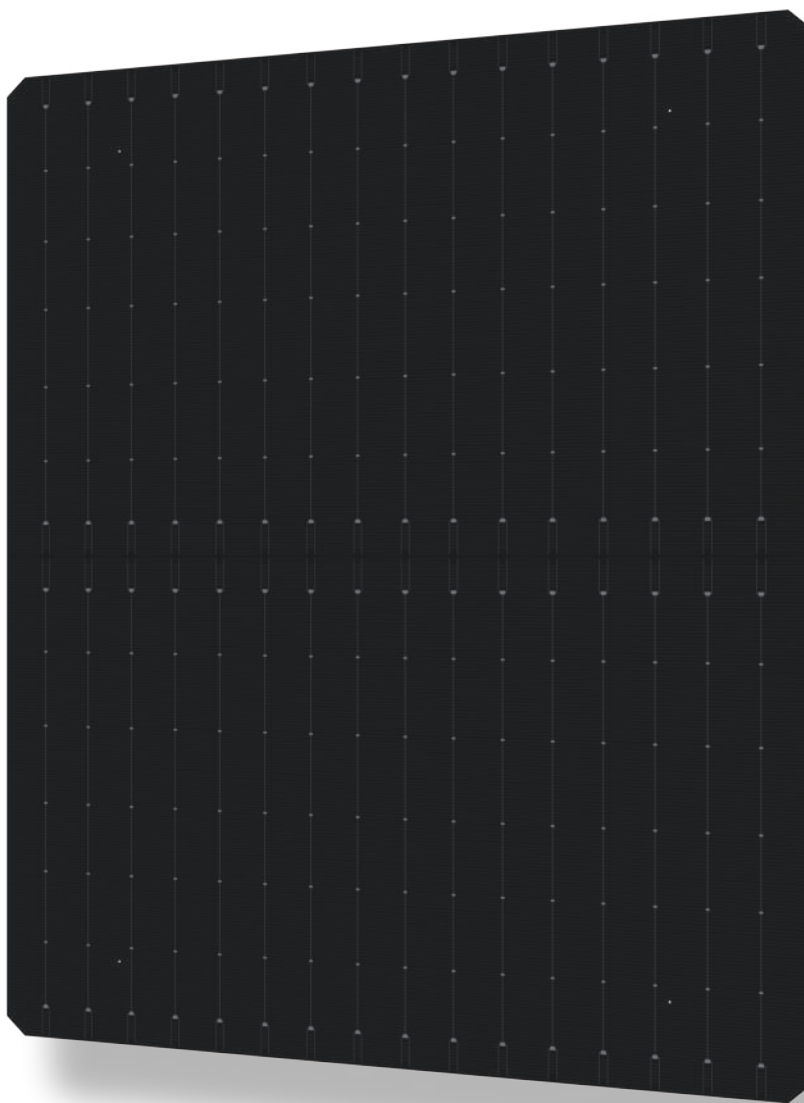
**High  
Efficiency**



**Excellent  
Quality**



**Prominent  
Reliability**



<https://en.tongwei.cn/cell.html>

# TNC-G12R

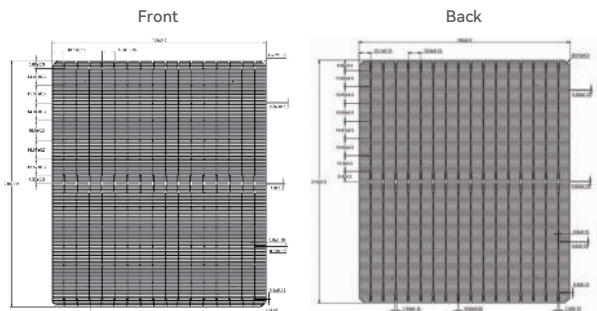
N-Type Bifacial Solar Cell | TW210-216N



## Front Electrical Performance Parameters

| Eff (%) | Pmpp (W) | Vmpp (V) | Impp (A) | Voc (V) | Isc (A) | FF (%) |
|---------|----------|----------|----------|---------|---------|--------|
| 26.1    | 9.97     | 0.628    | 15.875   | 0.745   | 15.987  | 83.71  |
| 26.0    | 9.93     | 0.627    | 15.831   | 0.744   | 15.961  | 83.59  |
| 25.9    | 9.89     | 0.627    | 15.768   | 0.744   | 15.938  | 83.41  |
| 25.8    | 9.85     | 0.626    | 15.734   | 0.743   | 15.919  | 83.30  |
| 25.7    | 9.81     | 0.625    | 15.695   | 0.742   | 15.906  | 83.16  |
| 25.6    | 9.78     | 0.624    | 15.672   | 0.740   | 15.891  | 83.14  |
| 25.5    | 9.74     | 0.623    | 15.636   | 0.739   | 15.872  | 83.01  |
| 25.4    | 9.70     | 0.622    | 15.590   | 0.738   | 15.868  | 82.83  |
| 25.3    | 9.66     | 0.621    | 15.553   | 0.737   | 15.861  | 82.64  |
| 25.2    | 9.62     | 0.620    | 15.517   | 0.736   | 15.851  | 82.48  |
| 25.1    | 9.58     | 0.619    | 15.480   | 0.735   | 15.842  | 82.30  |
| 25.0    | 9.55     | 0.618    | 15.453   | 0.734   | 15.826  | 82.20  |
| 24.9    | 9.51     | 0.617    | 15.406   | 0.733   | 15.824  | 81.98  |
| 24.8    | 9.47     | 0.616    | 15.369   | 0.732   | 15.820  | 81.78  |
| 24.7    | 9.43     | 0.615    | 15.332   | 0.731   | 15.813  | 81.59  |
| 24.6    | 9.39     | 0.614    | 15.295   | 0.730   | 15.811  | 81.38  |

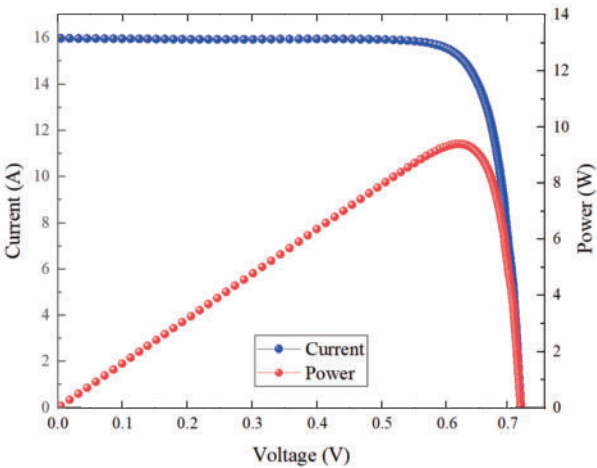
## Product Appearance (mm)



## Product Design

|                  |                                                                                    |                                  |
|------------------|------------------------------------------------------------------------------------|----------------------------------|
| <b>Dimension</b> | 182mm*210mm±0.5mm<br>Φ272±0.5mm                                                    | TkVoltage: $-(0.25\pm0.010)\%/K$ |
| <b>Thickness</b> | 130±13μm                                                                           | TkCurrent: $+(0.04\pm0.004)\%/K$ |
| <b>Front</b>     | 16 busbars (silver), 310 fingers<br>Blue anti-reflective coating (silicon nitride) | TkPower: $-(0.29\pm0.025)\%/K$   |
| <b>Back</b>      | 16 busbars (silver), 252 fingers<br>Blue anti-reflective coating (silicon nitride) | Rsh≥50Ω Irev2≤0.5A               |

## IV Curve



## Back Electrical Performance Parameters

| Eff (%)   | Pmpp (W) | Vmpp (V) | Impp (A) | Voc (V) | Isc (A) | FF (%) |
|-----------|----------|----------|----------|---------|---------|--------|
| ≥ 21.5    | 8.21     | 0.620    | 13.242   | 0.735   | 13.408  | 83.31  |
| 21.0-21.5 | 8.02     | 0.614    | 13.062   | 0.730   | 13.258  | 82.87  |
| 20.5-21.0 | 7.83     | 0.609    | 12.857   | 0.725   | 13.213  | 81.74  |
| < 20.5    | 7.64     | 0.604    | 12.649   | 0.720   | 13.177  | 80.53  |

STC (Standard Testing Conditions): 1000W/m<sup>2</sup>, AM1.5, 25°C

26.08.05

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Statement: With technological progress and product iteration, deviations may exist between the technical parameters of Tongwei's cell products and those stated in the specification. Tongwei reserves the right to adjust technical parameters at any time without prior notice to customers. The final interpretation of the technical specification shall vest in Tongwei.