

**PRODUCT SPECIFICATION**  
**High-Efficiency Bifacial**  
**TOPCon Solar Module – 585 W**



ARTIC TECH, a business unit of ARTIC FIBER OPTIC, develops smart IoT solutions for residential, corporate, and industrial environments. The portfolio combines connectivity, automation, sensors, security, and energy management to enable efficient and intelligent systems.

This high-efficiency photovoltaic module is designed for commercial and utility-scale solar installations, incorporating advanced TOPCon cell technology to achieve high energy yield and stable performance. Its robust construction, combined with enhanced mechanical resistance and long-term reliability features, ensures consistent operation under demanding environmental conditions throughout its service life.

**Product Code**  
ATE-182-585

**Key Benefits**

- High-efficiency TOPCon cell technology
- SMBB half-cell design for improved efficiency
- Robust composite frame with no PID
- Certified mechanical resistance for harsh conditions
- Extremely low LID/PID for long-term stability
- Bifacial design for additional energy yield



**PRODUCT SPECIFICATION**  
**High-Efficiency Bifacial**  
**TOPCon Solar Module – 585 W**



**Electrical Data (STC)**

|            |         |
|------------|---------|
| Pmax       | 585 Wp  |
| Voc        | 51.69 V |
| Isc        | 14.41 A |
| Vmpp       | 42.77 V |
| Impp       | 13.68 A |
| Efficiency | 22.64%  |

**Output (AC)**

|      |         |
|------|---------|
| Pmax | 438 Wp  |
| Voc  | 49.1 V  |
| Isc  | 11.63 A |
| Vmpp | 40.02 V |
| Impp | 10.96 A |

**Mechanical Data**

|                         |  |
|-------------------------|--|
| Cell                    | 182 mm (all dimensions)  |
| Weight                  | 32 ± 0.5 kg  |
| Dimension               | 2278 × 1134 × 30 mm  |
| Cable                   | 4 mm <sup>2</sup> , 300 mm (customized length based on needs)  |
| Frame                   | Composite material frame   |
| Junction box            | IP68, 1500 VDC, 3 diodes   |
| Packaging configuration | 36pcs/pallet, 20pallets/container, 720pcs/container;<br>36pcs/pallet, 25pallet/Trailer, 900pcs/Trailer |

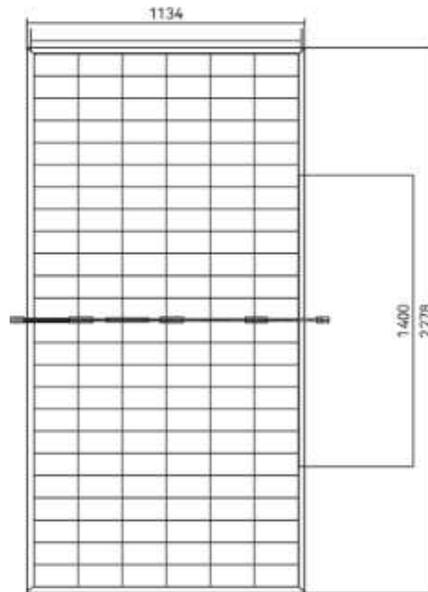
**Working Condition**

|                                 |               |
|---------------------------------|---------------|
| Maximum system voltage          | 1500 VDC      |
| Operating temperature           | -40°C ~ +85°C |
| Maximum fuse rating             | 30 A          |
| Rear side mechanical load       | 2400 Pa       |
| Front side mechanical load      | 5400 Pa       |
| NOCT                            | 44 ± 2°C      |
| Safety rating                   | Class II      |
| Grounding electric conductivity | <0.1 Ω        |

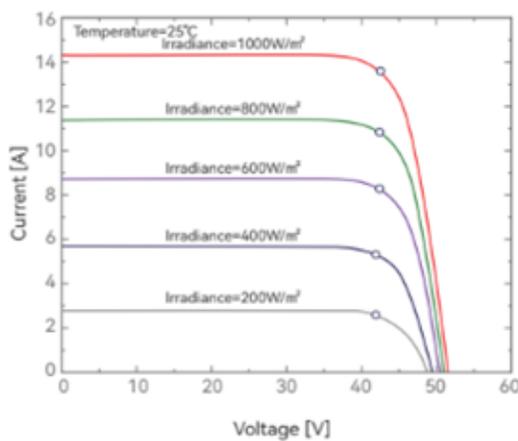
PRODUCT SPECIFICATION  
 High-Efficiency Bifacial  
 TOPCon Solar Module – 585 W



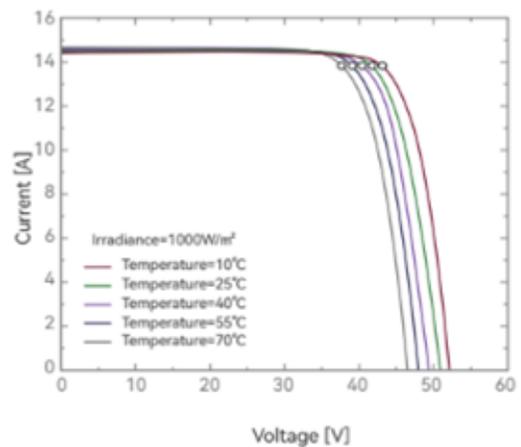
Dimension



I-V Diagram



Different Irradiance



Different Temperature