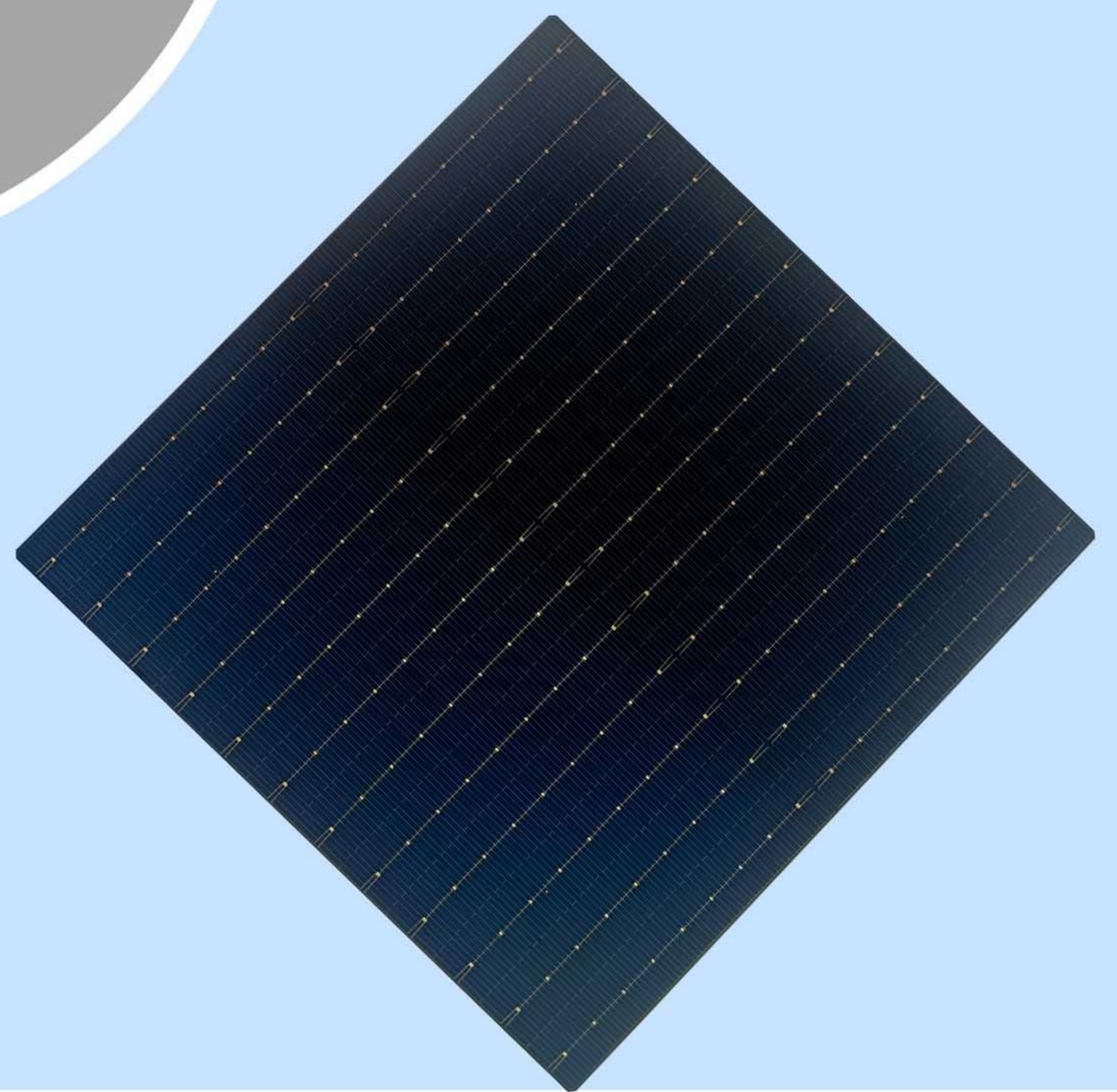

A large grey circle with a white border containing the text "M12-12BB Data Sheet" in white, bold, sans-serif font. A grey curved line connects the top of the circle to the top right of the page, and another grey curved line connects the bottom of the circle to a blue circle on the left side of the page.

M12-12BB Data Sheet

A blue circle at the end of a grey curved line that originates from the bottom of the title circle.

■ Product Description

- ✓ High conversion efficiency with high reliability
 - ✓ No light-induced degradation
 - ✓ Uniform cell performance with stable process control
 - ✓ Both sides can generate electricity
 - ✓ Low mismatch of cell performance during encapsulation
 - ✓ Excellent power generation performance under low irradiation
 - ✓ Low hot spot effect
- 
- A blue circle at the end of a grey curved line that originates from the right side of the page.

■ Technical Characteristics

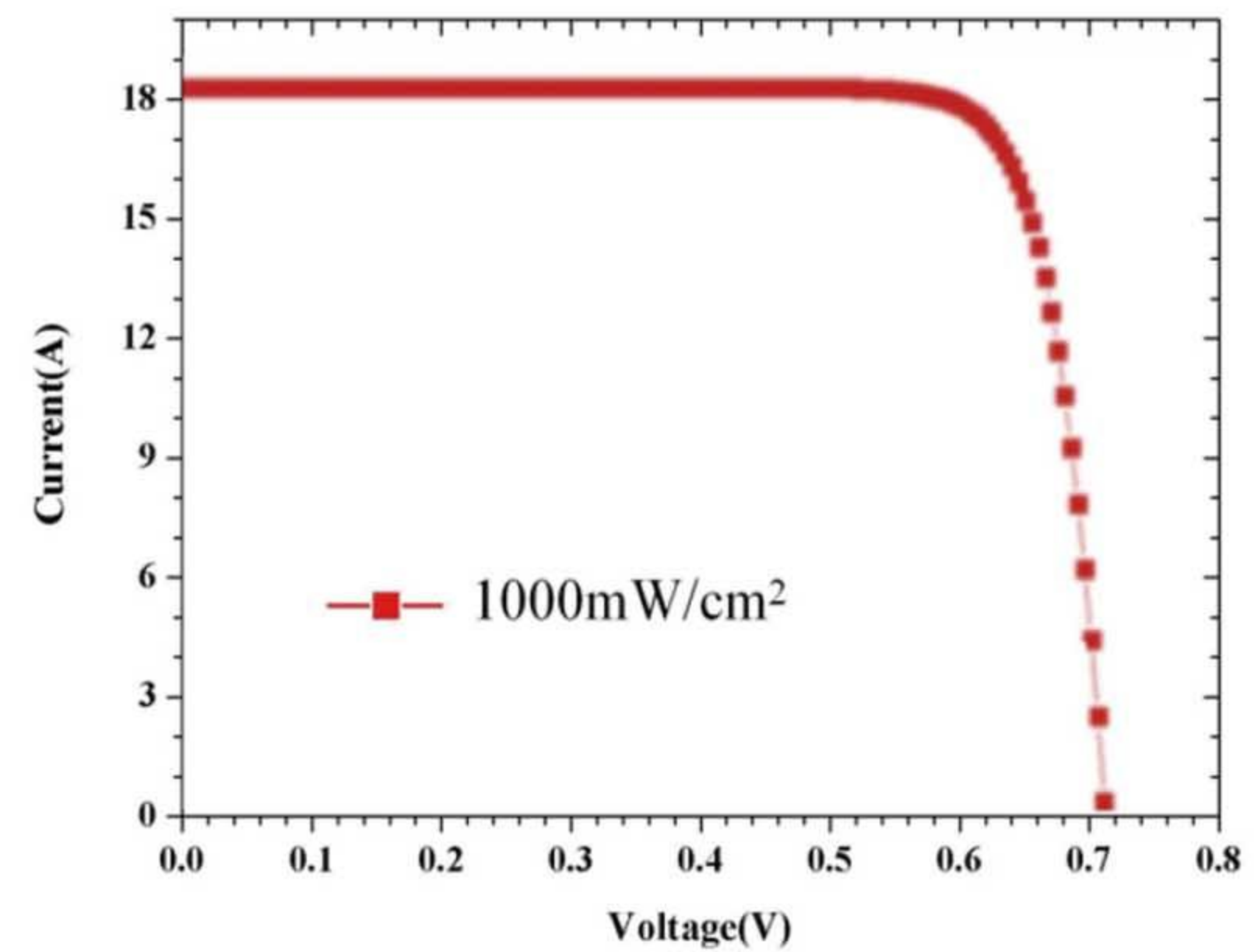
Dimension	210mm *210mm±0.25mm	TkVoltage:-0.26 %/K
Thickness	140±14um	TkCurrent:+0.046%/K
Front	11*0.06±0.04mm main bus bars(silver), 150 auxiliary bus bars, blue (dark blue) color, black anti-reflecting coating(silicon nitride)	TkPower:-0.3%/K
Back (+)	Back electrode width(silver):1.2 ± 0.3mm bus bars(silver),covering 170 aluminum bus bars.	Rsh≥50Ω, Irev2≤0.5A

■ Light Intensity and Reliability

Intensity(W/m2)	Uoc	Isc
1000	1.000	1.000
900	0.996	0.903
800	0.991	0.803
600	0.988	0.602
400	0.962	0.403

The UOC (ISC) tested by 1000W/m2 is the standard, and the ISC (ISC) decreases with the strong decrease in light.

■ IV Curve

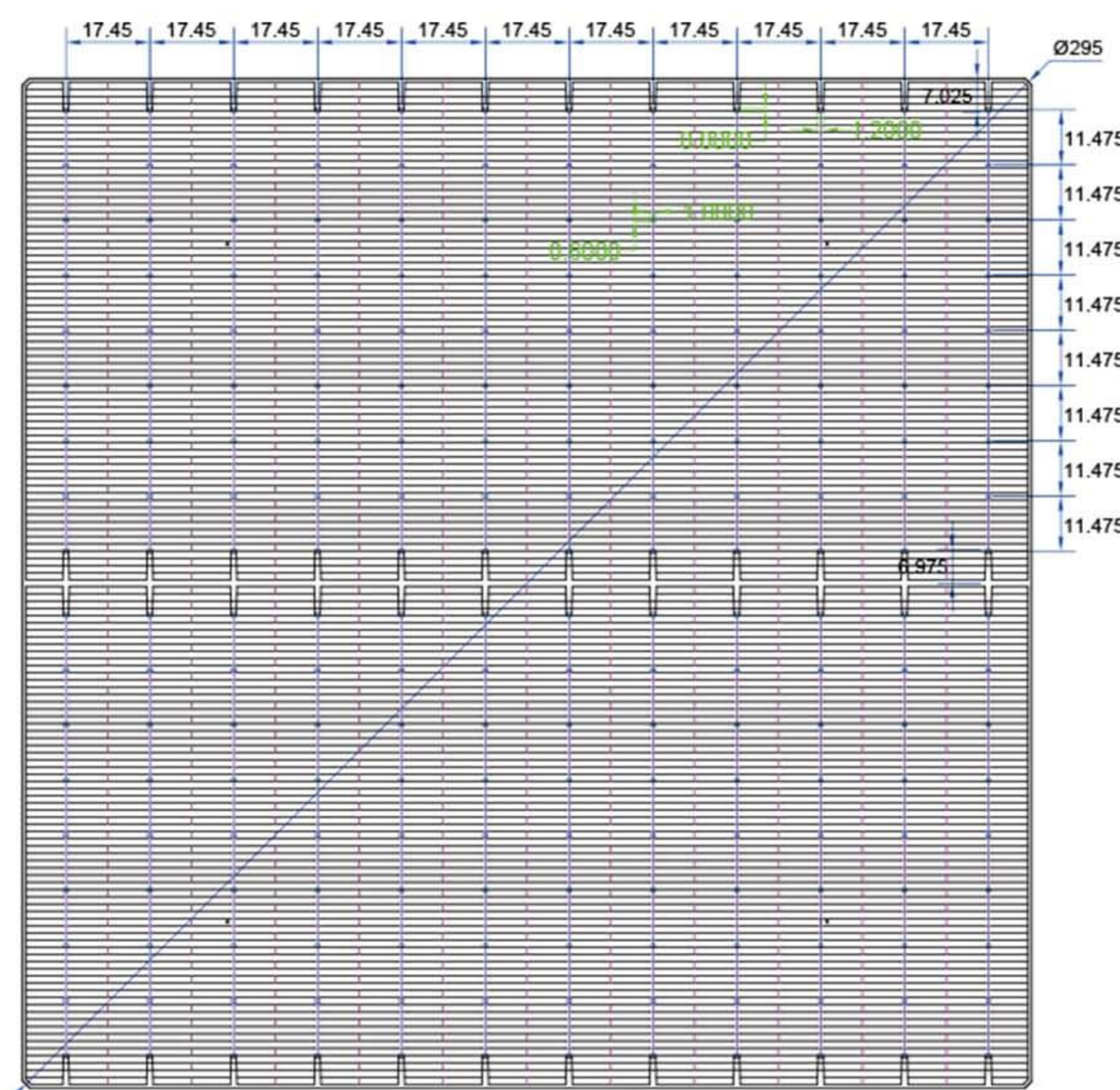


■ Weldability

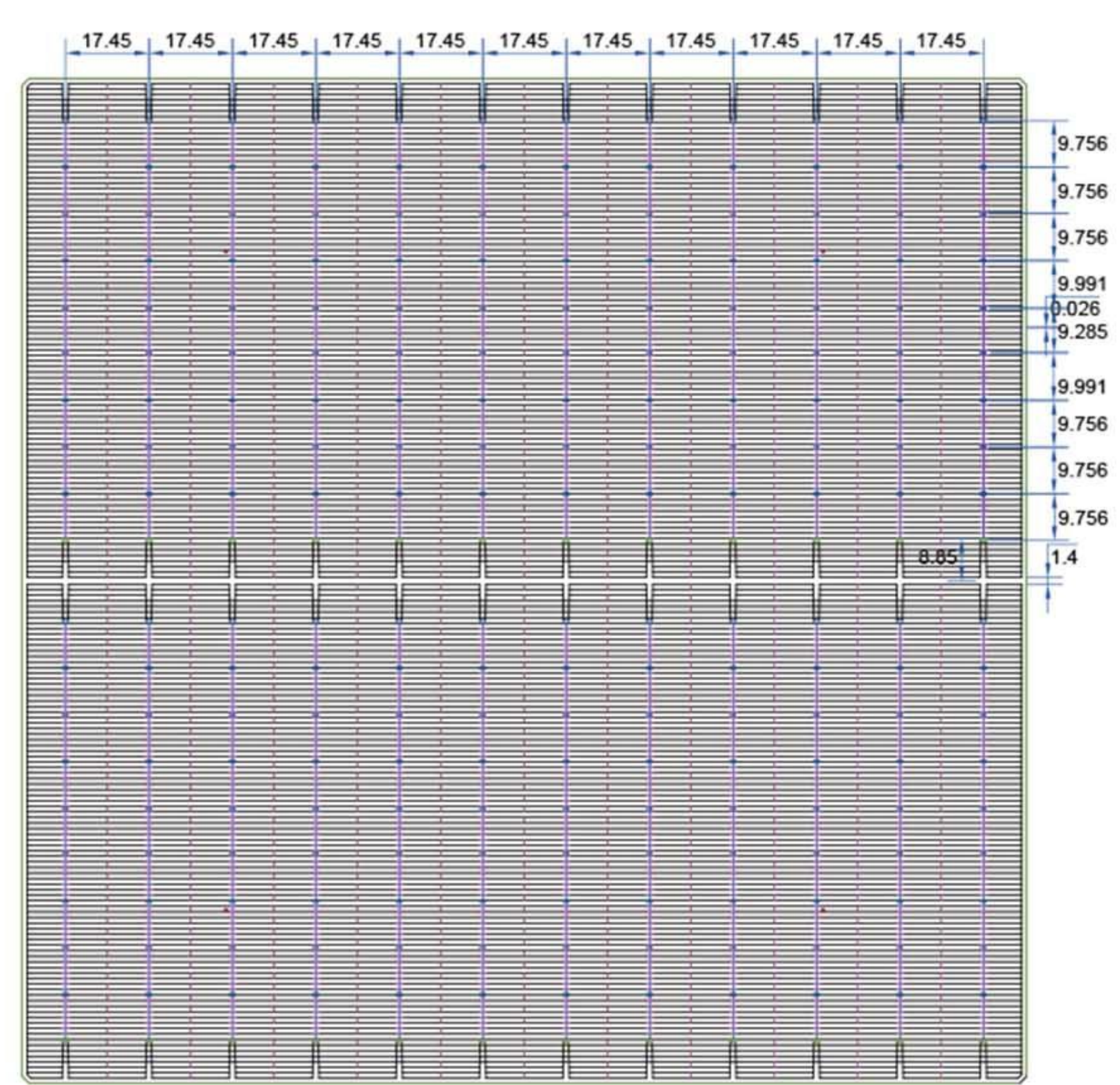
Minimum peeling intensity ≥1.0N/mm

Results may vary depending on the welding ribbon, welding methods and conditions.

■ Printing Graphics



Front Side



Back Side

■ Front Side Electrical Performance

Eff (%)	$P_{mpp}(W)$	$U_{mpp}(V)$	$I_{mpp}(A)$	$U_{oc}(V)$	Isc(A)	FF(%)
25.1	11.07	0.632	17.521	0.7177	18.228	84.65
25.0	11.04	0.631	17.491	0.7167	18.201	84.63
24.9	10.99	0.629	17.465	0.7153	18.193	84.46
24.8	10.96	0.628	17.451	0.7142	18.182	84.37
24.7	10.91	0.626	17.427	0.7130	18.170	84.21
24.6	10.86	0.624	17.403	0.7110	18.157	84.16
24.5	10.83	0.623	17.387	0.7105	18.149	83.95
24.4	10.78	0.622	17.340	0.7104	18.138	83.65
24.3	10.74	0.620	17.314	0.7094	18.130	83.47
24.2	10.69	0.619	17.282	0.7095	18.129	83.13
24.1	10.65	0.617	17.246	0.7093	18.125	82.81

STC:1000W/m², AM1.5, 25°C

■ Back Side Electrical Performance

Eff (%)	$P_{mpp}(W)$	$U_{mpp}(V)$	$I_{mpp}(A)$	$U_{oc}(V)$	Isc(A)
>16	5.28	0.578	9.136	0.675	10.109
15.5-16	5.18	0.572	9.068	0.674	10.048
15-15.5	5.02	0.565	8.877	0.672	9.981
<15	4.89	0.559	8.743	0.670	9.895

STC:1000W/m², AM1.5, 25°C