

SOL9661B Series



SOL9661B
> 0.05 %
Eta gain

efficiency

Patent Pending

FRONT-SIDE PASTE



New Generation Front Side Silver Paste For PERC+SE

- Ultra-Fine-line screen printing
- Superior contact and Voc for SE PERC emitter
- Low laydown and high adhesion

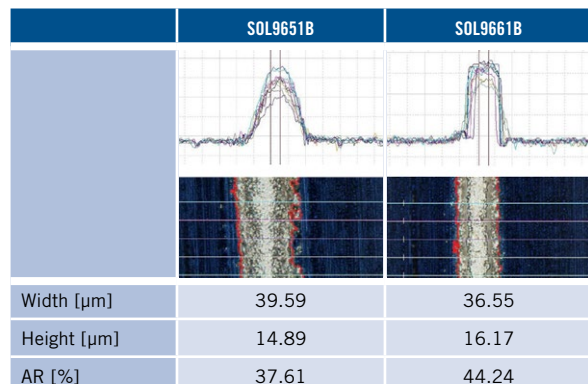
The Heraeus SOL9661B series front side silver paste was specially designed for ULDE (Ultra Lightly Doped Emitter) plus SE (Selective Emitter). SOL9661B series is based on the glass chemistry upgraded from the last generation to offer high adhesion and extra protection on laser damaged area, combined with the latest improvement in organic vehicle system for UFL(Ultra-Fine-Line) printing. As confirmed by customers, SOL9661B has efficiency gain >0.05% in mass production. SOL9661B has a wide firing window toward lower temperature side, which makes the series well-performed on PERC solar cells, meanwhile, superior UFL printing ability gives more space to customer to reduce laydown and improve efficiency. It is worth mentioning that the SOL9661B platform allows our R&D to offer solutions for different printing technology and emitter.

KEY BENEFITS

- Ultra-Fine-line screen printing
- Superior contact and Voc for SE PERC emitter
- Low laydown and high adhesion
- High Voc, extra protection on laser damaged Selective Emitter
- Low firing temperature and wide contact window can further reduce LeTID
- Perfect compatibility with multi Busbar printing
- Allow quick and efficient customization

SUPERIOR ULTRA-FINE-LINE PRINTABILITY

The SOL9661B is perfectly tailored for Ultra-fine-line printability for screen printing. It supports a finger geometry that can print defect-free through a less than 26 µm screen opening in high throughput mass production.

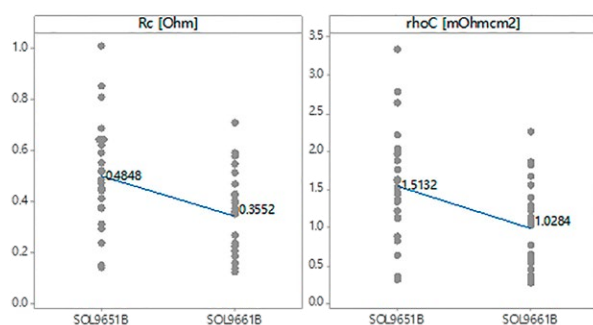


Same conditions on 480/11 – 26 µm opening

UNIQUE PASTE CHEMISTRY DESIGNED FOR SELECTIVE EMITTER PERC CELL

Continued innovation from last generation, SOL9661B features a unique patent pending glass frit and silver combination, enabling the tolerance of Low Peak, wide firing temperatures and emitter protection. Driven by Ultra-Fine-Line, conventional paste will get Isc gain but FF drop, Heraeus SOL9661B series' exclusive inorganic platform continues to improve the contact performance, can achieve Isc and FF gain at the same time.

SOL9661B has Better Contact Performance than SOL9651B



TYPICAL PROPERTIES

Wafer types:

- Mono crystalline PERC
- Mono crystalline PERC with SE

Solid content: 91 ± 1%

Fineness of Grind (FOG):

- 4th scratch: ≤ 12 µm
- 50%: ≤ 8 µm

Viscosity:

CPE-51 spindle (Brookfield):
40–110 kcps @ 1 RPM, 25°C

RECOMMENDED PROCESSING GUIDELINES

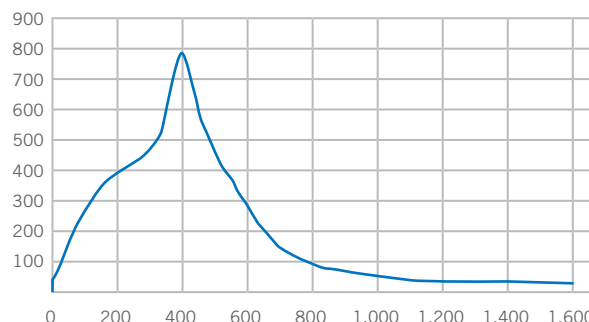
Single Print: 480/11 ≤ 26 µm opening;
430/13 ≤ 28 µm opening

Dual Print: 480/11 ≤ 26 µm opening;
430/13 ≤ 28 µm opening

EOM thickness: ≤ 15 µm EOM

Drying: Typically dried in an IR dryer with set points of 250–300°C in less than 20 seconds.

Firing: IR Furnace with Actual Wafer Peak Temperature at 740–800°C profile.



Storage:

Store in a dry location at 5°C–25°C.
Stir well before using.

Contact your Application Engineering Team partner for individual advice.

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