



Understanding 156.75mm 5BB Solar Cells: Specifications and Applications

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What Does 156.75mm 5BB Mean in Solar Technology?

In photovoltaic manufacturing, the designation 156.75mm 5BB refers to solar cells measuring 156.75x156.75mm with five busbars. These busbars (the thin silver lines) play a crucial role in electron collection efficiency - think of them as miniature highways for electrical current. Compared to older 3BB designs, the 5BB configuration reduces resistance losses by 18-22%, according to 2024 industry benchmarks.

Key Technical Specifications

- Dimensions: 156.75mm x 156.75mm (M6 wafer standard)
- Busbar configuration: 5BB (five parallel conductors)
- Conversion efficiency: 18.2%-19.2% for polycrystalline models
- Power output: 4.42W-4.57W per cell
- Thickness: 200mm ?20mm

Market Applications and Practical Uses

These workhorse cells power various solar solutions:

- Residential solar arrays: A typical 5kW system uses ~1,100 cells
- Commercial power stations: 1MW installation requires ~220,000 cells
- Specialty applications: Boat solar systems, RV power supplies

Fun fact: The 156.75mm dimension isn't random - it's precisely calculated to minimize silicon waste during diamond wire cutting. Imagine trying to fit maximum pizza slices from a circular wafer!

Pricing Dynamics (2024 Q2 Market Data)

Order Quantity	Price per Cell	MOQ
1-999 pcs	\$0.45-\$0.50	500 pcs

1,000-5,000 pcs

\$0.38-\$0.42

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10,000+ pcs

\$0.32-\$0.35

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Performance Comparison: 5BB vs. Other Configurations

When testing under STC conditions (25°C, 1000W/m²):

5BB cells show 3.7% higher output than 3BB counterparts

Power degradation after 25 years:

Web: <https://www.sphoryzont.edu.pl>