Multi 3 Bus Bars SAS

Is multi-busbar cell design better than a 3-busbar design?
Simulations demonstrated that the multi-busbar design allows higher cell and module efficienciescompared to a state of the art 3-busbar cell design,and in the same time reduces the amount of silver needed for the front electrode.

What is a multi busbar design?
As front electrode a multi busbar design was chosen. Hereby the busbars were exchanged by multiple wires which are connected to the perpendicularly orientated finger grid . An additional tabbing is not necessary for that kind of cell design. A big contributor to the loss in * Corresponding author.

How efficient is a multi busbar cell?
In the left graph the efficiency is plotted over the finger spacing. The multi busbar cell design shows higher efficiencies,the optimum of finger spacing is almost identical and has a wide maximum at about 2 mm for both cell designs. The optimized number of wires was seven for a wire diameter of 250 Î¼m.

What are the advantages of multi busbar solar cell design?
Under those conditions the multi busbar design demonstrates its advantages compared to a state of the art three busbar cell design. The multi busbar grid geometry increases the efficiency of solar cells incorporated in a module by 0.5% abs . In addition, the multi busbar cell concept can significantly save expensive Ag per cell.

How much AG does a multi busbar consume?
For the multi busbar design the optimum lies at approx 15 mgresulting in 44 Î¼m wide and 2 Î¼m high fingers with a finger spacing of 1.5 mm. This reduces the Ag consumed by 118 mg or 89%,and can 232 S. Braun et al. /Energy Procedia 27 (2012) 227 âEUR" 233 therefore lead to significant cost reductions.

What are the benefits of a multi busbar?
Another beneficial effect of the multi busbar concept is the geometry of the wires. By using round wires additional sunlight can enter the semiconductor because of a reflection on the wire and module glass. This will lead to even higher currents and efficiencies of this cell design.

BB-3 Three Battery Bus Bars - Red & Black. The Briggs & Stratton battery bus bars are designed for safely and efficiently connecting multiple batteries in parallel. This kit comes with two bus bars - 1 negative (black) and one positive ...

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