

## Asoleyo Solar Tile - Technical Assistance Request

In my quest to develop an affordable, decorative photovoltaic tile, I've already designed and produced a set of simulated solar tile prototypes, as an aesthetic proof-of-concept.

Solar cells' front electrical contacts are often screen-printed on the surface of the silicon wafer using metallic ink during the manufacturing process.

I am designing front contacts that are visually attractive; I only need to change the existing screen print. I need technical assistance primarily in two areas:

- 1) Solar Cell Design Expertise
  - a) I need to consult with solar cell design and manufacturing experts from NREL and the American-Made Network to confirm and refine my research on the dimensions and spacing of screen-printed front contact busbars and branches/fingers.
  - b) I need access to software, if available, to simulate the contact grid resistance vs. shading losses for my designs. Using feedback from these simulations and experts, I can quickly iterate my designs for maximum balance between efficiency and aesthetics.
- 2) Business and Manufacturing Expertise
  - a) I need assistance connecting and coordinating with manufacturers, to order production runs of custom PV cells.
  - b) I need help with the logistics of bringing a prototype designer solar panel into production, utilizing the custom cells in an integrated system.
  - c) I have briefly consulted with Callye Keen of Red Blue Collective about this, but I need further assistance.

Thank you for your consideration!

-Adam Winsor,  
Asoleyo Solar Tile

