

Power Generating Ceramic Tile With Body-Integrated Solar Cells for Any Surface

Abstract:

The power generating ceramic tile has a solar cell integrated in the casted body of the ceramic tile, that is meant to convert any surface into a solar surface, capable of replacing the traditional tiles or other building materials that would have been used otherwise, and capable to generate clean solar energy. The conventional solar module has the multiple bus bars on the cell which creates shadow on the cell causing the generation loss. The conventional solar module has chemical layer and lamination between cells and glass which reduces the sun irradiation falling on solar cell. The conventional solar module has the wired connectors which are exposed. Many a times, the installer does the wrong connection unknowingly as both positive and negative terminals look the same, leading to damage to module and fire causing accidents. The Power Generating Ceramic Tile features innovative technology and a robust frame design for higher efficiency and higher power output. Power Generating Ceramic Tile has the solar cells with bus bars on edge which reduce the shadow on the solar cell created by bus bars. The Power Generating Ceramic Tile has no chemical and lamination which allows the solar rays to fall directly on the solar cell without any obstacle. The Power Generating Ceramic Tile has no exposed connectors as the connectors are mounted on the body and are interconnected by putting two tiles next to each other, thereby allowing the positive terminal of one tile getting inserted into the negative hole of the other tile. This phoka yoke mechanism is implemented in the Power Generating Ceramic Tile to avoid human errors causing accident and damages.

Figure 2.