

Solar Systems

SYSTEM TYPES

Photovoltaic (PV):

Photovoltaic (PV) is the field of technology and research related to the application of solar cells for energy by converting sunlight directly into electricity.

Solar Thermal:

Solar thermal energy is a technology for harnessing solar energy for heat. Solar thermal collectors are characterized by the US Energy Information Agency as low, medium, or high temperature collectors. Low temperature collectors are flat plates generally used to heat swimming pools. Medium-temperature collectors are also usually flat plates but are used for creating hot water for residential and commercial use. High temperature collectors concentrate sunlight using mirrors or lenses and are generally used for electric power production.

INSTALLATION TYPES

BIPV

Building integrated systems are incorporated as a roofing product or flashed into the roof tile system.

Rack-Mounted Systems

These systems incorporate a deck or tile attached mounting bracket and the solar panels are affixed to these brackets typically with a racking system.

ROOF TILE INSTALLATIONS:

The roof shall be constructed to support the loads of the roof installed solar system. Roof-mounted or integrated systems that serve as roof coverings shall conform to the requirements of Chapter 9 of the IRC, Chapter 15 of the IBC and/or other Building, Electrical, Plumbing or other applicable Codes. In addition, check with your local building official for specific licensing requirements.

Installation of the solar systems incorporated into roof tile systems shall be in accordance with the requirements of the “Installation Manual for Moderate Climate Regions” (TRI / WSRCA ICC-ES ESR-2015P), solar systems manufacturer’s installation guidelines and applicable building code requirements.

Appropriate flashing that properly directs and keeps water flow on the surface of the tile and/or re-directs the flow via appropriate flashing onto the surface of the tile and/or off the roof is critical. Deck mounted or other systems that penetrate the tile or roof deck shall have both primary roof tile

flashing and secondary deck flashing. Design wind speed calculation shall be furnished from the solar manufacturer that meet or exceed local requirements, fire rating of the system verified if required and UL & CEC listing as required.

For more information about the tile roofing industry contact TRI at 312.670.4177 or visit the web site at www.tilerroofing.org.



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