

ABSTRACT

PHOTOVOLTAIC TILE ASSEMBLY

5 A photovoltaic tile assembly 10 comprises a base tile 12
having at least one solid region 14 through which a
mechanical fastener is driven for fastening the base tile
12 to an underlying roof structure. The assembly 10
further comprises one or more cover tiles 16 each having a
10 photovoltaic cell 18 for converting solar energy into
electricity. The cover tiles 16 are electrically and
mechanically coupled to a corresponding base tile 12 by
electrical connection posts 22. The posts 22 are
supported within the base tile 12 and have a first end 24
15 that contacts with and provides electrical connection with
respective output terminals 20 of the cover tile 16.
Additionally, the first end 20 penetrates through the
cover tile 16 to provide mechanical attachment of the
cover tile 16 to a base tile 12. Each post 22 also has a
20 second end 26 that is electrically coupled to an
electrical connection tube 28 to facilitate electrical
coupling of the cover tiles 16 to a power management
system. Tubes 28 are provided with electrical connectors
76 and 78 at opposite axial ends to enable electrical
25 connection with adjacent tubes 28 in adjacent tile
assemblies 10.

Figure 6