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[54] **OPTOELECTRONIC DIODE AND COMPONENT CONTAINING SAME**

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[52] **U.S. Cl.** **257/454**; 257/432; 257/485; 257/486; 257/453

[58] **Field of Search** 257/432, 454, 257/461, 485, 486

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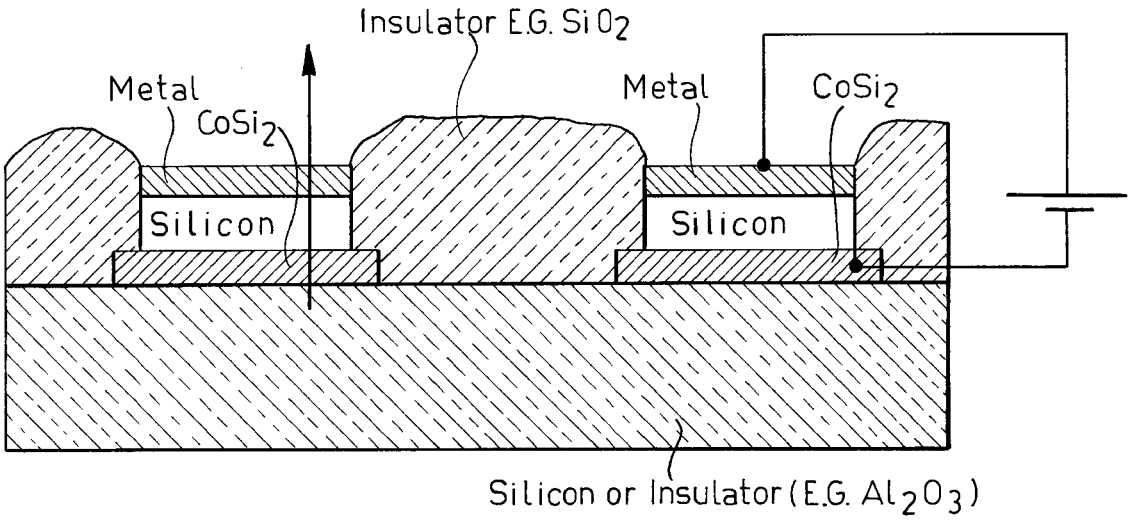
[57] **ABSTRACT**

An optoelectronic component has an Al_2O_3 or Si substrate having a surface on which a buried $CoSi_2$ layer is provided, a Si layer overlying the buried $CoSi_2$ layer. A metal layer on a portion of this latter Si layer forms a diode between the metal layer, the underlying portion of the Si layer and the buried $CoSi_2$ layer and a waveguide for a transparent portion of the metal layer delivers photon energy to the underlying portion of the Si layer.

3 Claims, 11 Drawing Sheets