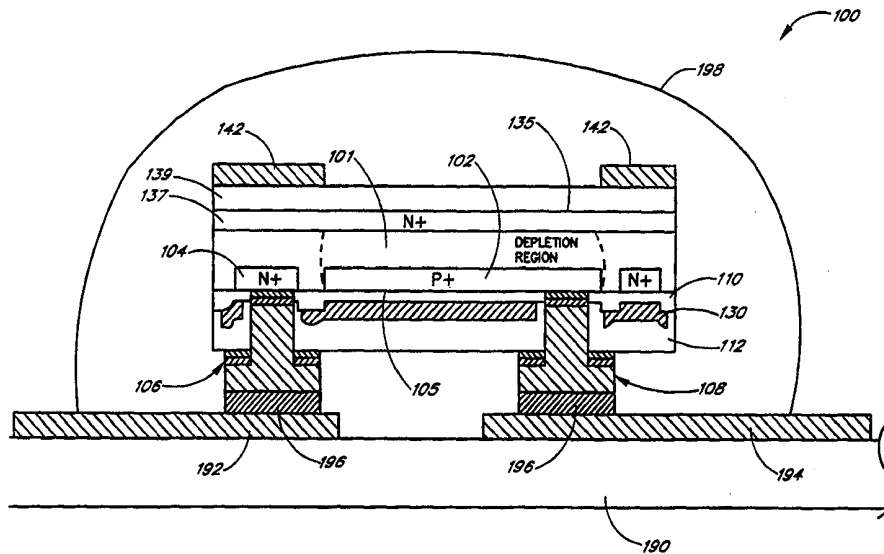




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(54) Title: SOLID STATE PHOTODETECTOR WITH LIGHT-RESPONSIVE REAR FACE



(57) Abstract

A semiconductor photodiode (100) is configured to have its rear face (135) light responsive with electrical contacts formed on the front face (105). The photodiode (100) can be surface mounted, such as by solder, upon a carrier (190) with the light responsive rear face (135) up. An integral filter (139) over the rear face (135) confines light reaching the semiconductor substrate (101) to desired wavelengths. In one embodiment, the photodiode (100) also includes integral opaque layers (130, 142) over the front and rear faces of the substrate (101). The rear opaque layer (142) includes an aperture to allow light to strike the rear face (135) adjacent an active region (102). In another embodiment, the photodiode (100a) is configured to double-sided light sensitivity, and the front side (105) faces an aperture (200a) through the carrier (190a).

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