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(54) Title: TWO DIMENSIONAL CONTACT IMAGE SENSOR WITH BACKLIGHTING

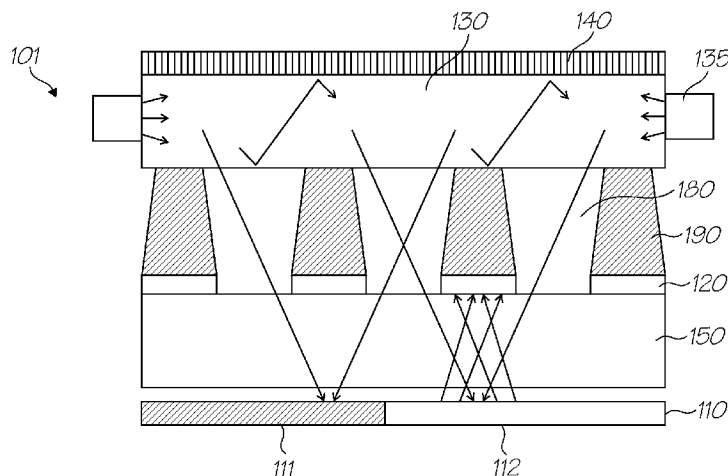


FIG. 2

(57) Abstract: A two-dimensional image sensor with backlighting comprises a photodetector array (120). Light from a source (135) passes through the array (120) from behind, to reflect off a surface to be imaged (110), with the reflected light detected by the array (120). The photodetector array may be formed in an opaque bulk silicon substrate (190), with channels (180) etched through the substrate to allow light to pass through to the surface to be imaged (110). The sensor may further comprise a diffusing layer (130) and a spacer layer (150). The image sensor is suitable for imaging densely spaced dot coding patterns (111, 112). A front-illuminated image sensor is also disclosed, with UV-stimulated infrared emitters arranged below a UV filter and photodetector array.