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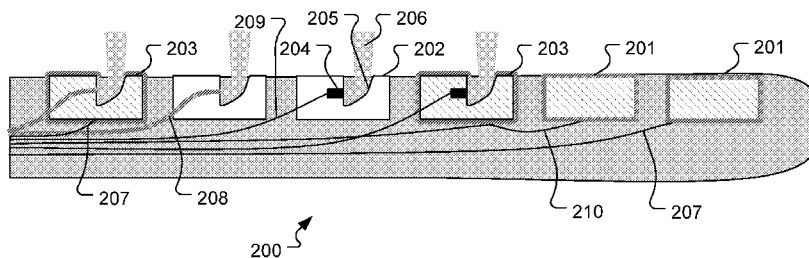


Fig. 2

(57) Abstract: An implantable stimulation device is described which includes an implantable stimulation source carrier for insertion into or adjacent to target tissue. The stimulation source carrier includes stimulation contacts for delivering neural stimulation signals to nearby target tissue. At least one of the stimulation contacts is an optical stimulation element having multiple individual optical stimulation sub-elements for delivering optical stimulation signals to the nearby target tissue with controlled shape and direction.

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