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(54) **CROSSPOINT SWITCH WITH MLED IO PORTS AND IMAGING FIBER CABLES**

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ABSTRACT

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Systems and methods include an optical switch system which provides a combination of μ LED arrays, PDs, imaging fiber cables, and crosspoint switch on a single chip. The system includes one or more input ports with each input port configured to connect to an input fiber bundle. The system additionally includes one or more output ports with each output port configured to connect to an output fiber cable, wherein each of the input fiber bundle and the output fiber cable include a plurality of fiber cores. An electrical crosspoint switch is connected to the one or more input ports and the one or more output ports, wherein the electrical crosspoint switch is configured to connect a given input port to a corresponding output port, including all signals in the input fiber cable to the corresponding output fiber cable.

