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(57) Abstract :

Accordingly, embodiments herein disclose an optoelectronic device for ultrafast data communication. The optoelectronic device comprises an optical receiver or an optical transmitter including an optical interface disposed at an end thereof and through which optical signals are communicated by the optical receiver or optical transmitter. Further, the optoelectronic device may include an electronic component and a first electrical interface disposed at the optical interface end of optical communications assembly and communicatively coupled to the electronic component. Furthermore, the optoelectronic device may include advanced photonics components and high-speed electronics integrated with the optoelectronic device and leading to enhanced data transfer rates and improved performance in communication systems in the optoelectronic device.

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