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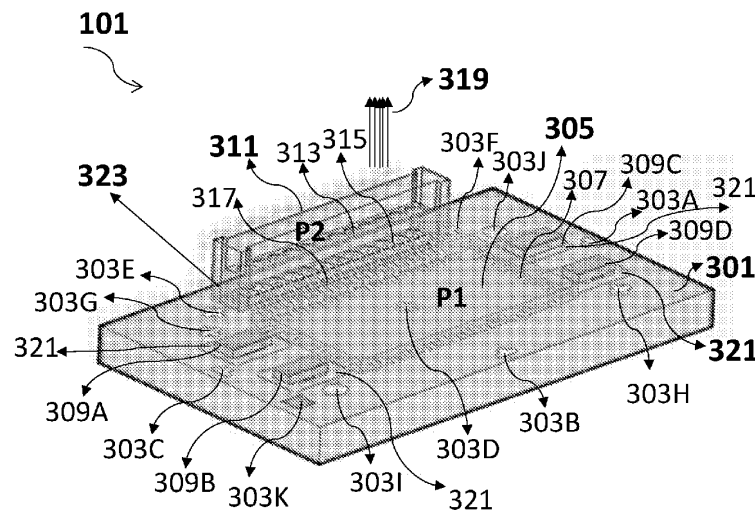


FIG. 3A

(57) Abstract: The present invention describes systems and methods for enabling an optics based compute system associated with transmission (101) and reception (103) for data processing and communication which solve the problem of computation coupled with transmission and/or reception associated with high data rate application with significant accuracy and at a low power consumption. The disclosed systems and methods complements higher data rate processing supported with higher data rate transmission and/or reception with compact packaging, lower power consumption, heat dissipation, available at low cost. This is achieved by using efficient design, packaging, and coupling of an electronic engine (305/405), and an optical engine (311/411), using a plurality of fiducials, substrate, and power couplers. Optical signal (319) is transmitted from system (101) and transmitted optical signal (419) is received by the system (103).

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