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(54) Title: LIGHT DETECTION AND RANGING (LIDAR) SENSOR SYSTEM INCLUDING INTEGRATED LIGHT SOURCE

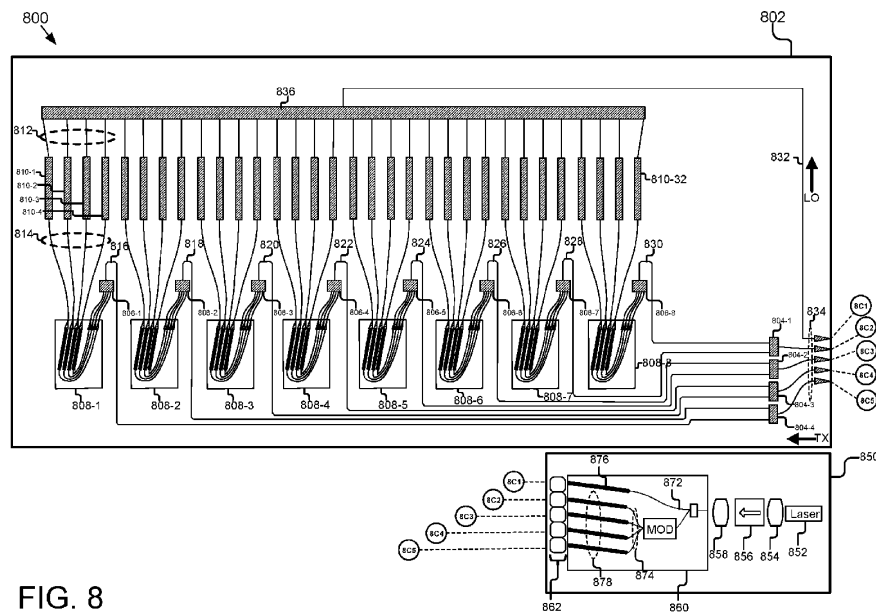


FIG. 8

(57) Abstract: A light detection and ranging (LIDAR) sensor system mounted to a vehicle includes a first device and a second device coupled to the first device. The first device includes a laser source and one or more optical components. The first device is configured to output an optical signal associated with a local oscillator (LO) signal. The second device includes an optical amplifier array device and a transceiver device. The optical amplifier array device includes an integrated optical component and is configured to amplify the optical signal. The transceiver device is configured to transmit the amplified optical signal to an environment and receive a returned optical signal that is reflected from an object in the environment.

[Continued on next page]

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