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The overall heterogeneous integrated chip has been packed into a QFN carrier, realizing the first “photonic black box”, where all the optics is placed inside the carrier, providing just electrical I/O (fig. 2). This type of packaging allows to integrate one or multiple photonic chips into complex electronic circuits, without the need for fiber arrays or external laser sources.

B. Initial Results

As preliminary results, we measured the response of a laser after the integration, utilizing a grating coupler placed after the Mach-Zendher Modulator (MZM) that is encoding the input vector. The expected Insertion Loss of the PWB is estimated at around

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