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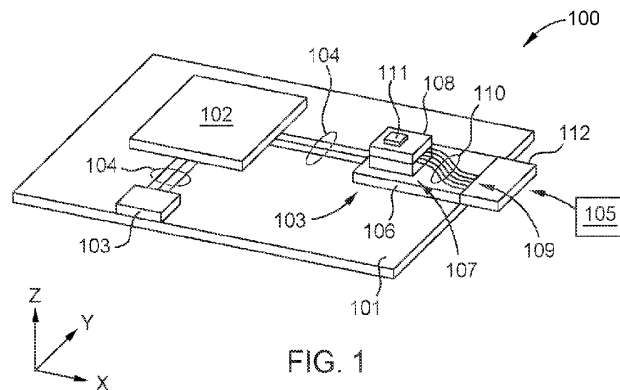
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(54) Title: APPARATUS AND METHOD TO ACHIEVE LOW LOSS PVD SINK WITH CMOS BEOL COMPATIBLE THERMAL BUDGET



(57) Abstract: Embodiments of the present disclosure generally relate to photonics. The disclosure includes tools, photonic devices, device films for photonics devices, and methods of forming a device film. In at least one embodiment, a photonic device includes a substrate, a buried oxide (BOX) layer disposed over the substrate, a device layer disposed over the BOX layer, the device layer comprising at least one device, a cladding disposed over the device layer, and a lens layer disposed over the cladding, the lens layer comprising a microlens aligned with the device. At least one of the BOX layer, the device layer, the cladding, and the lens layer, of the photonic device includes silicon nitride and has a propagation loss of less than about 1.5 dB/cm

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