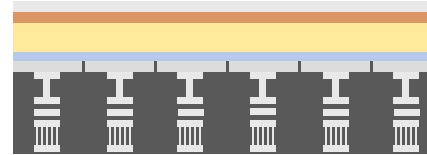


(a)

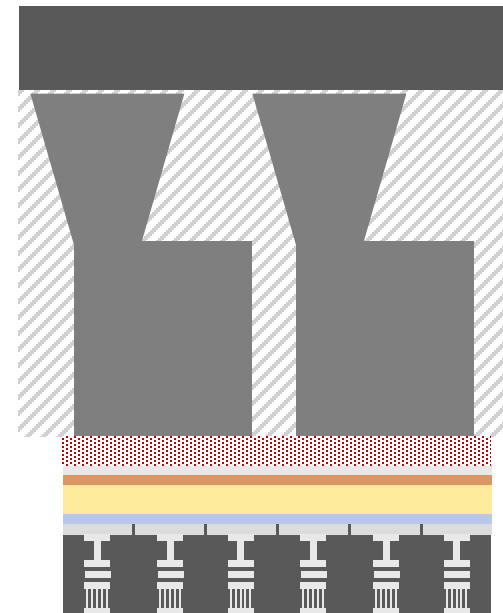
1. ROIC Fabrication



2. Monolithic integration of PePD



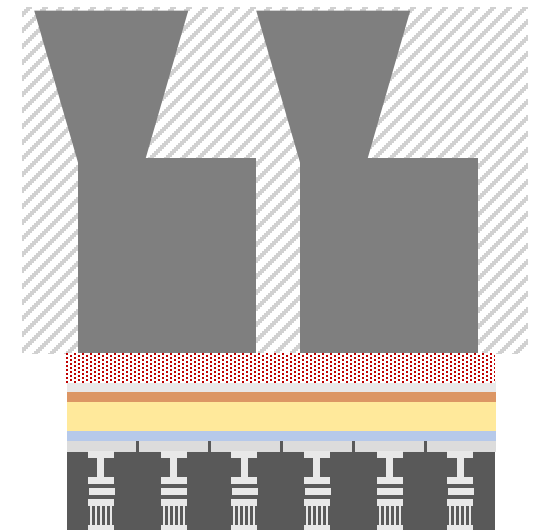
4. Direct wafer bonding via SiO_2/SiCN interlayer and thermal annealing ($>250^\circ\text{C}$)



3. Waveguide matrix on carrier wafer



5. Carrier wafer removal



(b)