



領域：光電半導體元件構裝及應用

實驗室名稱：光電構裝實驗室

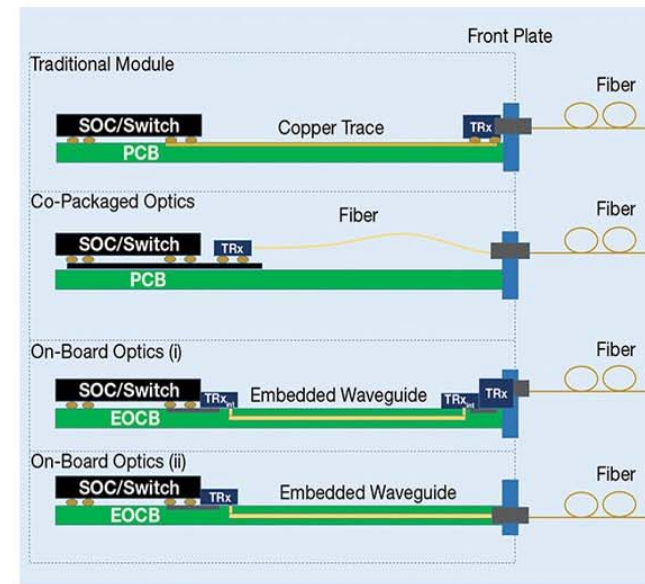
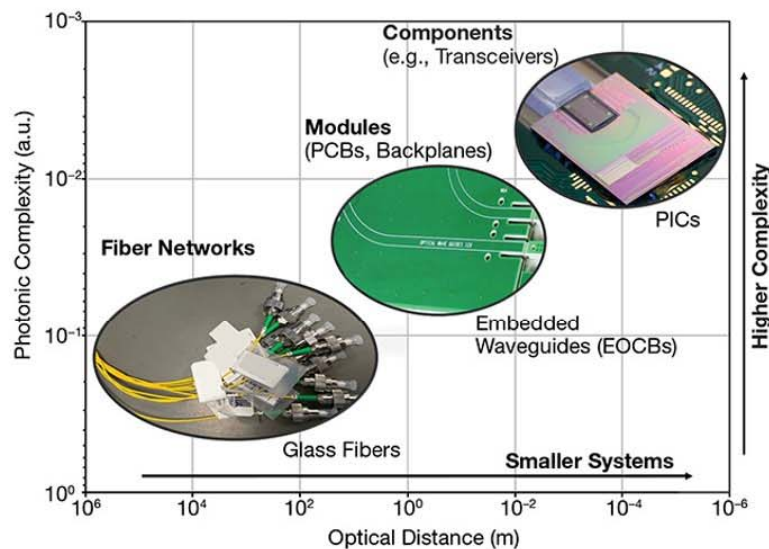
地址：

參與教授：施性坤 助理教授

研究方向：1.矽光子構裝於光纖通訊領域, 2.白光LED光源於照明及車燈等領域

研究方向(一)

研究方向(一) – 矽光子晶片模組構裝



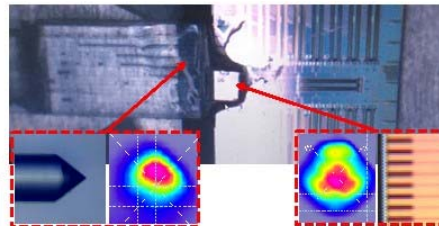
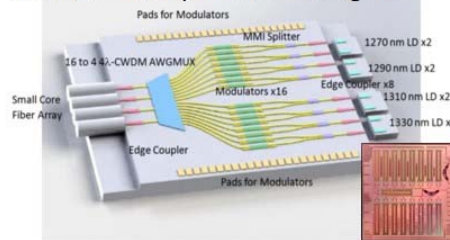
參考“On-Board Optics Expand Bandwidth and Reduce Power Use in the Data Center,” *Photonics Spectra*, Feb. 2023

隨著資訊和通訊技術發展趨勢，應用共同光學封裝技術(CPO, Co-Packaged Optics)與板載光學元件(OBO, On-Board Optics)，並整合EIC(Electrical Integrated Circuit)與PIC(Photonic Integrated Circuit)於同一電路板(PCB, Printed circuit board)或同一光電基板(EOCB, Electrical-Optical Circuit Board)上，可實現未來高運算晶片傳輸需求。

研究方向(一)

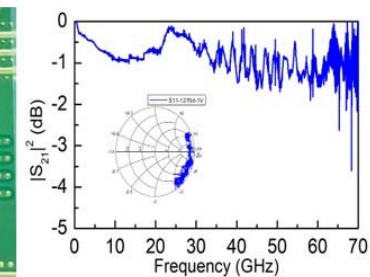
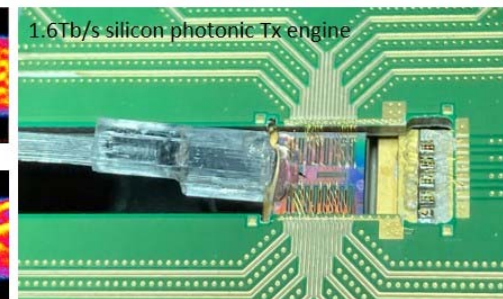
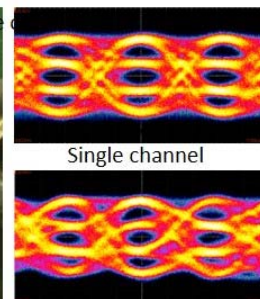
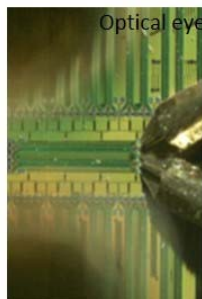
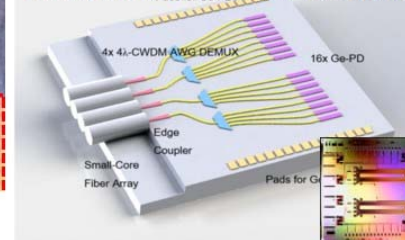
研究方向(一) - 矽光子晶片模組構裝

1.6Tb/s silicon photonic Tx engine



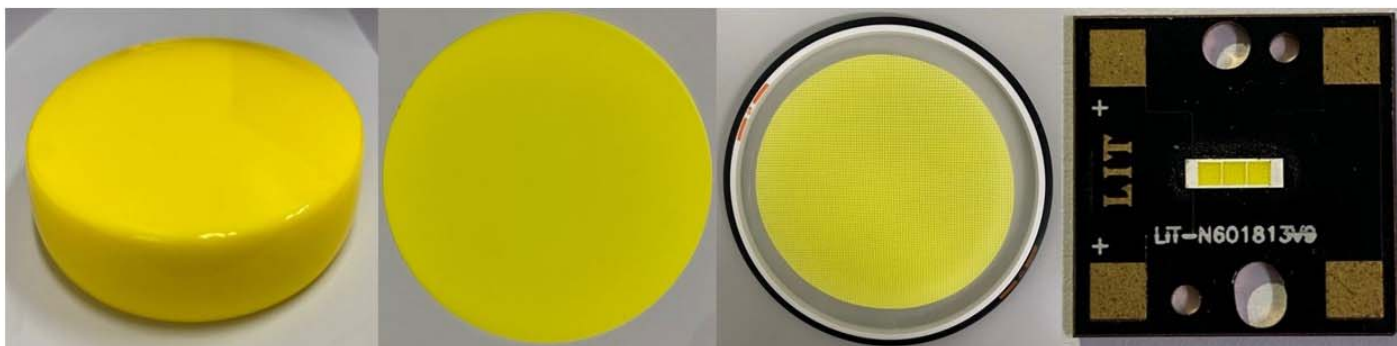
Microlens fiber array coupling to SiPh chip

1.6Tb/s silicon photonic Rx engine



研究方向(二)

研究方向(二) - 高品質/高可靠性白光LED於照明及車燈領域：



The related photos of a diameter of four-inch Phosphor-in-Glass.