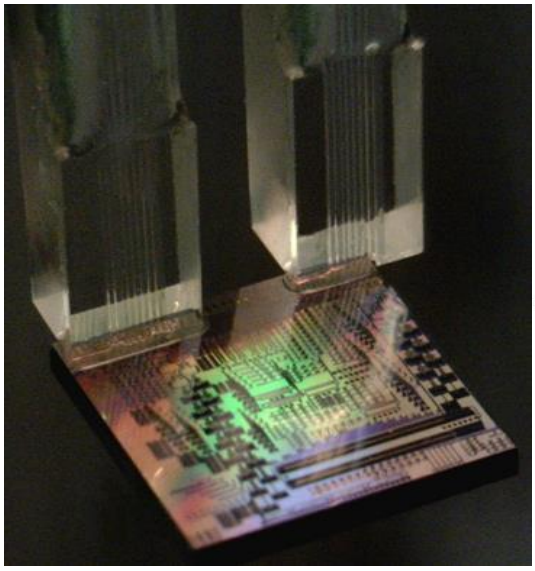
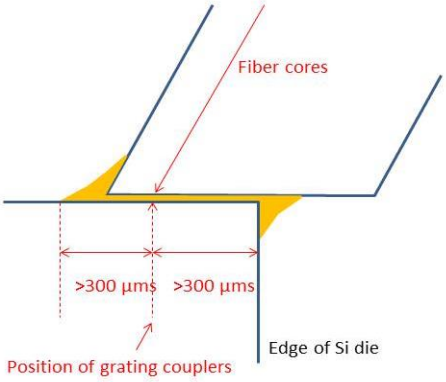
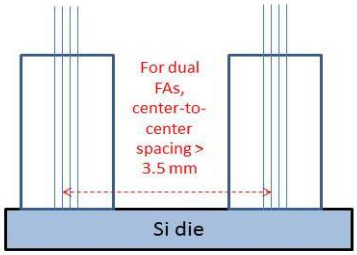
PLC CONNECTIONS

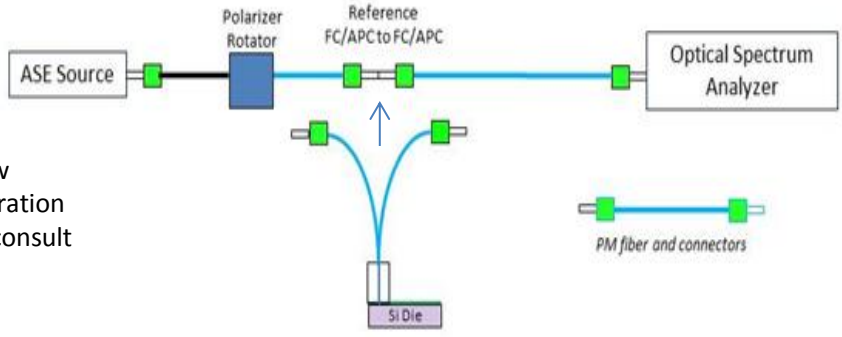
Planar Lightwave Circuits
Optical Coupling – Components, Services, Consulting

Bonded Fiber Arrays for Grating Coupling to Silicon PICs









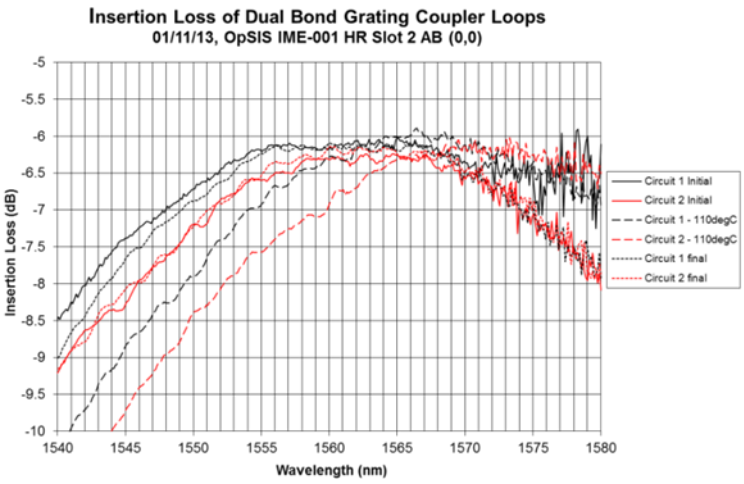
Die layout

- Coupler-row >300µm from diced edge
- Critical structures >300µm from coupler-row
- For dual FAs, GC-row centers > 3.5mm separation
- To ensure product & process compatibility, consult with PLCC before die fabrication

Product and service description

- From 2 to 64 SM or PM fibers , fiber lengths > 1 meter, PM FC/APC or PM FC/UPC connectors
- TE or TM launch available with ≥21dB PER
- 127µm contiguous fiber pitch (or specify)
- PLCC will empirically determine optimum coupling angle
- Assemble and polish fiber array to required angle
- Align and bond with adhesive; report measured launch angle with adhesive
- Optional temperature cycle to 100°C
- Typical excess loss < 1dB over intrinsic circuit + coupler losses
- Wavelength for minimum IL ± 10nm of target
- Measurements include connector losses
- Post-bond bake to 110°C is optional; customer can perform after data confirmation to create permanent attachment
- Specifications subject to change, best effort on optical performance

Measurement Example:



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PLCC2, LLC | 673 N. Wilson Road, Columbus, OH 43204 | Tel: (614) 279-1796 | info@plcconnections.com