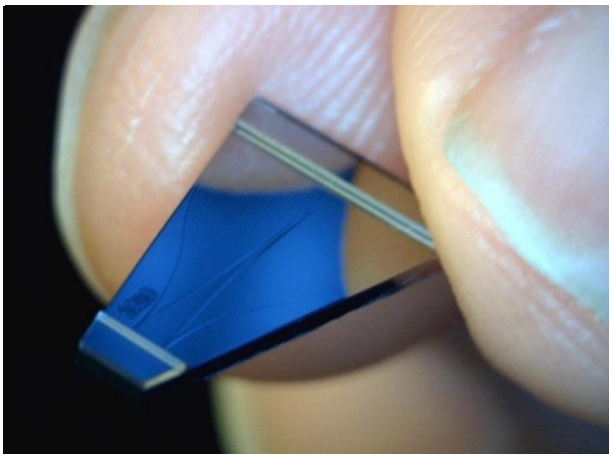
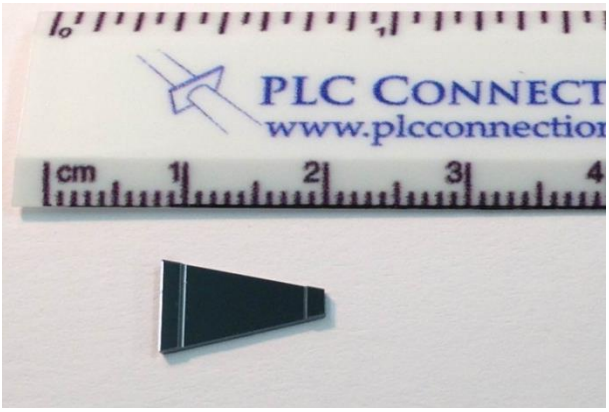
PLC CONNECTIONS

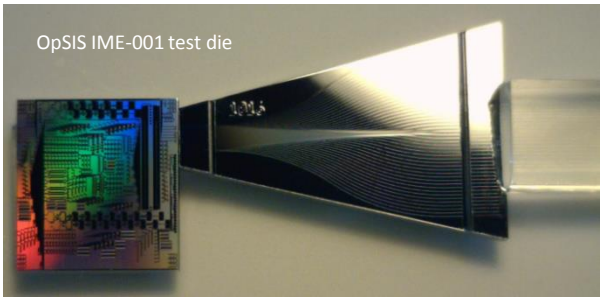
Planar Lightwave Circuits
Optical Coupling – Components, Services, Consulting

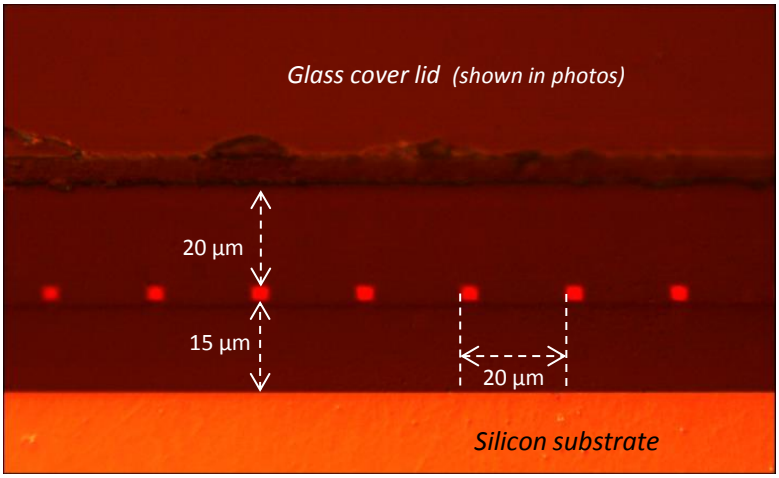
PLC-Transposer for Edge Coupling to Silicon PICs

- Reduces the coupling-loss between SM/PM fiber and silicon waveguides
- Glass waveguides fan in from 127µm pitch to 20µm ± 0.05 pitch
- Reduces mode field diameter from approximately 10µm to 4µm
- Fan-in contains up to 48 channels that users can select from on multiples of 20µm
- 1 transposer circuit can provide up to 24 inputs + 24 outputs
- Trapezoidal chip width tapers from 8 to 2 mm, L = 12, t = 1 mm
- Total insertion loss (in + out) to typical silicon edge couplers ≤ 10 dB with Telecom PM fiber, FC/APC to FC/APC
- Transposer options include:
  - Lids for packaging & bonding (shown in the photos)
  - Circuit tip can be polished for mating with any style of edge couplers
  - PM fiber with FC/APC connectors can be attached to customer specified channels









- *Designs available for 1310 and 1550 nm*
- *Input/output coupling loss is edge coupler design dependent*
- *To ensure product & process compatibility, consult with PLCC before die fabrication*
- *All of the information provided is believed to be accurate. PLCC reserves the right to make revisions without notice.*

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