Optoelectronics Packaging capability summary
Custom Photonic Packaging

- Actives design, manufacture, test and qualification
- Dedicated expert resources with extensive experience
- Fully equipped, purpose built, antistatic facility certified to ISO 9001/2000 with cleanroom facilities
Photonics Packaging Philosophy

- Emphasis on custom products
  - Close customer co-operation
  - Experienced design team
  - Design for manufacture

- Target markets
  - Development projects
    - Research devices
    - Prototype to commercial product
  - Small/medium volume complex manufacture
  - Medical/Sensors/Comms/Military/Consumer etc
  - Provides a service that others do not support
    - Because volumes are too small
    - Because design/build problems
Design and development

- Specialist designers of optoelectronic packaging
  - In-house skill set
  - Custom design
    - Active and passive devices
    - Optical (Zemax support)
    - Mechanical (Solid Edge support etc)
    - Thermal

- Extensive experience of practical packaging issues
  - Design for manufacture
  - High speed (10Gb/s +)
  - Stable alignment and PM techniques
  - Thermal management
  - Hermetic design
  - Vacuum packaging
  - Fibre handling
  - Free space products
  - Bulk optics products
  - High Power
  - Single mode and PM RGB

Exceptionally wide product range capability
Manufacture

- Fully equipped for
  - R&D samples (<10)
  - Prototype development (<100)
  - Small/medium volumes (>100)
  - Route for high volume sub-contract manufacture

- Comprehensive capability including
  - Precision die attach – eutectic, solders and epoxy
  - Wirebond – fine/fat wire, tape, Al/Au/Cu, wedge, ball bond, deep access
  - Hybrid assembly
  - Active alignment – sub micron multi-axis capability
  - Bulk optics align/fix capability
  - Special lens capability
  - Stable sub micron active attach technology
  - Micro spot welding, parallel gap welding,
  - Thermode and hot gas micro soldering
  - Induction heating systems
  - Glass sealing for hermetic feedthrough etc
  - Hermetic sealing – projection welding and seam sealing.
  - Laser welding
  - Hermetic fibre feedthroughs
  - Connectorisation
  - Extensive materials and piece-parts instant availability
  - Critical process clean room capability
  - ESD control

Virtually every packaging process available enabling optical technologies
Test and Qualification

- Gooch and Housego has a reputation for the highest quality and reliability

- Broad range of test facilities
  - Optical test
  - Leak test (gross & fine)
  - Burn-in
  - Environmental

- Equipped to undertake full Telcordia 468 and 1221 qualification programmes
Gooch and Housego Summary

Gooch & Housego is an international group specializing in the manufacture of precision optical, crystal and optoelectronic components for OEM's and research purposes. The Group offers a unique optical manufacturing and design capability making it a first choice manufacturer and technology partner for many of the photonic industry's leading OEM's and scientific institutions.

- Photonics packaging
- High performance fused couplers
- Integrated electronics/photonics module design and manufacture
- Precision Optics
- Optical Coatings
- Acousto Optics
- RF Electronics
- Electro Optics
- Single Crystal Growth

Broad range of photonics related technologies

enabling optical technologies

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