APPLICATION NOTE

Cleaning TOSAs and ROSAs

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INTRODUCTION

Advanced Optical Components discontinued the use of dust caps for all TOSA and ROSA components in 2003. The decision to stop using dust caps was reached through careful examination of the caps, and finding that they were actually a major contributor to contaminants in the bore of the OSA. All AOC assembly and packaging is done in a clean room environment to minimize contamination. Furthermore, it has been found that the materials used to manufacture the dust caps can lead to ESD events.

Occasionally it might be necessary to remove debris from the barrel or lens surface on a TOSA or ROSA component. The only recommended way to clean these components is with Clean-Dry-Air (CDA) or Nitrogen. Blowing CDA/Nitrogen into the bore will remove any loose particles and not damage the integrity of the lens. Cleaning using solvents such as alcohol or acetone are not recommended. Furthermore, care should be taken to not allow the propellants from canned CDA from reaching the optical surface. Expulsion of propellants often happens when the can is sprayed from an inverted position. It is further recommended that items such as "bore cleaners" not be used as they can create scratches on the lens surface as depicted in the figure below.

These scratches..... are caused by these tools!

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Finisar's ADVANCED OPTICAL COMPONENTS division was formed through strategic acquisition of key optical component suppliers. The company has led the industry in high volume Vertical Cavity Surface Emitting Laser (VCSEL) and associated detector technology since 1996. VCSELs have become the primary laser source for optical data communication, and are rapidly expanding into a wide variety of sensor applications. VCSELs' superior reliability, low drive current, high coupled power, narrow and circularly symmetric beam and versatile packaging options (including arrays) are enabling solutions not possible with other optical technologies. ADVANCED OPTICAL COMPONENTS is also a key supplier of Fabrey-Perot (FP) and Distributed Feedback (DFB) Lasers, and Optical Isolators (OI) for use in single mode fiber data and telecommunications networks

LOCATION

- Allen, TX - Business unit headquarters, VCSEL wafer growth, wafer fabrication and TO package assembly.
- Fremont, CA – Wafer growth and fabrication of 1310 to 1550nm FP and DFB lasers.
- Shanghai, PRC – Optical passives assembly, including optical isolators and splitters.

SALES AND SERVICE

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AOC CAPABILITIES

ADVANCED OPTICAL COMPONENTS' advanced capabilities include:

- 1, 2, 4, 8, and 10Gbps serial VCSEL solutions
- 1, 2, 4, 8, and 10Gbps serial SW DETECTOR solutions
- VCSEL and detector arrays
- 1, 2, 4, 8, and 10Gbps FP and DFB solutions at 1310 and 1550nm
- 1, 2, 4, 8, and 10Gbps serial LW DETECTOR solutions
- Optical Isolators from 1260 to 1600nm range
- Laser packaging in TO46, TO56, and Optical subassemblies with SC, LC, and MU interfaces for communication networks
- VCSELs operating at 670nm, 780nm, 980nm, and 1310nm in development
- Sensor packages include surface mount, various plastics, chip on board, chipscale packages, etc.
- Custom packaging options

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