

A grayscale electron micrograph of a cell, likely a yeast cell, showing a large, dark, textured nucleus in the center. The surrounding cytoplasm contains various organelles and smaller dark spots. The overall image has a grainy, high-magnification appearance.

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Inspecting & Cleaning

Clean fiber optic components are a necessary requirement for quality connections between fiber optic equipment. One of many basic and important procedures for the maintenance of fiber optic systems is to clean the fiber optic equipment.

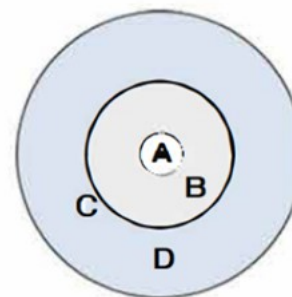
The goal is to eliminate any dust or contamination to provide a clean environment for the fiber-optic connection ultimately to avoid failures. Inspection, cleaning and re-inspection are critical steps for the connector as well as the bulkhead before you make any fiber-optic connection.

Regular inspection & cleaning reduces network downtime and offers optimized signal performance and prevention of network damage.

The IEC 61300-3-35 Standard - "Fiber Optic Connector Endface Visual and Automated Inspection"

Recently published as an interoperability standard for connector manufacturers and users. Zones are used to prioritize evaluation criteria. Different failure criteria for defects and scratches are specified for each zone.

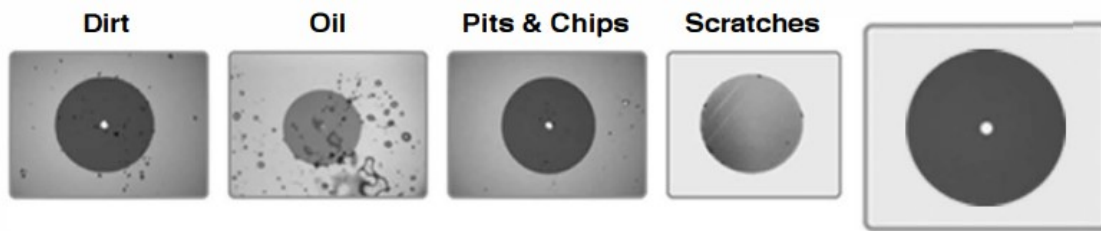
| Zone | IEC 61300-3-35 Recommended Acceptance Criteria Multimode Polished Connectors | |
|----------|--|---|
| | Scratches | Defects |
| Core | No limit $\leq 3 \mu\text{m}$ None $> 3 \mu\text{m}$ | $4 \leq 5 \mu\text{m}$ None $> 5 \mu\text{m}$ |
| Cladding | No limit $\leq 5 \mu\text{m}$ None $> 5 \mu\text{m}$ | No limit $< 2 \mu\text{m}$ 5 from $2 \mu\text{m}$ to $5 \mu\text{m}$ |
| Adhesive | No limit | No limit |
| Contact | No limit | None $\geq 10 \mu\text{m}$ |



Zone A: Core Zone
Zone B: Cladding Zone
Zone C: Adhesive Zone
Zone D: Contact Zone

There are 3 major ZONES (A/B/D) on the end face that are used to define the level of impact contamination may have on signal

performance. Particles closer to Zone A (core) will have more impact than those farther out.



Recommended Inspection & Cleaning Tools:

- Portable hand-held video microscope for inspecting connector endfaces
- Mechanical dry cleaner to sweep and lift away dust and residues from endface
- Wet cleaning and degreasing agent and lint-free wiping material



Lightel Fiber Optic Video Microscope



Complex CMX-TL-1601 Fiber Optic Cleaning Kit



Complex FIBERCLEAN-1 Fiber Optic Cleaning Kit for LEMO Type SMPTE 304/311M Hybrid Connectors

General Inspection & Cleaning Process:

Always be sure laser sources are turned off before you begin the inspection and cleaning process

1. Inspect the fiber connector, component, or bulkhead with a fiberscope. If the connector is found to be dirty, clean it with a dry cleaning technique.

2. Inspect the connector - if the connector is still dirty, repeat the dry cleaning technique.
3. Inspect the connector - if the connector is still dirty, clean it with a wet cleaning technique followed immediately with a dry clean in order to ensure no residue is left on the endface.
4. Inspect the connector - if clean, it is ready to use! If the connector remains dirty, repeat the wet cleaning process and inspect again.

**Check Out the Complex Site to Learn More
About The Importance of Clean Fiber!**