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Edition 1.0 2010-08

TECHNICAL REPORT



Fibre optic interconnecting devices and passive components – Part 01: Fibre optic connector cleaning methods

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

Q

ICS 33.180.20

ISBN 978-2-88912-083-3

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING DEVICES
AND PASSIVE COMPONENTS –**

Part 01: Fibre optic connector cleaning methods

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IEC 62627, which is a technical report, has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
86B/2902/DTR	86B/2940/RVC

Full information on the voting for the approval of this technical report can be found in the report on voting indicated in the above table.

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This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS –

Part 01: Fibre optic connector cleaning methods

1 Scope

This technical report is intended to emphasize the need for cleaning fibre optic connections as well as describing some of the current tools and methods available for proper cleaning. In addition, the report includes a definition of practices that are not recommended. This technical report explains the need to visually inspect plug endfaces but it does not address the inspection criteria, which are covered in another standard.

NOTE This technical report only covers single fibre plug-adaptor plug or plug-active device configurations, but the same principles apply to plug-socket configurations and multi-fibre ferrules.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

exposed plug endface

EPE

typically, a fibre optic plug that is held in the hand such as the end of a patchcord

NOTE The ferrule is exposed to the air and is not confined within an alignment sleeve of a bulkhead adaptor or device port. The endface of the plug is easy to access and can be brought into contact with the cleaning material.

2.2

port

open fibre optic alignment sleeve which contains a fibre optic plug endface to which a fibre optic plug may be mated

NOTE In the case of a bulkhead adaptor, it is the open side of the adaptor after a fibre optic plug has been inserted into one side. In the case of an optical device, it is the opening into which a user of the device will plug a patch cord. The mating side of a port can only be accessed through the alignment sleeve. Therefore the cleaning material must be brought to the endface through the alignment sleeve.

2.3

bulkhead adaptor

a component in which two or more plugs may be mated

NOTE It has one or more alignment sleeves in which two or more ferrules are aligned.

3 General

3.1 Need for cleaning of fibre optic connections

3.1.1 General

Contamination is the most common source of problems in optical networks. A single particle located on the core of a single mode fibre can cause significant back reflection, attenuation and fibre damage.

With increased data rates, it has become increasingly important to ensure that all plugs and adaptors are inspected and if necessary cleaned before mating. This means that both sides