



DOCUMENT CHANGE REQUEST

DCR number 1756 Changes required for: General

Originator: Steve Thacker

Date: 2026/02/05

Date sent: 2025/09/15

Organisation: ESCC Executive Secretariat

Status: IMPLEMENTED

Title: Optical Fibre Cable Assemblies with Single Fibre Ferrules, Generic

Number: 3420 Issue: 2

Other documents affected:

3420/001-5

Page:

various see attached spec mark-ups

Paragraph:

various see attached spec mark-ups

Original wording:

As spec above

Proposed wording:

Specifications are proposed to be amended as requested by Manufacturer Diamond, as follows in order to

- add new high power components & applicable requirements
- plus other amendments to the Detail spec

Changes are as follows:

See attached draft mark-up specifications for full details.

1) ESCC 3420 Generic Spec.

- Para. 3: add new hybrid Patchcord Vacuum Feedthrough definition
- Add new Para. 8.10, High-Power Burn-in
- Add new Para. 8.19 High-Power Thermal Vacuum
- Para. 12.3 Chart F3: add tests related to the new High-Power Burn-in test, plus add/amend notes 1 & 5
- Para. 12.4 Chart F4: add new High-Power Subgroup with the new High-Power Thermal Vacuum test, plus add new note 5.

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2) ESCC 3420/001 Detail Spec.

a) Add requirements for new Variants 07 & 08 for high power components

i.e.: Paras. 1.4.1; 1.4.2; 1.5; 1.7.1; new 1.7.4; 2.1.1.1; 2.3.1; 2.3.2; 2.5; new 2.6; new 2.7,

b) Delete all references to redundant optical function type PS: paras: 1.4.1.2, 1.4.2, 1.7.7.2, etc.

c) Amend ambient temperature to be consistent with Generic 3420

i.e. Tamb = 23 +/-3 degC; Paras: 2.4 & 2.5

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Justification:

As above.

Note: DCR raised on behalf of supporting Manufacture Diamond.

Attachments:

esc3420001iss6_draft_d_in_review.docx, esc3420_issue_2_draft_c_in_review.docx

Modifications:

The following additional changes were discussed & agreed by ESA/PSWG (ref. MoM#109)/Diamond:

See attached new spec mark-ups for details of all changes: 3420 Draft 2C & 3420/001 Draft 6D

1) ESCC3420:

For new Para. 8.10: for bullet 4, amend to read as follows:

- Power applied: Maximum Rated Power (as applicable at Test Temperature) at the Nominal Operating Wavelength as specified in the Detail Specification.

For new Para. 8.19: for bullets 4, 5, 6, amend to read as follows:

- Test Temperature: Maximum Operating Temperature as specified in the Detail Specification.
- Power applied: Maximum Rated Power (as applicable at Test Temperature) at the Nominal Operating Wavelength as specified in the Detail Specification.
- Duration: 1000 hours minimum.

2) ESCC3420/001:

Para. 2.1.1.1 & 2.1.1.2: editorial changes relevant to Para. 2.3.2 & modified Para. 2.7

Amend test temperature tolerances to be +/-2 degC (Paras. 2.3, 2.4, 2.5, 2.6, 2.7)

Paras. 2.6 & 2.7: add nominal wavelength to test conditions (i.e. 1550nm) (plus several editorial changes)

Approval signature:

Date signed:

2026-02-05