

Förderverein für Elektrotechnische Normung (FEN) e.V.  
Cenelec Electronic Components Committee

# CECC

Système Harmonisé d'Assurance de la Qualité  
des Composants Electroniques

SPECIFICATION PARTICULIERE:

## COUPLEURS A FIBRES OPTIQUES

Type: Non selectif en longueur d'onde  
Transmission Etoile

1 x 2 portes bidirectionnel

Style: Configuration A, Type de fibre B1.2

Harmonized System of Quality Assessment for  
Electronic Components

DETAIL SPECIFICATION:

## FIBRE OPTIC BRANCHING DEVICES

Type: Non Wavelength Selective  
Transmissive Star

1 x 2 Ports Bidirectional

Style: Configuration A, Fibre Type B1.2

Harmonisiertes Gütebestätigungssystem für  
Bauelemente der Elektronik

BAUARTSPEZIFIKATION:

## FASEROPTISCHE VERZWEIGER

Bauart: Nichtwellenlängenselektiver  
Übertragungsstern

1 x 2 Tore zweiseitig gerichtet

Bauform: Aufbau A, Fasertyp B1.2



# 1

Edition  
Issue  
Ausgabe

## CECC 81 101-806

1994

**AUSTRIA**

Österreichischer Verband für Elektrotechnik (ÖVE)  
Eschenbachgasse 9  
A-1010 VIENNA

**BELGIUM**

Comité Electrotechnique Belge  
Avenue F. Van Kalken, 9  
B-1070 BRUSSELS

**DENMARK**

Dansk Elektroteknisk Komite  
Dansk Standard  
Electrotechnical Sector  
Baunegårdsvej 73  
DK-2900 HELLERUP

**FINLAND**

Finnish Electrotechnical Standards Association (SESKO)  
P.O. Box 134  
SF-00211 HELSINKI 21

**FRANCE**

Union technique de l'Electricité  
Participation française au CECC  
F-92052 PARIS La Défense Cedex 64

**GERMANY**

Deutsche Elektrotechnische Kommission im DIN und VDE (DKE)  
Stresemannallee 15  
D-60596 FRANKFURT

**IRELAND**

EOLAS - The Irish Science and Technology Agency  
Glasnevin  
IRL-DUBLIN 9

**ITALY**

Comitato Elettrotecnico Italiano (CEI)  
Viale Monza, 259  
I-20126 MILAN

**NETHERLANDS**

Nederlands Elektrotechnisch Comité (NEC)  
Kalfjeslaan 2  
P.O. Box 5059  
NL-2600 GB DELFT

**NORWAY**

Norsk Elektroteknisk Komite (NEK)  
P.O. Box 280  
Skøyen  
N-0212 OSLO 2

**PORTUGAL**

Instituto Português da Qualidade  
Rua José Estevão, 83A  
P-1199 LISBOA CODEX

**SPAIN**

New Spanish Member  
to be determined.

**SWEDEN**

Svenska Elektriska Kommissionen (SEK)  
Box 1284  
S-16428 KISTA-STOCKHOLM

**SWITZERLAND**

Schweizerischer Elektrotechnischer Verein (SEV)  
Luppenstr. 1  
CH-8320 FEHRLTORF

**UNITED KINGDOM**

UK Electronic Components Policy Council  
Electrical Department  
British Standards Institution  
2, Park Street  
GB-LONDON W1A 2BS

Information about the System may be obtained from:



FEN e.V. Secretariat  
and  
CECC General Secretariat  
Gartenstraße 179  
D - 60596 Frankfurt  
Telephone: Int. + 49 69 639171  
Telefax: Int. + 49 69 639427

or from the National Authorized Institutions  
of the participating countries listed  
who can supply copies of:

- 1 The Internal Regulations of the FEN e.V.
- 2 The Rules of Procedure of the System
- 3 CECC Specifications of the FEN and National Specifications for the System
- 4 CECC 00 200: Register of Firms, Products, and Services Approved under the CECC System
- 5 CECC 00 300: Register of National Documents Implementing CECC Publications and CECC European Standards
- 6 CECC 00 301: Register of CECC Specifications and Related Detail Specifications
- 7 Other CECC Publications and publicity documents

|                                                                                                                                                                        |                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| [1]<br>Specification available from:<br>CECC GENERAL SECRETARIAT                                                                                                       | [2] CECC 81 101-806<br>Page 1 of 18 |
| [3]<br>ELECTRONIC COMPONENT OF ASSESSED<br>QUALITY IN ACCORDANCE WITH<br>GENERIC SPECIFICATION<br>EN 181 000 : 1994<br>BLANK DETAIL SPECIFICATION<br>EN 181 101 : 1994 | [4]<br>Issue 1<br>.....<br>.....    |

## [5] DETAIL SPECIFICATION for

**FIBRE OPTIC BRANCHING DEVICE OF ASSESSED QUALITY**

Style:                    - Configuration:        A  
                          - Fibre Type:            B1.2  
                          - Connector Set:        Not applicable

Type:                    Splitter/Combiner  
(transfer matrix        - Non wavelength selective  
and numbering of       - Bidirectional  
ports see page 2)      - Transmissive star 1 x 2

|     |            |                         |                     |
|-----|------------|-------------------------|---------------------|
| [6] | Assessment | Qualification Approval  | Climatic            |
|     | Level: B   | Procedure: Fixed sample | category: 40/085/21 |

[7] Outline dimensions  
and mass

Panel piercing and  
mounting details:  
Not applicable.

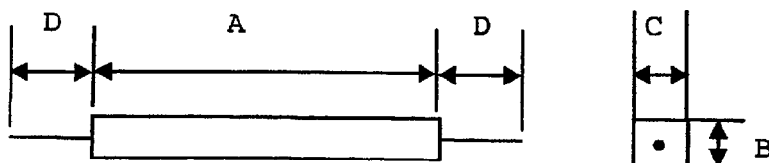


Figure 1 (Not to scale)

| Dimensions (mm) |      |      |         |
|-----------------|------|------|---------|
| Ref.            | Min. | Max. | Notes   |
| A               | 40   | 70   |         |
| B               | 3    | 6    |         |
| C               | 4,5  | 7    |         |
| D               | 1000 | 3000 | Pigtail |

Mass (g): < 3.

Information about manufacturers who have components qualified to this Detail Specification is available in the current CECC 00 200, Register of Approvals.

[8] Variants:

| Variant No. | Operating wavelength range ( $\mu\text{m}$ ) | Pigtail type                  |
|-------------|----------------------------------------------|-------------------------------|
| A-01        | $1,31 \pm 0,05$<br>$1,55 \pm 0,05$           | primary coating               |
| A-02        | $1,31 \pm 0,05$<br>$1,55 \pm 0,05$           | loose tube<br>0,5 mm / 1,0 mm |

Transfer matrix and numbering of ports:



| Launch Port | Receive Ports |               |               |
|-------------|---------------|---------------|---------------|
|             | 1             | 2             | 3             |
| 1           | $a_{11} > 50$ | $a_{12} = 4$  | $a_{13} = 4$  |
| 2           | $a_{21} = 4$  | $a_{22} > 50$ | $a_{23} > 55$ |
| 3           | $a_{31} = 4$  | $a_{32} > 55$ | $a_{33} > 50$ |

Note: Values in dB.

## [9] SUPPLEMENTARY INFORMATION

**Marking of the component** (see 2.7.2 of EN 181 000):

1. Manufacturer's identification mark
2. Manufacturer's date code
3. Manufacturer's part number
4. Variant identification number

**Marking and contents of package** (see 2.7.3 of EN 181 000):

1. Manufacturer's identification mark
2. Manufacturer's part number
3. Manufacturer's date code
4. Variant identification number
5. Nominal attenuation value

**Ordering information** (see 2.9 of EN 181 000):

CECC 81 101-806-(Variant number)

**Related documents:**

Not applicable.

**Certified records of released lots:**

Certificate is required (see 3.5 of EN 181 000).

**Structural similarity:**

See 3.2 of EN 181 000.

| [10] TABLE 1:<br>FIXED SAMPLE INSPECTION TEST SCHEDULE |                                                                                                                                      |                            |                |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------|
| Test Sequence<br>(Note)                                |                                                                                                                                      | EN<br>181 000<br>Clause    | Sample<br>Size |
| GROUP 0                                                | Visual inspection<br>Dimensions                                                                                                      | 4.5.1<br>4.5.2             | 20             |
| GROUP 1                                                | Insertion loss between<br>conducting ports at 1310 nm,<br>1550 nm<br>Insertion loss between<br>isolated ports at 1310 nm,<br>1550 nm | 4.5.5<br>4.5.6             | 5              |
| GROUP 2                                                | Cold<br>Dry heat<br>Damp heat                                                                                                        | 4.6.17<br>4.6.18<br>4.6.19 | 5              |
| GROUP 3                                                | Change of temperature<br>Climatic sequence                                                                                           | 4.6.22<br>4.6.20           | 5              |
| GROUP 4                                                | Vibration<br>Pulling<br>Drop test                                                                                                    | 4.6.1<br>4.6.4<br>4.6.14   | 5              |

Note: For details, measurements and performance requirements see table 4.