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YD/T 1272.3-2005

Replacing YD/T 895-1997

Optical fiber connector

Part 3: Type SC connector family

光纤活动连接器

第 3 部分: SC 型

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Foreword

YD/T 1272 “Optical Fiber Connector” is divided into 3 parts:

— Part 1: Type LC;

— Part 2: Type MT-RJ;

— Part 3: Type SC.

This Part is Part 3 of YD/T 1272.

This Part is the revision to YD/T 895-1997 “Technical Conditions of SC/PC Single-mode Optical Fiber Connector”. The revision refers to EC 61754-4:2002-03 “Optical Fiber Connector Interface Part 4: SC Connector Cluster”, IEC 60874-19-1:2003-01 “Detailed Specifications of SC/PC (Active Dual-core) Multimode Optical Fiber Ala and Alb Standard Terminated Fiber Optical Cord Connector”, IEC 60874-14-5:1997-06 “Detailed Specification of SC/PC Single-Mode Optical Fiber B1 Unadjusted Terminated Fiber Optical Connector”, IEC 60874-14-3:1997-06 “Detailed Specification of SC Single-Mode Optical Fiber Single-Core Fiber Optical Adaptor” and IEC 60875-14-10:1999-09 “Detailed Specification of SC/APC Unadjusted 8° Terminal Single-Mode Optical Fiber B1 Fiber Optical Tail Fiber or Jumper Connector”.

Compared with YD/T 895-1997, main changes of this Part are as follows:

— The scope in chapter 1 contains more connector types than previous standard; this Part applies to type-SC optical fiber connector cluster products.

— Add 3.7 Definition of “active device receptacle”.

— Re-write 4.1 Classifications.

— Delete the relevant provisions in original 4.2.1.4 Color and 4.5 optical fiber and cable.

— Change the previous clause 4.6 to clause 4.5; and redefine optical properties of type-SC connector cluster products.

— Revise 6.3 Measurement and test conditions; add 6.3.2 Single-mode connector measurement and test light source, 6.3.3 Multi-mode connector measurement and test light source, and 6.3.4 Cleaning before measurement.

— Revise the duration in 6.6.1 and 6.6.2, conditions in a) of 6.6.6, load in 6.6.10, load application point in test figure, and load in 6.6.10 by referring to the latest version of relevant standard in IEC60874.

— Revise 8.1.1.

— Section 4.2 “Interface graphics and coordinating dimensions” in this Part adopts IEC

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Optical fiber connector

Part 3: Type SC connector family

1 Scope

This Part defines and classifies type-SC optical fiber connector and prescribes graphics and coordinating dimensions of various interfaces, optical properties of type-SC optical fiber connector cluster, requirements of standard connector and gluing material, test methods and quality assessment procedures as well as marking, packaging, transportation and storage requirements.

This Part applies to type-SC optical fiber connector cluster products.

2 Normative references

The articles contained in the following documents have become part of this Part when they are quoted herein. For the dated parts so quoted, all subsequent modifications (including all corrections) or revisions made thereafter do not apply to this Part. However, the parties who reach an agreement according to this Part are encouraged to study whether the latest versions of these documents may be used. For the undated parts so quoted, the latest versions (including all modification sheets) apply to this Part.

GB 2421-1999 Environmental testing for electric and electronic products - Part 1: General and guidance

GB 2828.1-2003 Sampling procedures for inspection by attributes – Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

YD/T 1117-2001 Specification of all Optical Fiber Branching Devices

3 Terms and definitions

For the purpose of this section, the following terms and definitions shall apply.

3.1 Type SC optical fiber connector

SC connector is a kind of plug-in connector that is composed based on single-core plug and adaptor. Its feature is adopting rectangular structure and elastic clamp locking mechanism, including a coupling guide-key and an elastic plug-pin in the direction of optical axis. Typical outer diameter nominal value of plug-pin is 2.500mm; plug has a plug-in switch, which may be used for positioning and limiting of relevant position between connector and

matching element. Optical center-alignment device of connector is a rigid inner bore or elastic sheath.

For tail-fiber that uses single-mode optical fiber connector, it is called type-SC single-mode optical fiber connector; tail-fiber multimode optical fibber connector is called type-SC multimode optical fiber connector; optical connector of which the plug-pin end-face is spherical is called type-SC/PC optical fiber connector; optical fiber connector of which the plug end-face is beveled spherical is called type-SC/APC optical fiber connector.

3.2 Reference plug, adapter

Plug or adapter that are precision-manufactured or selected for measurement.

3.3 Mating face dimensions

Dimensions of components and parts that determine the plug mating between a set of optical fiber connector elements.

3.4 Concentricity error

The distance between optical fiber mandrel and plug-pin axis.

3.5 Angular alignment error

Angular deviation between excitation beam axis and plug-pin axis.

3.6 Eccentricity of spherical endface top

The distance between convex spherical vertex of plug-pin and plug-pin axis.

3.7 Active device receptacle

Connector plug-receptacle that is used for active-devices, components and modules.

4 Requirements

4.1 Classification

4.1.1 Plug interface

There are 4 kinds of interfaces based on number of optical fiber cores and endface shape of pins.

(1) Single-core connector plug interface — PC;

(2) Single-core connector plug interface — APC8°;

(3) Dual-core connector plug interface — PC;

(4) Dual-core connector plug interface — APC8°.

Note: (1) and (3) have a plug-pin that has spherical polish-grinding surface and achieves physical contact (PC); (2) and (4) have a plug-pin that has slanted spherical polish-grinding surface (APC8°) and achieves physical contact.

4.1.2 Adapter interface

There are 6 kinds of interfaces based on the number of optical fiber cores and application occasions:

(1) Single-core connector adapter interface;

(2) Single-core PC connector plug-type active-device receptacle interface;

(3) Single-core APC connector plug-type active-device receptacle interface;

(4) Dual-core connector adapter interface;

(5) Dual-core PC connector plug-type active-device receptacle interface;

(6) Dual-core APC connector plug-type active-device receptacle interface.

4.2 Interface graph, mating dimensions

4.2.1 Type-SC/PC connector interface

4.2.1.1 Single-core connector receptacle interface

Single-core connector receptacle interface is shown in Figure 1; mating dimension is provided in Table 1; Table 2 provides grade of single-core connector plug-pin.

— Angular alignment error of optical fiber and plug-pin: <0.2°;

— Eccentricity of spherical endface top of plug-pin: <30μm.

4.3.2 Reference adapter

Interface device of reference adapter is the same with general adapters; mainly select the adapters with low insertion loss and good repeatability. The requirements are as follows:

Use two reference plugs to conduct any exchange insertion connection of reference adapter; insert and pull for twice to measure the insertion loss; the maximum value: <0.10dB (single mode), <0.05dB (multimode); maximum change: <0.05dB.

4.4 Materials

It must be ensured that the materials of connector and optical fiber cable have no aging phenomenon, and are flame retardant and meet environmental requirements. It can withstand the test conditions required by connector; bonding glue used for manufacture of connector has no adverse effects on the structure of connector; the physical, chemical and optical properties shall match optical fiber; optical properties of connector shall not be damaged.

4.5 Optical performances of connector

4.5.1 Allowable optical performance indexes of type-SC single-mode connector

(1) Insertion loss that any plug passes reference adapter and reference plug ≤0.35dB (including repeatability); return loss>40dB (SC/PC), > 60dB (SC/APC).

(2) Insertion loss of any connection between two plugs ≤0.5dB; return loss >35dB (SC/PC); >58dB (SC/APC).

4.5.2 Allowable optical performance indexes of type-SC multimode connector plug

(1) Insertion loss that any plug passes reference adapter and reference plug is 0.35dB (including repeatability).

(2) Insertion loss of any connection between two plugs ≤0.5dB.

4.5.3 Allowable optical performance indexes of type-SC adapter or receptacle

Loss of type-SC adapter or receptacle allows loss relative two reference plugs <0.2dB (single mode), <0.1dB (multimode).

Note: Optical performances of dual-core connector refer to the provisions on optical performances of above-mentioned single-core connector.

4.5.4 Operating temperature of type-SC optical connector:

Operating temperature of type-SC optical connector: -25°C~+70°C.

4.5.5 Allowable insertion loss and return loss variations after routine tests:

Allowable insertion loss and return loss variations after routine tests are shown in Table 11.

Table 11 Variations of insertion loss and return loss after various tests (dB)

S/N	Test Name	Variation of Insertion Loss	Variation of Return Loss
a	Low temperature	≤0.2	<5
b	High temperature	≤0.2	<5
c	Damp heat (steady state)	≤0.2	<5
d	Vibration	≤0.2	<5
e	Drop	≤0.2	<5
f	Temperature cycle	≤0.2	<5
g	Repeatability	≤0.2	<5

Table 11 (Continued)

S/N	Test Name	Variation of Insertion Loss	Variation of Return Loss
h	Mechanical durability	≤0.2	<5
i	Strength of locking mechanism	≤0.2	<5
j	Optical cable tensile strength	≤0.2	<5
k	Optical cable twist	≤0.2	<5

4.6 Safety

It is recommended to add protective cap to type-SC connector, because there is hazardous radiation from the port without cap or optical fiber output end connected to tail end, which must be noted.

Warning:

Be careful during optical fiber operation to avoid hurting skin, especially the eyes. When optical fiber or optical fiber connector transmits optical energy, do not directly view the end-face of optical fibber or connector plug.

5 Quality assessment procedures

Quality assessment procedures include identification approval procedures and quality consistency inspection.

5.1 Identification approval procedures

5.1.1 Initial manufacturing stage

Initial manufacturing stage is defined as:

Manufacturing state of assembling single components into type-SC optical fiber connector.

Table 13 Batch quality inspection procedures

Inspection Sequence	Corresponding Method	Assessment Grade	
		IL	AQL
Group A — Appearance inspection — Dimension	 6.1 6.2	I	4%
Group B — Insertion loss measurement — Return loss measurement	 6.4.1, 6.4.2 6.5.1, 6.5.2	II	4%
Note 1: For detailed test, measurement and performance requirements are provided in corresponding clauses of chapter 6. Note 2: IL refers to inspection Grade; AQL refers to acceptable quality Grade.			

5.2.2 Periodic inspection

Periodic inspection includes sample inspection for group C and group D in Table 14. Inspection cycle shall be mutually maintained so that group D inspection replaces group C inspection in the cycle of group D. Products of all specifications proposed as structurally similar components and parts will get periodic inspection approval once inspection is successfully completed.

(a) Samples

Inspected sample shall be a complete set of connector made from single-mode fiber and cable with minimum mode field diameter or multi-mode optical fiber and cable with minimum core diameter prescribed for connector optical fiber.

After completing group “C0” or “D0” inspection, samples of other groups shall be randomly drawn from group “C0” or “D0”.

(b) Test

The test follows methods and order prescribed in Table 14; test sample shall meet requirements for optical properties and mechanical environmental properties prescribed in this Part.

Table 14 Periodic quality inspection procedures

Inspection Sequence	Corresponding Method	Assessment Grade	
		n	P
Group C0 — Appearance inspection	 6.1	18	24
— Dimension	6.2		
Group C1			
— Insertion loss measurement	6.4.1, 6.4.2	18	24
— Return loss measurement	6.5.1, 6.5.2		

(1) Whether the sample is consistent with the design, manufacture and standards and whether the processing quality is satisfactory.

(2) The appearance must be smooth, clean, free of oil stains and burs as well as scars and cracks, vibrant in color and greatly uniform; the parts and components must be combined neatly, with the plugs and adaptors inserted and removed smoothly and easily, the clamps powerful and the switches normal.

6.2 Dimensions

To ensure the product's consistency of both mechanical and optical properties in the specified environment and guarantee its versatility and interchangeability, the product's mating face dimensions must meet the requirements of the standards.

6.3 Measurement and Test Conditions

6.3.1 Atmospheric Conditions of Measurement and Tests

The measurement and test of adaptors shall be carried out under the atmospheric conditions as defined in GB2421-1999; and the accuracy of the measuring instrumentation shall be subject to requirements, and regular calibration.

6.3.2 Light Sources for Measurement and Tests of Single-Mode Optical Fiber Connectors

The measurement and test of single-mode connectors adopt LD light sources, whose peak wavelength is 1.3μm/1.55μm. To eliminate the effect of cladding modes on measurement, a Φ30mm ring can be tied on the pigtail of a plug connected to a light source. The light source wavelength (the spectrum line lower limit) must be longer than the cutoff wavelength of the spectral fiber used.

6.3.3 Light Sources for Measurement and Tests of Multimode Connectors

Multimode connector measurement adopts LED light sources, whose peak wavelength is 0.85μm/1.3μm. As the mode distribution variation of measurement systems due to optical fiber disturbance will have an effect on measuring results, LED or other incoherent light sources shall be used, and a mode scrambler shall be applied to pigtails to eliminate the undesired transient higher-order modes. Multimode optical fiber mode filters are made up of optical fibers twisting five times round a smooth spindle, whose diameter shall ensure the attainment of steady-state modes by attenuating transient higher-modes. A typical spindle diameter: 50μm-core optical fibers shall have a 18mm spindle diameter; 62.5μm-core optical fibers a 20mm spindle diameter (as for optical cables, the cable diameter shall be deducted from the spindle diameter accordingly).

6.3.4 Preparation Before Measurement

Prior to measurement, the ferrule and it's endface as well as the adaptor sheath shall be wiped and cleaned with lint-free fiber paper or absorbent cotton, or absolute alcohol if

Temperature: 40°C;

Relative humidity: 90%~95%;

Duration: 96h;

Rate of temperature change: not more than 1°C/min (not more than 5min average).

No online monitoring on optical properties of the sample.

(b) Procedure

First pretreat the sample at room temperature, and measure its optical properties and record the data. Then remove it from the measurement system and place it into a high and low temperature incubator accurate to ±3°C. Raise the temperature to 40°C at a specified rate and adjust the relative humidity to 90%~95%. Keep the state for 96h. And after 2h of restoring to room temperature at a specified rate, take out the sample and clean it up. Measure its optical properties and record the data.

(c) After Test

The sample shall meet the following requirements:

(1) Free of mechanical damage, such as distortion, cracking, slacking, etc.

(2) Optical properties comply with c in Table 11.

6.6.4 Vibration (Sinusoidal)

(a) Conditions

Frequency range: 10~55Hz;

Frequency sweep requirements: sweep rate to be one octave per minute, with a ±10% tolerance;

Amplitude: 0.75mm single amplitude;

Duration in every direction: 30min.

Online monitoring on optical properties of the sample.

(b) Procedure

First pretreat the sample at room temperature, and measure its optical properties and record the data. Fix the sample on the platform vibrator to be vibrated for 30min in each of the two vertical directions, of which one is parallel to the connector's common axis. Observe and record the data of its optical properties.

(c) After Test

(2) Optical properties comply with f in Table 11.

6.6.7 Insertion and Extraction Force

The test is intended to measure the force needed to completely insert or extract a set of connectors.

(a) Devices

Clamps;

Force applying devices;

Force measuring instruments.

(b) Procedure

Fix a whole set of connector to be tested to the clamps. Apply force to its plug to completely insert an adaptor and measure the force required; apply force to extract the plug from the adaptor and measure the force required.

(c) Allowable Insertion and Extraction Force

Allowable insertion force:19.6N at maximum;

Allowable extraction force:19.6N at maximum.

6.6.8 Repeatability

The test is intended to evaluate the consistence of insertion loss of connectors in serval times of their insertion and extraction.

(a) Conditions

Numbers of insertion and extraction: 10.

Online monitoring on optical properties of the sample.

(b) Procedure

As shown in Figure 18, if the opposite plug is inserted, insert and extract it in a usually used way, and record the data of its optical properties. Repeat this 10 times and record their data.

(c) After Test

The sample shall meet the following requirements:

(1) Free of mechanical damage, and no obvious scratches in the pins.

shall be provided for users along with the products. Type-SC optical fiber connectors go through routine inspection in items such as appearance, dimensions, insertion loss and return loss.

7.2.1.2 Sampling Inspection

This is an inspection carried out by the quality inspection department by proportionately sampling finished products or specimens from mass production or from products at different stages. The sampling inspection of type-SC optical fiber connectors shall be subject to section 5.2.1.

7.3 Type Inspection

In case one of the following situations occurs, type-SC optical fiber connectors shall be subject to type inspection, which shall be carried out according to 5.1.3.1 in the quality approval procedure.

(1) Trial type identification for plant-transfer production of new and old products;

(2) After mass production, when major changes in, for example, structures, materials and processes that may have an impact on product performance;

(3) When production restores after long shutdown;

(4) When the factory inspection results are significantly different from that of the last type inspection;

(5) When the national quality supervision agency proposes for type inspection.

8. Marking, Packaging, Transportation and Storage

8.1 Marking

8.1.1 Color

Type-SC/PC connectors are usually in blue-color to their external parts; type-SC/APC connectors are usually in green-color to their external parts.

8.1.2 Content

The product packing box shall be marked with product's type, batch, date of production, manufacturer's name and implemented standard number.

8.2 Packaging and Transportation

The product shall be well packaged. The connector plugs and adaptors/sockets in each pair shall be covered well with protective caps, and shall be reeled with a diameter not less than 2.5 times of the pigtail cable diameter.

When being subject to long-distance transportation, the product shall be packed with wooden cases or cardboard cartons, on which is marked “no hurling, striking, pressing” and rainproof signs to avoid damage to the product.

8.3 Storage

The products cannot be long-placed in the open air or environment with serious corrosion; it shall be placed in environment within the operation temperature range.

V	mm	0		0.5	5
BC	mm	0		0.5	45° chamfer
EA	Degrees		90		7
EB	Degrees				Refer to Table A.2
ED	mm	0.80		1.70	
EP	mm	5		12	Radius of curvature, 8

Note 1: Plug-pin end type shall be one of type (1), (2) and (3) shown in plug-pin end-face expanded view (see Figure A1).

Note 2: Chamber radius of curvature allows a maximum depth of 1.2mm from plug-in end-face.

Note 3: When they do not match each other, dimension H are provided based on plug end-face. Plug-pin moves with the direction of contact end-face through central axial pressure, so dimension H is variable. Plug-pin pressure shall be 7.8~11.8N when dimension H is 7mm±0.1mm.

Note 4: Dimensions of negative value indicates that inner bottom surface position is relative to the direction on the left side that is defined as X reference-plane.

Note 5: Connecting sheath shall be able to move towards right and left; these dimensions are provided when connecting sheath moves to the position in its most right direction.

Note 6: When connecting sheath moves to the position in its most left direction, dimension M shall be less than 0 mm.

Note 7: Dimension M shall be defined as the angle between two planes; plane A refers to the symmetry axis of oblique end-face guide key that passes through plug-pin axis and connector plug. Plane B refers to the normal that passes through plug-pin axis and APC reference-plane.

Note 8: Dimension EP shall be measured on diameter about 0.25mm away from plug-pin axis; sphere center deviation degree of spherical polish-grinding plug-pin end-face vertex shall be less than 50μm.

Table A.2 Dimension EB (Degrees)

Interface	Minimum Value	Reference Value	Maximum Value
61754-4-5		8	
61754-4-6		9	
61754-4-7		12	

A.2 Dual-core APC connector plug

Dual-core APC connector plug is shown in Figure A.2; mating dimensions are shown in Table A.3; dimensions are shown in Table A.4.

Note 7: Connecting sheath may be rigid casing; when two single-core sockets are fixed together by shapeable casing, the dimension P shall be 8.89 ~ 8.99mm.

Note 8: When connecting sheath is a steel sheath, the dimension DB shall be 12.65~12.75mm. When two single-core plugs are fixed shapeable sheaths, the dimension DB shall be 12.25~13.15mm.

Note 9: Dimension EA shall be defined as the angle between two planes; plane A refers to the symmetry axis of oblique end-face guide key that passes through plug-pin axis and connector plug. Plane B refers to the normal that passes through plug-pin axis and APC reference-plane.

Note 10: Dimension EP shall be measured on diameter about 0.25mm away from plug-pin axis; sphere center deviation degree of spherical polish-grinding plug-pin end-face vertex shall be less than 50μm.

Table A.4 Dimension EB (Degrees)

Reference [should be “Interface”]	Minimum Value	Reference Value	Maximum Value
61754-4-9 [it should be “61754-4-8”]		8	
61754-4-9		9	
61754-4-10		12	

A.3 Adapter interface and mating dimensions

A.3.1 Single-core connector adopter

Single-core connector adapter interface and mating dimensions are the same with Figure 2 in 4.2.1.2 and Table 3; grade of adapter is the same with Table 4 in 4.2.1.2; alignment-sheath pin-gauge interface of adapter and dimensions are the same with Figure 3 in 4.2.1.2 and Table 5.

A.3.2 Dual-core connector adapter

Dual-core connector interface and mating dimensions are the same with Figure 5 in 4.2.1.4 and Table 8; grade of adapter is the same with Table 4 in 4.2.1.2; alignment-sheath pin-gauge interface of adapter and dimensions are the same with Figure in 4.2.1.2 and Table 5.

O	mm	2.0	22	
P	mm	9.0	9.1	
R	mm	7.4	7.5	
S	mm	1.0	1.1	Radius of curvature
T	mm	3.80	4.04	
U	mm	5.0	5.3	
V	mm	0.6	1.6	
AA	Degrees	27	33	
AB	mm	0.8	1.0	
AC	mm	0.4	0.6	Radius of curvature
AD	mm	0.7	0.8	
AE	mm	0.4	0.6	
BA	mm	5.4	5.6	2
BB	mm	11.0	11.2	2
DB	mm	12.65	12.75	
DD	mm	-	6.99	
OA				1, radius of curvature and refer to Table B.4
OC	mm	0	0.05	Radius of curvature
OD				1, refer to Table B.4

Note 1: Figure B.3 provides an example of mechanical shutdown device; mechanical shutdown device requires endpoint of optical fiber is at optical datum-axis. Due to the deviation of plug-pin endpoint figure, it is required that the referential methods for mechanical shutdown for all models shall be provided. When mechanical shutdown device is inserted to reference-plane (point), optical datum-axis of optical fiber and receptacle within characteristic scope of applications prescribed in Table B.4.

Note 2: Lines shown in Figure B.3 may be used to indicate the structure.

B.3 Single-core APC connector plug-type active-device receptacle

Single-core APC connector plug-type active-device receptacle interface is shown in Figure B.4; mating dimensions are given in Table B.6; grade of center-alignment device is shown in Table B.7; receptacle pin-gauge is shown in Figure B.5; dimensions of pin-gauge is given in Table B.8; grade of mechanical shutdown device is shown in Table B.9.

O	mm	2.0	2.2	
P	mm	9.0	9.2	
R	mm	7.4	7.50	
S	mm	1.0	1.1	Radius of curvature
T	mm	3.80	4.04	
U	mm	5.0	5.3	
V	mm	0.6	1.6	
AA	Degrees	27	33	
AB	mm	0.8	1.0	
AC	mm	0.4	0.6	Radius of curvature
AD	mm	0.7	0.8	
AE	mm	0.4	0.6	
BA	mm	5.4	5.6	2
BB	mm	11.0	11.2	2
OA				1, radius of curvature; refer to Table B.9
OC	mm	0	0.05	Radius of curvature
OD				1, refer to Table B.9
Note 1: Figure B.4 provides an example of mechanical shutdown device; mechanical shutdown device requires endpoint of optical fiber is at optical datum-axis. Due to the deviation of plug-pin endpoint figure, it is required that the referential methods for mechanical shutdown for all models shall be provided. When mechanical shutdown device is inserted to reference-plane (point), optical datum-axis of optical fiber and receptacle within characteristic scope of applications prescribed in Table B.9. Note 2: Lines shown in Figure B.4 may be used to indicate the structure.				

Table B.7 Grade of center-alignment device (mm)

Grade	Minimum Value	Maximum Value	Note
1	2.500	2.502	1, 2
2	2.501	2.504	1, 2
3	2.501	2.510	1, 2
4	2.501	2.525	1, 2
5			Elastic sheath, 2 and 3
Note 1: Connector center-alignment device is a steel inner-bore sheath. Note 2: Plus the grade corresponding interface parameters. Note 3: Connector center-alignment device is an elastic sheath, which provides that there shall be pressure of 2.9-5.9N when gauge-pin is inserted from one side to the middle of receptacle. The middle of receptacle is defined based on size H of position in the right side. Measurement is conducted through single gauge-pin.			

P	mm	9.0	9.1	
R	mm	7.4	7.5	
S	mm	1.0	1.1	Radius of curvature
T	mm	3.80	4.04	
U	mm	5.0	5.3	
V	mm	0.6	1.6	
AA	Degrees	27	33	
AB	mm	0.8	1.0	
AC	mm	0.4	0.6	Radius of curvature
AD	mm	0.7	0.8	
AE	mm	0.4	0.6	
BA	mm	5.4	5.6	2
BB	mm	11.0	11.2	2
DB	mm	12.65	12.75	
DD	mm	-	6.99	
OA				1, radius of curvature; refer to Table B.9
OC	mm	0	0.15	Radius of curvature
OD				1, refer to Table B.9

Note 1: Figure B.6 provides an example of mechanical shutdown device; mechanical shutdown device requires endpoint of optical fiber is at optical datum-axis. Due to the deviation of plug-pin endpoint figure, it is required that the referential methods for mechanical shutdown for all models shall be provided. When mechanical shutdown device is inserted to reference-plane (point), optical datum-axis of optical fiber and receptacle within characteristic scope of applications prescribed in Table B.9.

Note 2: Lines shown in Figure B.6 may be used to indicate the structure.

END