

4.0 Mechanical and Environmental performance

SC/UPC			
Item	Test condition	Loss	
Mechanical feature	Interchangeability	Free interconnection	$\Delta IL < 0.2db$
	Vibration	5-50Hz, 1.55mm amplitude	$\Delta IL < 0.2db$
Environmental characteristics	High temperature	+70°C for continuous 96 hours	$\Delta IL < 0.2db$
	Low temperature	-25°C for continuous 96 hours	$\Delta IL < 0.2db$
	Temperature cycle	-10°C~+60°C, 5 cycles	$\Delta IL < 0.2db$
	Humidity	+25°C ~ +65°C, 93%R.H. 96 hours	$\Delta IL < 0.2db$

5.0 Environment

5.1 Transport

SC/UPC	
Temperature	-40...+80° C
Relative humidity	5 - 100%

5.2 Storage

SC/UPC	
Temperature	-40...+70° C
Relative humidity	5 - 95%
Time	12 month

5.3 operation

SC/UPC	
Temperature	-25...+70° C
Relative humidity	10 - 90%

SC/UPC PATCHCORD

SWX-SC/UPC-010LBD

SUNSEA SC/UPC patchcord series are mainly used in telecom network, especially in CATV. Of course they also can be used in customer premises, Local Area Networks (LAN) or FTTX networks. The Insertion Loss requirement and the Return Loss requirement is kept at a high level to ensure a future proof network.  
 SUNSEA SC/UPC patchcord series is manufactured in a cost-effective and rigid production process under controlled processes to ensure long-term stability and reliability.

1.0 General design

1.1 PATCHCORD SIZE AND DRAWING



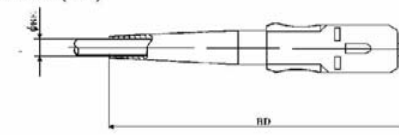
① TOLERANCES OF LENGTH (mm)

$L \leq 10000$  +100 / -50  
 $10000 < L \leq 50000$  +200 / -100  
 $L > 50000$  +400 / -100

② Standard lengths for patch cords and pigtails are 1, 2, 3, 5, 10 meters and customized.

③ The diameters( $\Phi D$ ) of the cable are 0.9, 2.0, 3.0mm.

④ PLUG DIMENSION (mm)



REF.	MIN.	MAX.
BD		60
BE	D+0.1	D+0.3

1.2 CONNECTOR

Color scheme		
Connector	House	Boot
SC/UPC	blue	blue
Material		
House	Spring	Ferrule
Plastic	Stainless steel	Phosphor bronze and Zirconia

- ① The materials of connector are all in accordance with RoHS-directive.
- ② Connector and hood Plastic, non flammable (UL94-V-0).
- ③ The dimension meet IEC 60874-14

1.3 Fiber

The fiber type: single-mode fiber G652D, G657A/B, and customized.

1.4 CABLE

The preferred cable color is yellow, other colors can be customized.  $\Phi$  0.9/2.0/3.0mm, tight secondary coating. It's made of flame retardant or LSZH material.

2.0 Optical performance

OPTICAL PERFORMANCE

Insertion Loss measurement test against reference connectors are intended to be used when quality conformance is required. Random mating attenuation test shall be used during qualification to ensure that the optical performance requirements are met.

SC/UPC	
Insertion Loss(Reference plug)	$\leq 0.30dB$
Insertion Loss (Random mated)	$\leq 0.50dB$
Return Loss	$\geq 50dB$

3.0 Ferrule end-face geometry

Connectors are manufactured in a controlled process to ensure ferrule endface geometry after termination and polishing. All geometrical parameters are defined in IEC 61753-3-1 to meet specific requirement for fiber-to-fiber interconnection and ensure a stable optical performance.

SC/UPC	
Radius of Curvature	10~25mm
Apex Offset	$\leq 50\mu m$
Fiber Height	-50 ~ +50nm
Angular Offset	N/A

