

Customer :



Optical Patchcord

Single / Multi mode Patchcord / Pigtail

TECHNICAL SPECIFICATIONS

Luxtech co., ltd.

E-mail : luxtech@luxtech.co.kr
Http://www.luxtech.co.kr

TABLE OF CONTENTS

Section	Page
1. Provision	3
1.1 Application Limit	3
2. Parts Number	3
3. Physical Dimensions	4
4. Component Characteristics	4
4-1. Connector	4
4-2. Epoxy	4
5. Technical Data	5
6. Measuring Insertion Loss	6
7. Measuring Return Loss	6
8. Inspection Criteria	7
8-1. Visual	7
9. Interferometric	8
9-1. PC Type measurement limit	8
9-2. APC Type measurement limit	8
9-3. Definitions	8

1. PROVISION

1.1 Application Limit

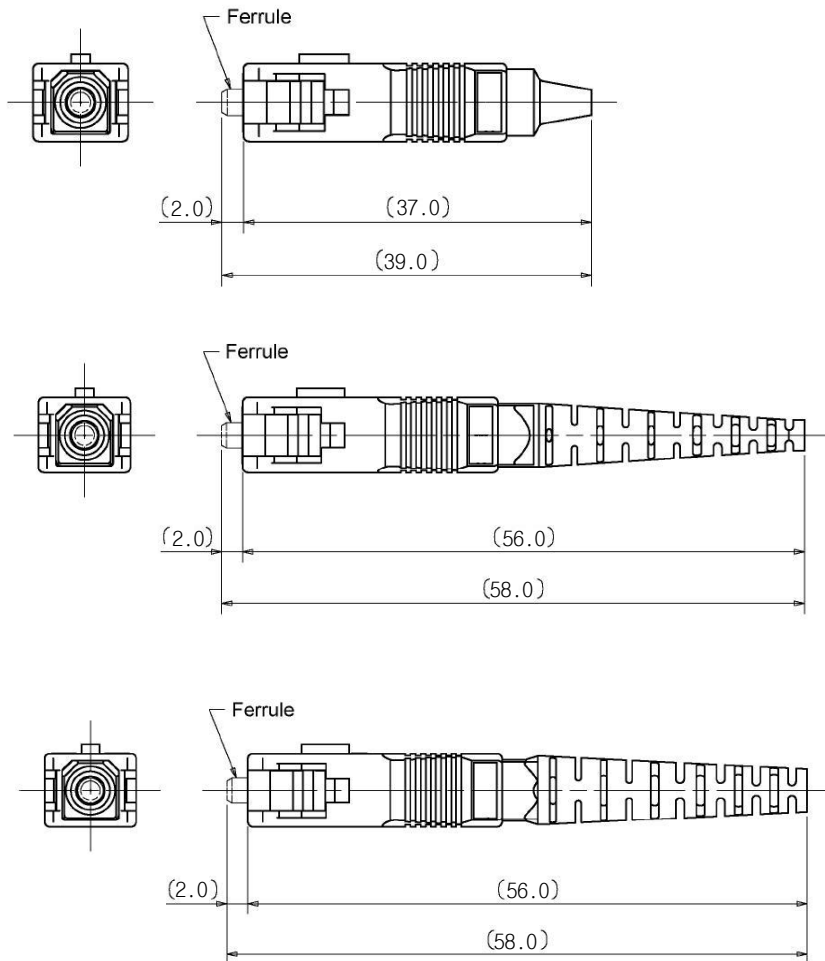
These specifications apply to the SM / MM Patchcord & Pigtail supplied by **LUXTECH CO.,LTD.**

2. PARTS NUMBER

OJC — □ □ □ □ — □ □ — □ □ — □ □
① ② ③ ④ ⑤

- ① Connector : SC,FC,ST,LC,MU,MTRJ
- ② Polishing : PC / UPC / APC
- ③ Fiber : SM, MM, OM3
- ④ Cord : 0.9 / 2.0 / 2.4 / 3.0
- ⑤ Length : 1 ~ 99 Meter

3. Physical Dimensions



4. Component Characteristics

4-1. Connector

Type SC and FC connector shall use Zirconia ceramic ferrules. The center hole will be 125 ~ 126 microns in diameter. Single-mode rated connectors will be used. FC connector bodies will be made of metal and not plastic.

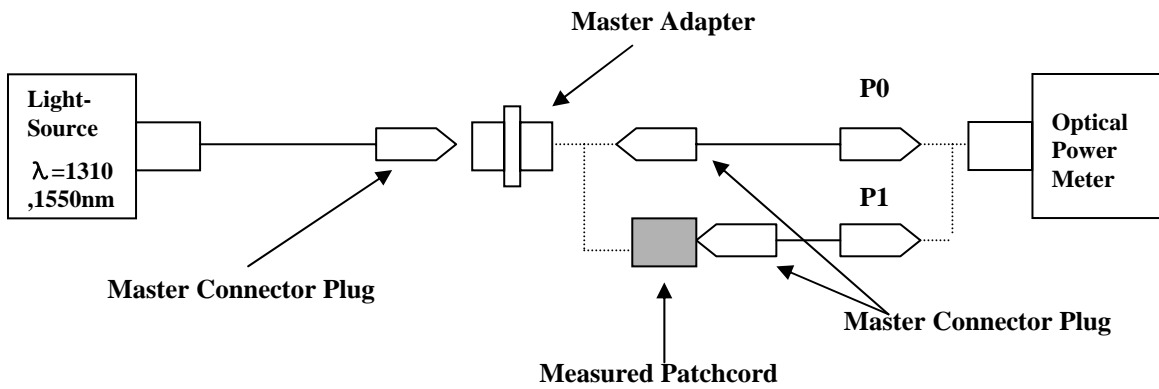
4-2. Epoxy

Type 353ND epoxy will be used for assembling. Baking time is 20 minutes at 100. C

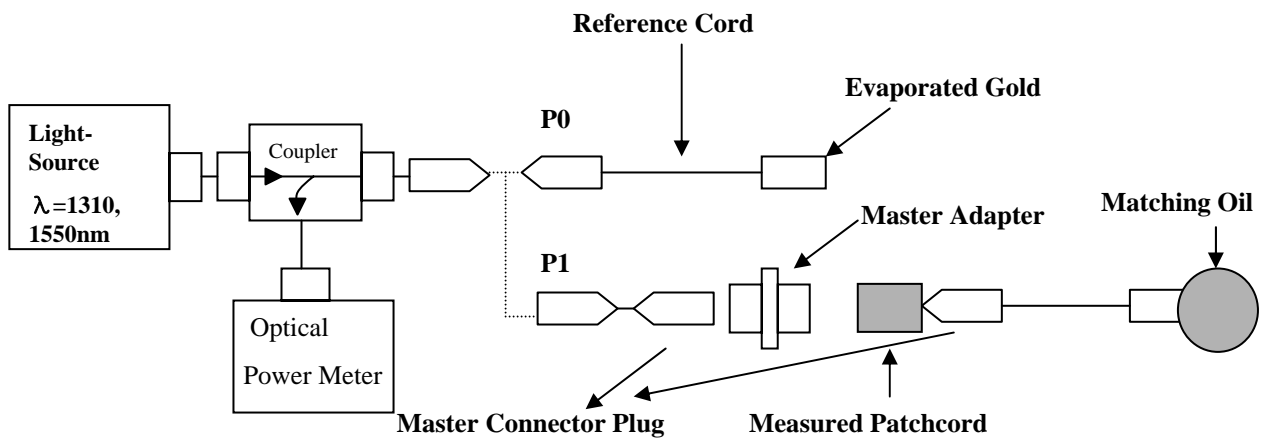
5. Technical Data

Characteristics		Values
Structure		Satisfied Telcordia GR-326-CORE
Fiber Type		SM(9/125), MM(50/125,62.5/125), OM3
Insertion Loss		$\leq 0.3\text{dB}$ (against master connector)
Return Loss	SPC	$\geq 40\text{dB}$
	UPC	$\geq 55\text{dB}$
	APC	$\geq 65\text{dB}$
Mating durability		$\leq 0.2\text{dB}$ (500times)
Operating temperature stability		$\leq 0.3\text{dB}$ ($-40\text{ }^{\circ}\text{C} \sim +85\text{ }^{\circ}\text{C}$)

6. Measuring Insertion Loss



7. Measuring Return Loss



8. Inspection Criteria

8-1. Visual

Visual inspection will be performed at 400X or higher to verify that the connector has been properly fabricated and handled. Defects in excess of the allowable criteria will result in the attenuator being rejected.

Test	Criteria
Core	<ul style="list-style-type: none"> - No visible scratches, chips, or blemishes. - Contamination : If contamination is present, wipe surface with lint free wiping material that has been moistened with ethanol. After wiping with the ethanol, surface shall be clean of any contaminants.
Cladding	<ul style="list-style-type: none"> - No visible deep features (pits or scratches). Light scratches are allowed. <ul style="list-style-type: none"> - Scratches : <5um in width. - Pitting : <10um in diameter <15um in diameter if the features is adjacent to the outer edge of the cladding. - Contamination : If contamination is present, wipe surface with lint free wiping material that has been moistened with ethanol. After wiping with the ethanol, surface shall be clean of any contaminants.
Gap between cladding and ferrule	<ul style="list-style-type: none"> - Visible glue area <15um width - Light porosity is allowed (<5um in diameter)
Contact area (225 micron diameter)	<ul style="list-style-type: none"> - No deep features (deep pits or scratches) Allowed : <10um in width , other features : <30um in diameter - Contamination : If contamination is present, wipe surface with lint free wiping material that has been moistened with ethanol. After wiping with the ethanol, surface shall be clean of any contaminants.

9. Interferometric

9-1. PC Type measurement limits

Measurement Parameter	Units	Pass/ Fail Limits	
		Min.	Max.
Radius of Curvatures	mm	10.0	25.0
Fiber Height (Protrusion '-' / Undercut '+')	um	-0.050	0.050
Apex offset	um	0.00	50.0
Fiber Roughness (Ra & Rq)	nm	0.00	50.0
Ferrule Roughness (Ra & Rq)	nm	0.00	50.0

9-2. APC Type measurement limits

Measurement Parameter	Units	Pass/ Fail Limits	
		Min.	Max.
Radius of Curvatures	mm	5.0	12.0
Fiber Height (Protrusion '-' / Undercut '+')	um	-0.050	0.050
Apex offset	Um	0.00	100.0
Actual angle	degrees	7.4	8.6
Key Error	degrees	-0.25	0.25
Fiber Roughness (Ra & Rq)	nm	0.00	50.0
Ferrule Roughness (Ra & Rq)	nm	0.00	50.0

9-3. Definitions

Apex Offset : The radial distance between the axis of the core to the point the endface touches a plane perpendicular to the core.

Fiber Height : The axial distance between of the core at the axis to the plane touching the endface and perpendicular to the core

Ra / Rq : Ra and Rq are an indication of the surface roughness of the ferrule and fiber. Ra is the average difference between the fitted sphere and the raw data. Rq is the RMS between the fitted sphere the raw data.