



Specification for Low Profile Coupler (LPC)

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1. General

This document describes the specification of Low Profile Coupler (LPC). Products are to be provided into the package. Its part-number shall be described as follows;

Part Number
Year+Month (0000)-serial number (00000)
(i.e. 2014 Nov.-00001 : 1411-00001)

2. Specification

2.1 Optical Characteristics

Optical characteristics of LPC are shown in Table 1.

Table 1 Optical Characteristics of LPC

Parameters	Units	Value	Remarks
Fiber type		ITU-T G.657.B3	
Fiber diameter	μm	125	
Total insertion loss @λ=1490nm	dB	≤1.0	Large aperture PD method Sampling inspection
Return loss of MT connector	dB	≥55	

2.2 Mechanical specifications

Mechanical characteristics of LPC are shown in Table 2 and Figure 1.

Table 2 Mechanical Characteristics of LPC

	Parameters	Units	Value	Tolerance	Remarks
1	Length	mm	30	±0.5	Refer to Figure 2
2	Height	mm	Max:3.8		Refer to Figure 2
3	Polishing angle	Degree	82	± 0.5	Refer to Figure 1
4	Front polish angle	Degree	0	± 0.8	Refer to Figure 1
5	Yaw angle	Degree	0	±2.5	Refer to Figure 1
6	Chipping		No chipping or crack allowed on the Interface between v-groove and lid. No chipping allowed on the end-face of fiber array (v-groove and lid) over 750μm wide/deep. No chipping allowed on the both sides of v-groove over 750μm wide/deep. No developing cracks or fractures are allowed on the other area.		
7	Side surface appearance		Lid flush with the v-groove or lid is inside the v-groove.		
8	MT ferrule		Dummy-less ferrule.		

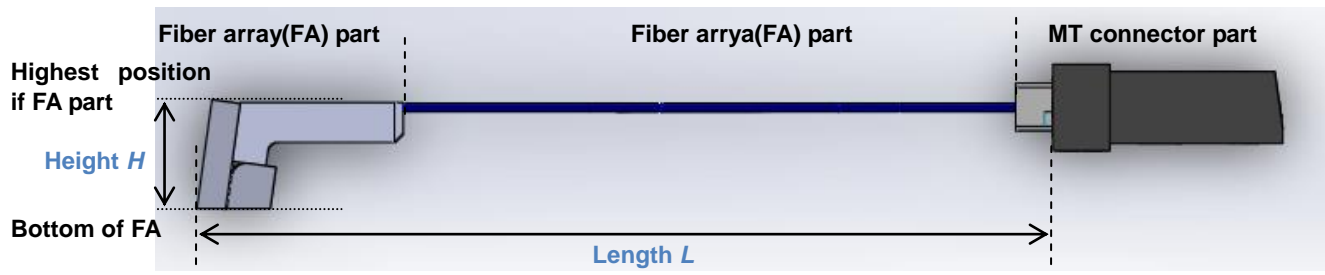


Figure 2 Schematic of LPC.

2.3 Fiber connections

Fiber connections are shown in Table 3.

Table 3 Fiber Connections

Fiber array fiber number	MT ferrule fiber number	Fiber color
1	1	Blue
2	2	Orange
3	3	Green
4	4	Brown
5	9	Slate
6	10	White
7	11	Red
8	12	Black

2.4 Environmental conditions

Operating and storage conditions of LPC are shown in Table 4.

Table 4 Environmental conditions

Items	Specification
Operating Temperature	-40 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Operating Humidity	5 ~ 85 % RH
Storage Humidity	5 ~ 85 % RH

3. Test report

Test report shall be provided with each LPC including the following information.

- Serial No.
- Length
- Tray ID and Position
- Spec. No

Test report format are shown in Table 5.

Table 5 Test report format

Serial No.			Length [mm]	Height	Apparence	Polishing angle	Tray ID	Position	Spec. No
17	04	00656	29.9	OK	OK	OK	000001	A01	YZS1772003B
17	04	00657	30.0	OK	OK	OK	000001	A02	YZS1772003B
17	04	00658	30.0	OK	OK	OK	000001	A03	YZS1772003B
17	04	00656	29.9	OK	OK	OK	000001	A04	YZS1772003B

4. Packaging

4.1 Packaging tray

Each LPC shall be packaged in the following tray. Column 8 is empty, no LPC.

Packaging tray is shown in Table 6 and Figure 3.

Table 6 Packaging tray

Items	Specification
Tray material	PET
Surface resistivity	$10^{10} \sim 10^{12}$ OHM

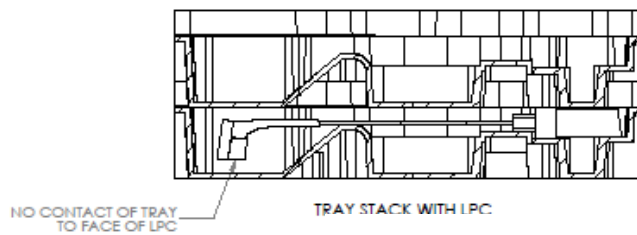
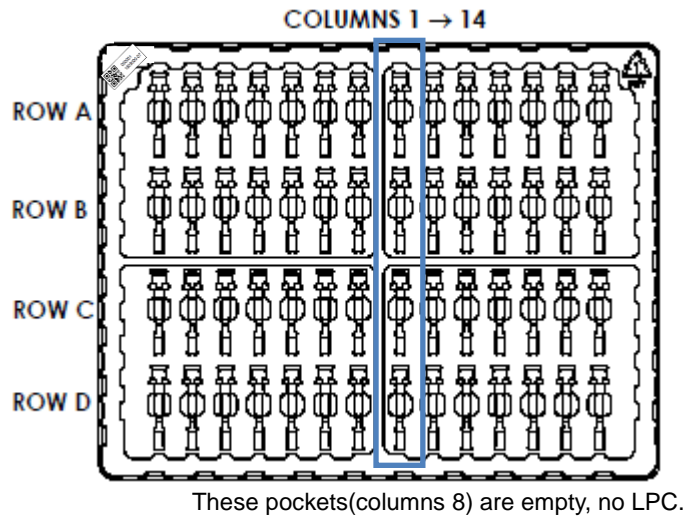


Figure 3 Schematic of package tray for LPC

4.2 Identification label

The identification label for Tray ID shall indicate the following information.

- Tray ID (6 digits)
- 2D barcode (QR code contains Tray ID and Specification No)

Ex) Tray ID: 000001 (6 digits)

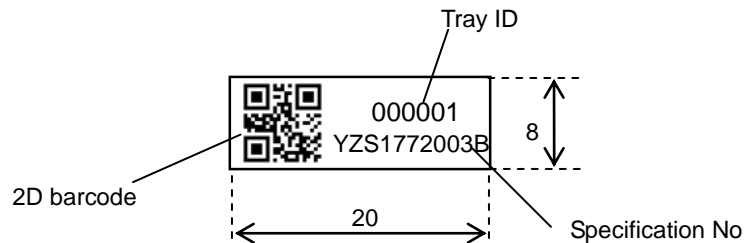
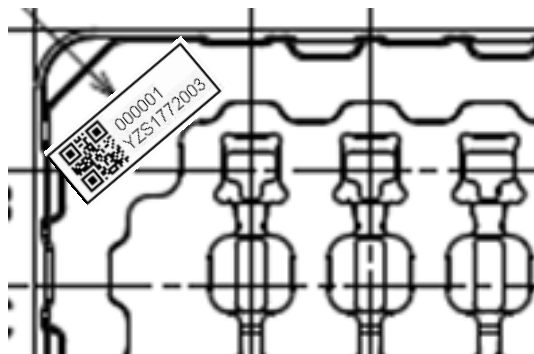


Figure 4 Example of Tray label



*Tray label shall be attached on left edge of packaging tray

4.3. Packing

Products shall be packed suitable not to be damaged during transportation.

5. Warnings

- Do not look into optical fibers or the end of an optical cable attached to the optical output when the device is active.
- Do not load fiber ribbon with more than 1N otherwise it will break the fiber.
- Please handle LPC carefully to prevent fiber breakage.
- Glass-fiber fragments are extremely sharp and may puncture the skin.

6. Limited warranty

- This limited warranty only covers failures due to defects in design, materials or manufacture.
- The warranty term of our products is one year after shipment.
- Except where prohibited by law, SEI will not be liable for any indirect, special, incidental or consequential loss or damage arising from this product, regardless of the legal theory asserted.
- SEI makes no other warranties including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose.
- If our product is defective within the warranty period stated above, your exclusive remedy shall be to replace or repair the product or refund the purchase price of the product.

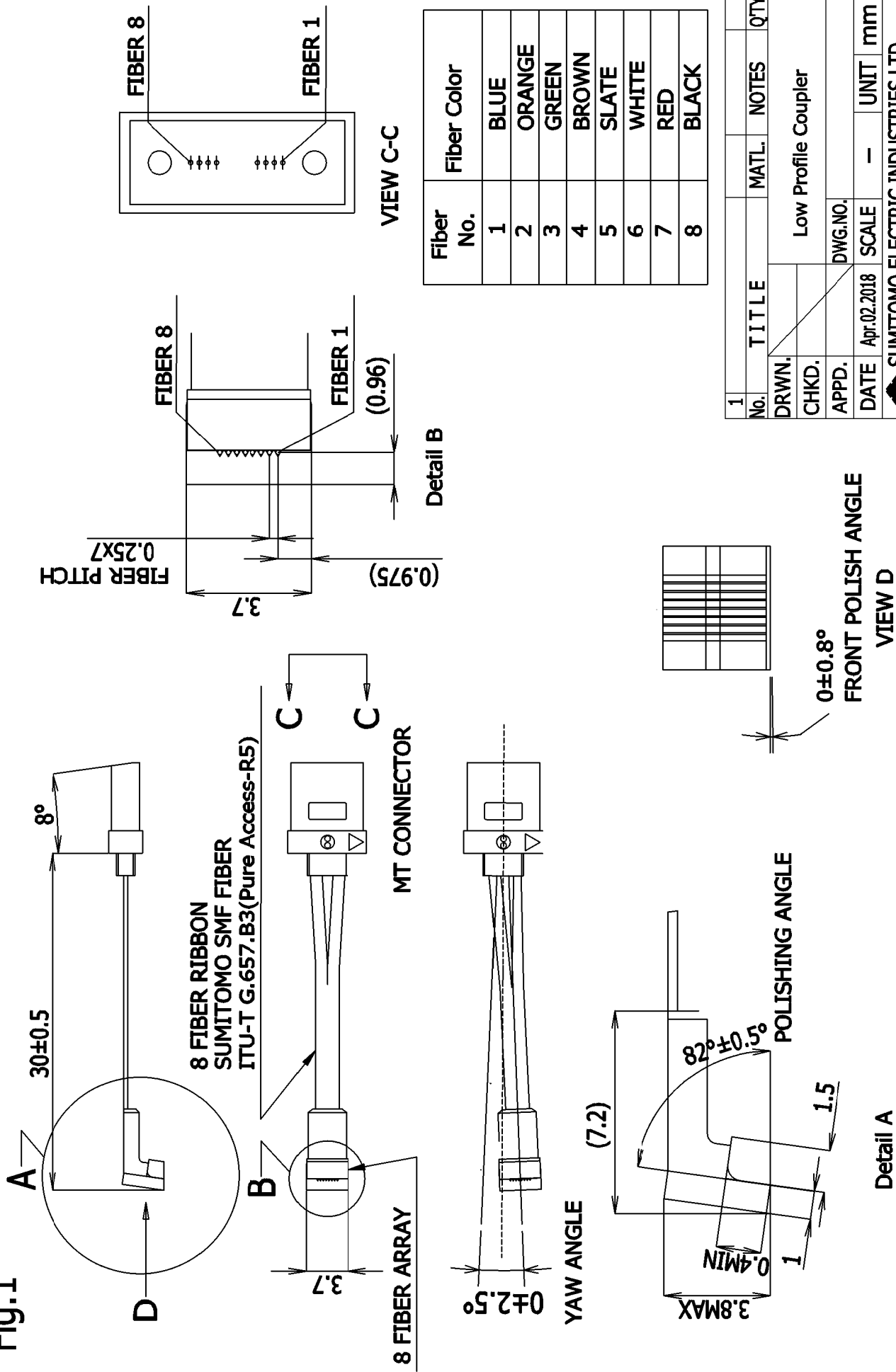
7. History of Change

Each time a specification is revised, alphabetic letter at the last digit of the specification number turns up consecutively (A,B,C...).

Revision No.	Description of change	Date	Author
YZS1772003	Initial Issue	2017/04/17	A.Kataoka
YZS1772003A	Change length from 28.1mm to 30.0mm. (Table.2 and Figure 1)	2017/05/08	A.Kataoka
YZS1772003B	Add support parts (Revised Fig.1)	2018/04/02	A.Kataoka

End of Document

Fig.1



Fiber No.	Fiber Color
1	BLUE
2	ORANGE
3	GREEN
4	BROWN
5	SLATE
6	WHITE
7	RED
8	BLACK

1	TITLE	MATL.	NOTES	QTY
No.				
DRWN.	Low Profile Coupler			
CHKD.				
APPD.	DWG.NO.			
DATE	Apr.02.2018	SCALE	UNIT	mm
SUMITOMO ELECTRIC INDUSTRIES, LTD.				