

Sumitomo Electric Ind., LTD.
Specification No. YZS2223034A

Specification
for
Field Installable SC type Connector
“e-SC”
e-SC-APC<SM>F-6-D-J4
e-SC-UPC<SM>F-6-D-J4

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Jun. 07, 2024

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Approved by

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Jun. 07, 2024

Y. Ukita / Manager



SUMITOMO ELECTRIC INDUSTRIES, LTD

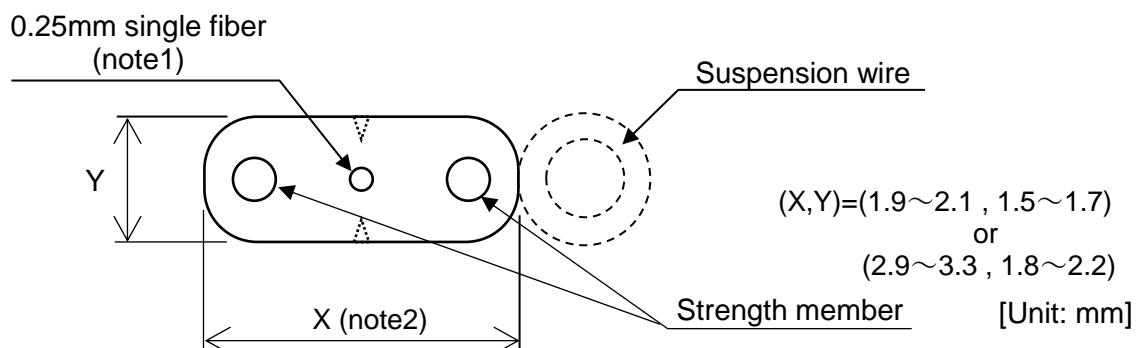
Tokyo Japan

1. General

This specification covers the field installable APC or UPC polished SC type connectors compliant with IEC 61754-4 and TIA/EIA 604-3 for bend insensitive SM fiber drop cable. The materials of this connector are compliant with EU/ROHS/2011/65.

2. Applicable drop cable

The applicable drop cable is shown in figure 1. The two fiber drop cable shall be applicable for this connector if the one fiber is used and other fiber is cut at the cable jacket end. This connector is inapplicable to the loose cable.



(note1) Bend insensitive SM fiber must be complied with ITU-T.G.652B, G652D, G657A1 and G657A2. Allowable fiber diameter is 0.25+/-0.015mm.

(note2) The Suspension wire must be removed before installation.

Figure 1 Applicable drop cable

3. Ordering information

Table 1 Ordering code (Connector)

No.	Product code	Finishing (Polishing)	Fiber type	Intermateability
1	e-SC-APC<SM>F-6-D-J4	APC	SMF	SC (IEC 61754-4) (TIA/EIA 604-3)
2	e-SC-UPC<SM>F-6-D-J4	UPC	SMF	

4. Composition and construction

Table 2(a) Composition and construction (note3)

Item	Qty [pc]	Construction
Connector plug	100	See Attached drawing GE2223034
Assembly Guide Jig-S	4	See Attached drawing GE2023126
e-SC Cut Spacer-S	4	See Attached drawing GE2023127
Easy Fiber Stripper	2	See Attached drawing GE1623119

(note3) Sales unit : 100 pcs connectors. Instruction manual is attached for this component.

Table 2(b) Material and end-face geometry of ferrule

Item	APC polishing	UPC polishing
Material	Zirconia Ceramic	
End-face geometry	First curvature radius	5 ~ 12 mm
	Eccentricity of fiber and ferrule hole	< 50 μm
	Height of fiber with ferrule surface	-50 ~ +50 nm

Table 2(c) Material list of parts

Part name	Material	Remarks
Connector plug	PBT	Compliant with EU/ROHS/2011/65
Ferrule	Zirconia Ceramic	
Outer housing	PBT	
Dust cap	PE	
Wedge plate	PC	
Cable holder	PA	
Assembly Guide Jig	PS	
e-SC Cut Spacer	PS	
Refractive index matching gel	Cristal clear gel - Refractive index: 1.463 - Oil Separation 24 hours: 0.1% - Evaporation 24 hours: < 0.5% - Specific gravity: approx. 1	- Very high clarity - Good mechanical shear stability - Low bleed and evaporation - Excellent adhesion

[Abbreviations] PBT: Polybutylene terephthalate, PC: Polycarbonate, PE: polyethylene,

PA: Polyamide, PS: Polystyrene

5. Required cleaver for cable-side fiber

Table3. Required cleaver for cable-side fiber

Product code	Cleaver structure	Cleave angle
e-SC-APC<SM>F-6-D-J4	10mm cut Holder type	0deg / 8deg
e-SC-UPC<SM>F-6-D-J4		0deg

6. Operating condition

Temperature : -40 to 75 degree C

Humidity: < 95%RH

7. Characteristics

7-1. Optical characteristics of assembled e-SC before shipment

Table 4 Optical specification (note4, 5)

Product code	Item	Specification
e-SC-APC<SM>F-6-D-J4	Insertion loss (Wavelength: 1310/1550/1625nm)	Typically $\leq 0.3\text{dB}$
	Return loss (Wave length: 1310/1550/1625 nm)	$\geq 50\text{dB}$
e-SC-UPC<SM>F-6-D-J4	Insertion loss (Wave length: 1310/1550/1625 nm)	Typically $\leq 0.3\text{dB}$
	Return loss (Wave length:1310/1550/1625 nm)	$\geq 45\text{dB}$

(note4) With Sumitomo Fiber, Sumitomo standard Tools, and Master plug.

This Insertion loss and Return loss are included Mechanical Splice to Built-in-Fiber, and Connector connection portion.

(note5) Room temperature 23 +/- 5 degree C

7-2. Mechanical characteristics

Table 5 Mechanical characteristics

Item	Specification
Allowable cable tensile strength	30N
Allowable fiber tensile strength	3N
Mating durability	≥ 500 times (loss increase : typically $\leq 0.2\text{dB}$)
Number of Re-termination	≥ 10 times (note 6)
Fiber/Cable locking points	Total 3 points; - 1 st : 125 μm grass fiber - 2 nd : 250 μm primary coating of fiber - 3 rd : 1.6 x 2.0 or 2.0 x 3.0 [mm] cable jacket

(note 6) The optical characteristics after re-assembly may vary depending on the operating environment.

8. Additional Jig set (Option)

Table 6 Ordering code (Additional Jig set) (note7)

No.	Ordering code	Include Parts	Qty [pc]	Construction
3	e-SC-V6 Jig Set	Assembly Guide Jig-S	1	See Attached drawing GE2023126
		e-SC Cut Spacer-S	1	See Attached drawing GE2023127

(note7) Sales unit : 100sets

9. Indications on connector

- (1) Company name: "SUMITOMO ELECTRIC INDUSTRIES" on the side of Outer Housing
- (2) Corporate symbol: "◆" on the top of Cover
- (3) Polishing type, Manufactured year/month and serial number on the side of Cover

10. Packing Unit

[Connector]

All composition in Table2 is packaged in one package. (See appendix 1)

[Additional Jig set]

All composition in Table 6 are packed in one package.

11. Production

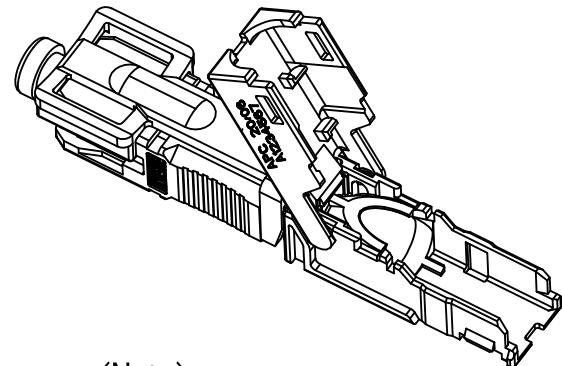
This connector is manufactured in ISO 9001:2015 and/or ISO14001:2015 certificated factories.

End of specification

e-SC-APC<SM>F-6-D-J4

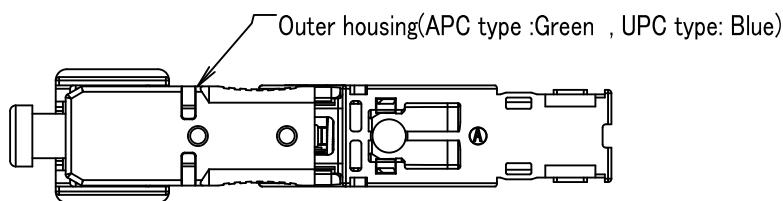
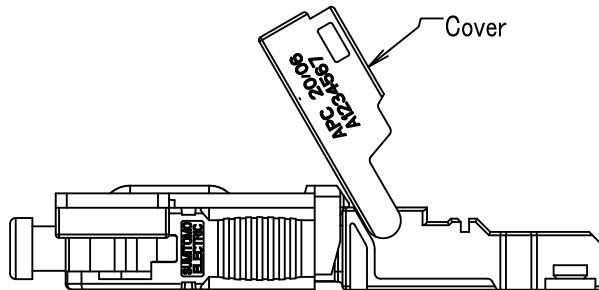
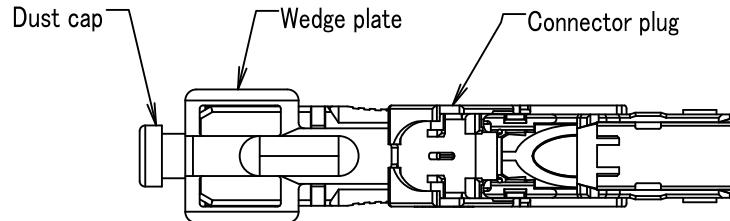
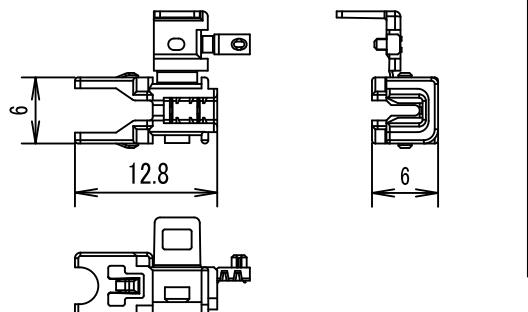
e-SC-UPC<SM>F-6-D-J4

[before assembly]



<Note>
Packing materials are not
shown in this drawing.

Cable holder

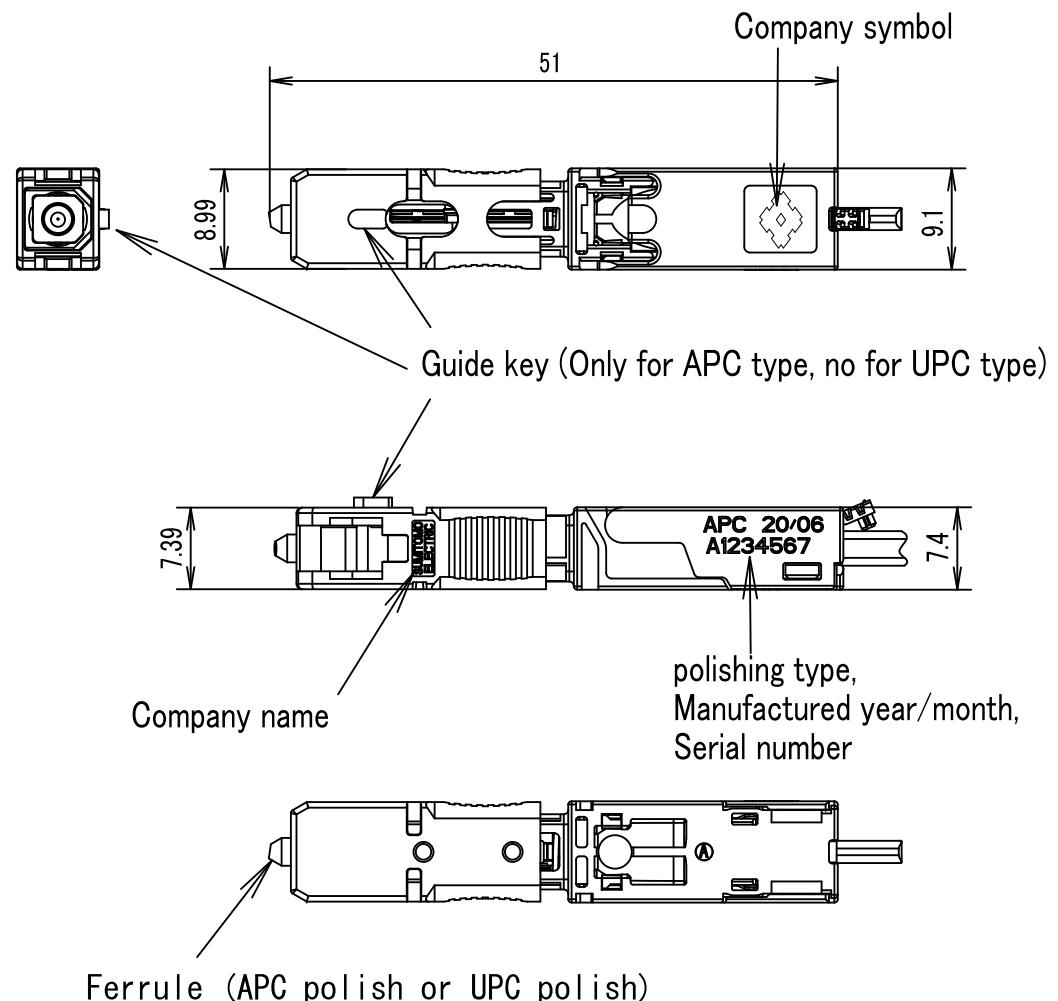
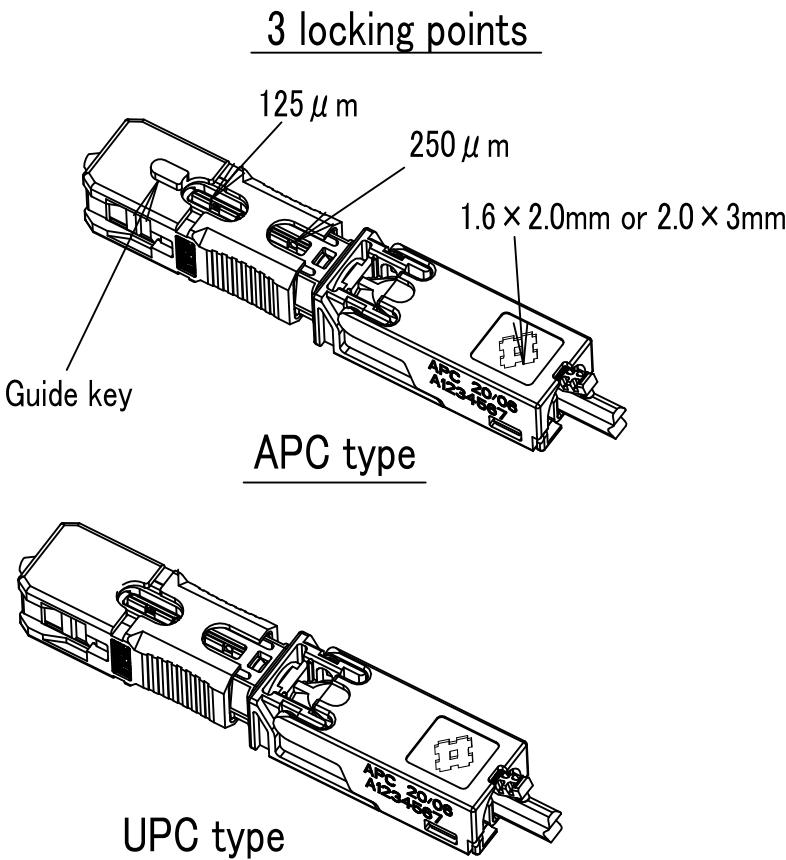


SUMITOMO ELECTRIC

UNIT:mm
Not to scale

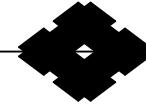
e-SC-APC<SM>F-6-D-J4
e-SC-UPC<SM>F-6-D-J4

[After assembly]

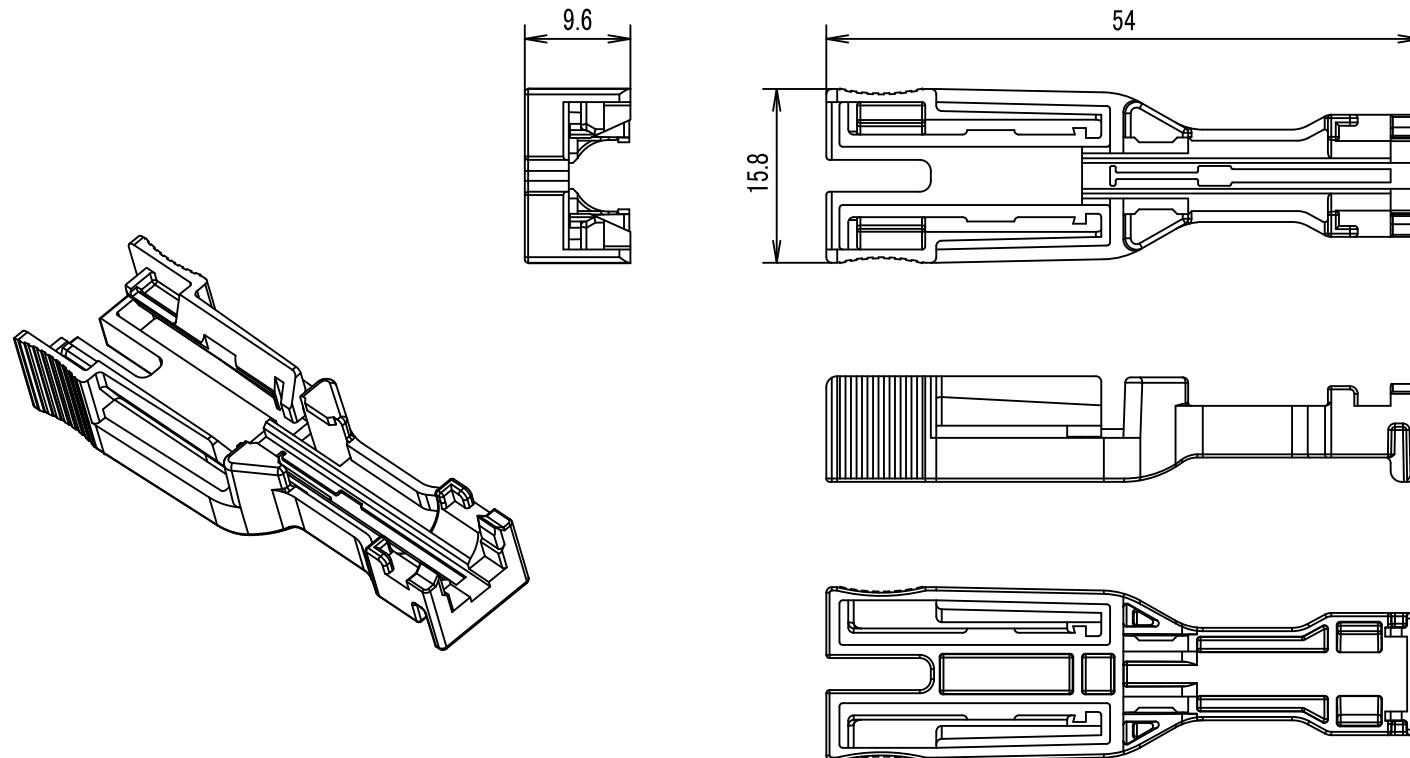


SUMITOMO ELECTRIC

UNIT:mm
Not to scale



Assembly guide jig-S

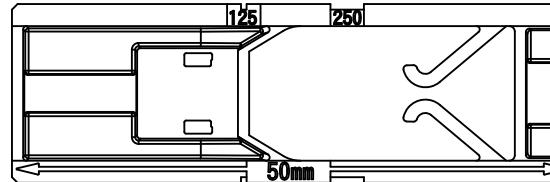
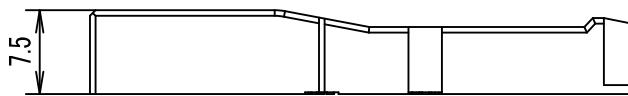
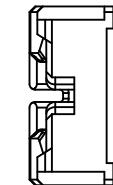
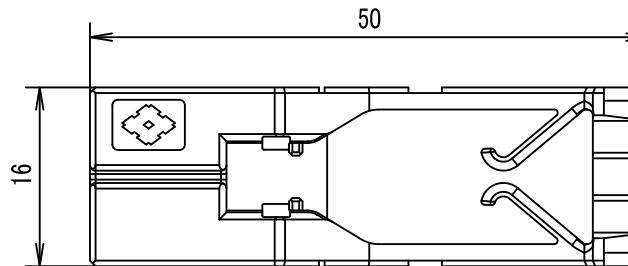
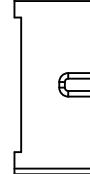
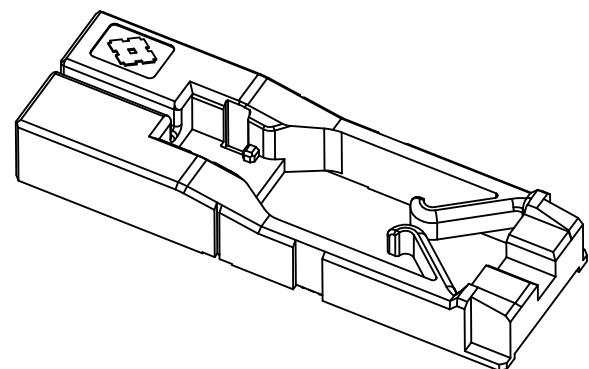


SUMITOMO ELECTRIC

UNIT:mm
Not to scale

Drawing No. GE2023127

e-SC Cut spacer-S

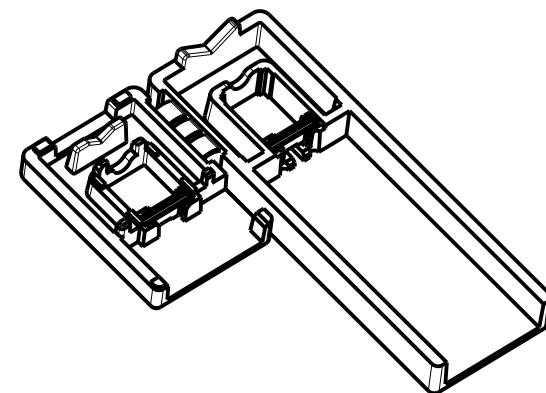
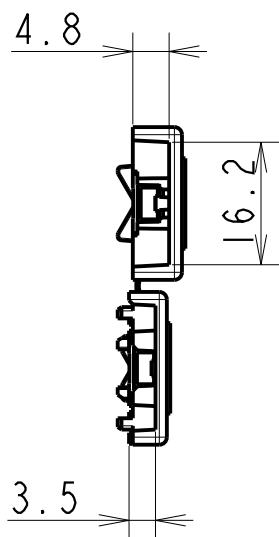
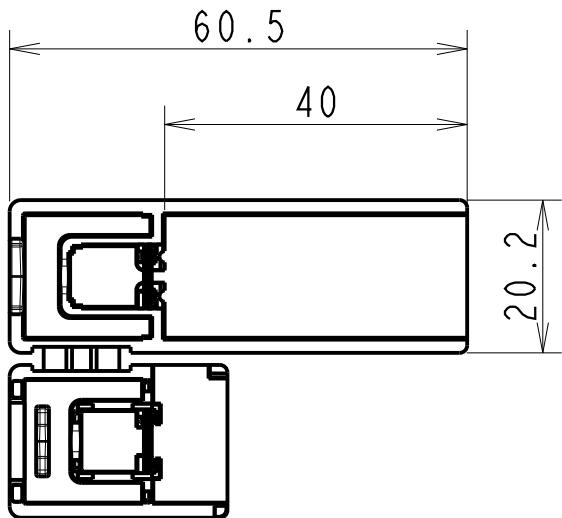


SUMITOMO ELECTRIC

UNIT:mm
Not to scale

No.GE1623119

Easy Fiber Stripper

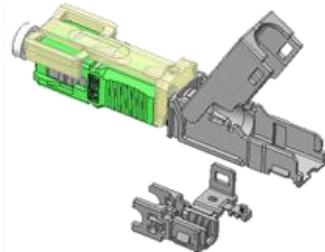


- Applicable Connector;
Sumitomo Electric's e-SC connector, e-LC connector
- Applicable Fiber Diameter; $\phi 250\pm15\mu\text{m}$
- Durability;Typical 50 stripplings

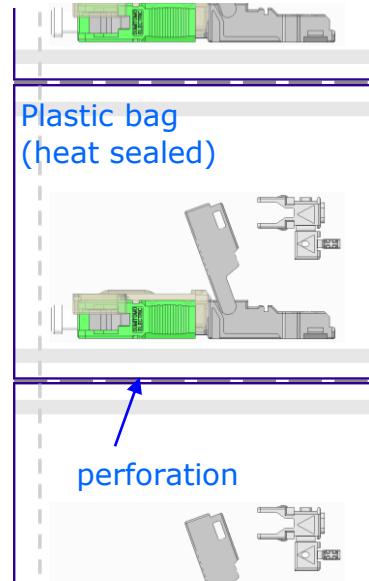
SUMITOMO ELECTRIC INDUSTRIES, LTD.

Package

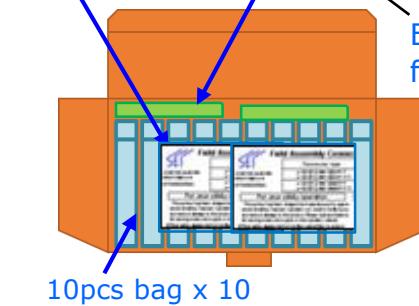
1. Individual(1pc) bag



Connector : 1pc
Cable holder : 1pc



3. 100pcs box



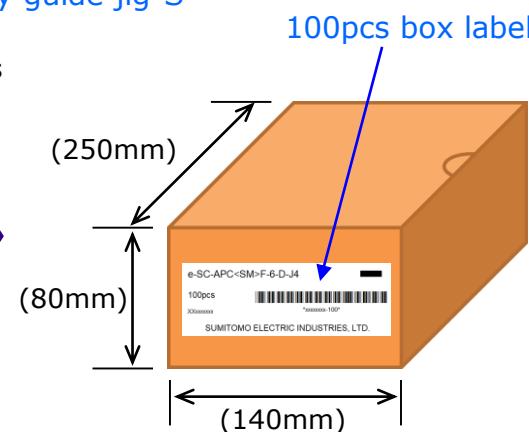
Cut spacer-S

Assembly guide jig-S

x2 packs

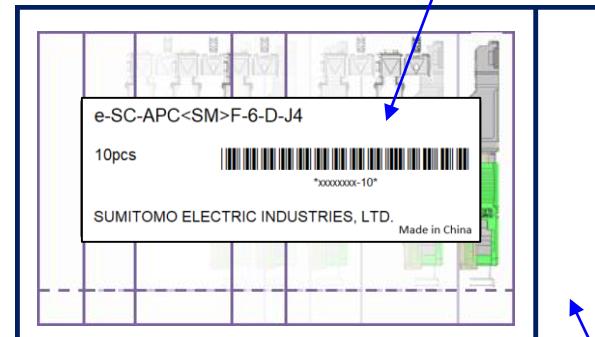
x1 pack

Easy fiber stripper



2. 10pcs bag

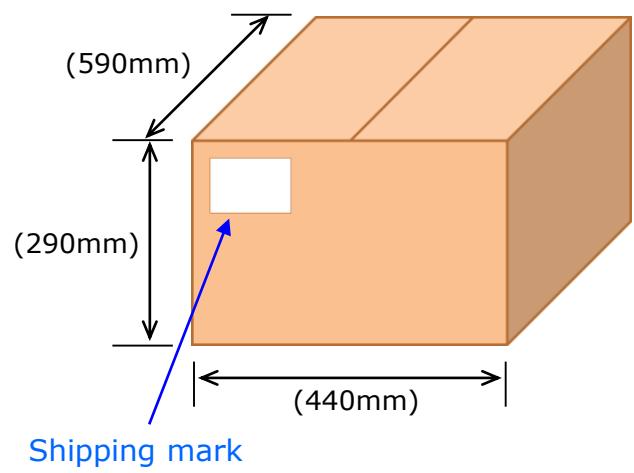
10pcs bag label



Individual bag : 10pcs

Plastic bag With zipper

4. Outer carton



[100pcs box x20]