

# MT-RJ Connector

## Application

New generation optical connector for the optical LAN system and the telecom application.

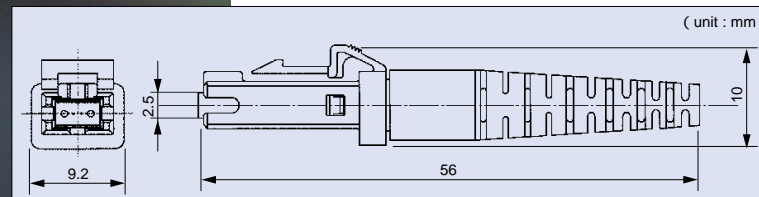


## Features & Benefits

- Small and high density : Conform to SFF (Small Form Factor)
- Easy connection and disconnection
- No need for matching material
- Low insertion loss & low reflection
- Simple & low cost

## Structure & Dimension

Compared to duplex SC connector, MT-RJ is less than half size.  
 Size : Height : 10 mm, Width : 9.2 mm, Length : 56 mm (with Boot)  
 Fiber protrusion from mini MT2 ferrule surface for stable physical contact  
 0.75 mm pitch between 2 fibers

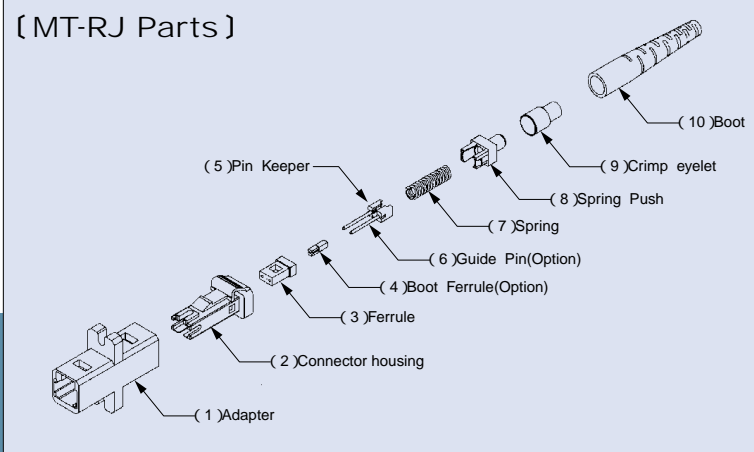


## Supply List

Cord : Patch Cord, Fan-out Cord, Pigtail Cord  
 Ferrule for Multi mode, Single mode : (3)  
 Housing kit for MM 62.5/125 (Boot Color : Beige) MM 50/125 (Black) and SM (Blue)

- Standard type : (2), (5), (7) ~ (10)
- Option : Boot ferrule (4), Guide pin (6)
- Adapter : (1)
- Termination Tool
- Polishing machine for MT ferrule
- Oven to cure adhesive

## [ MT-RJ Parts ]



## Ordering Information

Patch Cord : MT-RJ / [ ① ] - 2 - [ ② ] - [ ③ ] m  
 Fan-out Cord : MT-RJ / [ ① ] / [ ④ / ⑤ ] - [ ② ] - [ ③ ] m

① Guide Pin	P	With Guide Pin
	N	Without Guide pin
② Fiber type	S	Single mode
	G	Multi mode(50/125)
	G62	Multi mode(62.5/125)
③ Cable length (m)		
④ Single connector type	C343	FC connector
	C363	SC connector
	C375	MU connector
	C381	ST connector
⑤ Polishing method of Single connector	PC	Physical contact
	SPC	Super physical contact

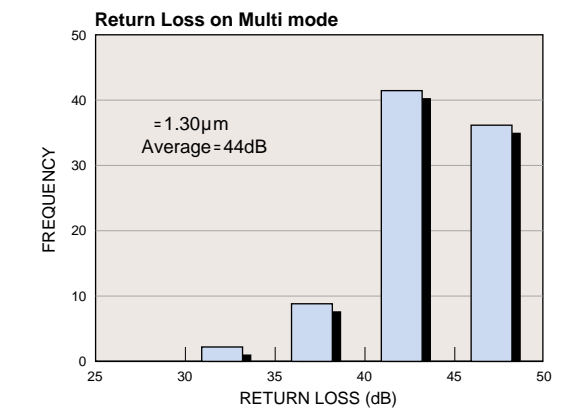
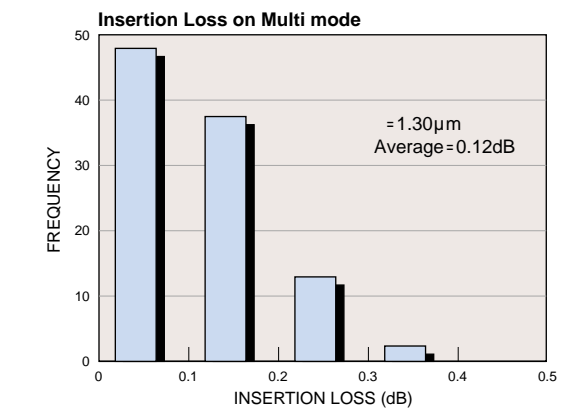
## MT-RJ Kit : MT-RJ(K) [ ① ] [ ② ] [ ③ ]

① Fiber type	S	Single mode
	G	Multi mode(50/125)
	G62	Multi mode(62.5/125)
② Guide Pin	P	With Guide Pin
	N	Without Guide pin
③ Boot ferrule	BF	With Boot ferrule
	N	Without Boot ferrule

## Performance

Following Figures and Table show typical performance data and specification of the mechanical and environmental properties for MT-RJ connector assembled in The Furukawa Electric Co.,Ltd. . These properties are tested in accordance with EIA/TIA -568A, 455 or IEC-61300. MT-RJ connector surpasses all specifications.

## Typical Properties



Item	Condition	Specification	Item	Condition	Specification
Insertion Loss		Max : 0.75dB	Impact Test	1.5 m x 8drops	Deviation Max. 0.3dB
Return Loss		Min : 20(MM) / 35(SM)dB	Cable Retention	19.6N, 90° / 68.6 N, 0°	Deviation Max. 0.3dB
Temperature Life	60	Deviation Max. 0.3dB	Durability	500 times	Deviation Max. 0.3dB
Humidity	40 , 95%RH	Deviation Max. 0.4dB	Coupling mechanism	39 N x 1min.	Deviation Max. 0.3dB
Low Temperature	- 10	Deviation Max. 0.3dB	Twist Test	25 N x 10 times	Deviation Max. 0.3dB
Temperature Cycling	- 10 - 60	Deviation Max. 0.3dB	Flex Test	4.9 N x 100 times	Deviation Max. 0.3dB

# MT ferrule

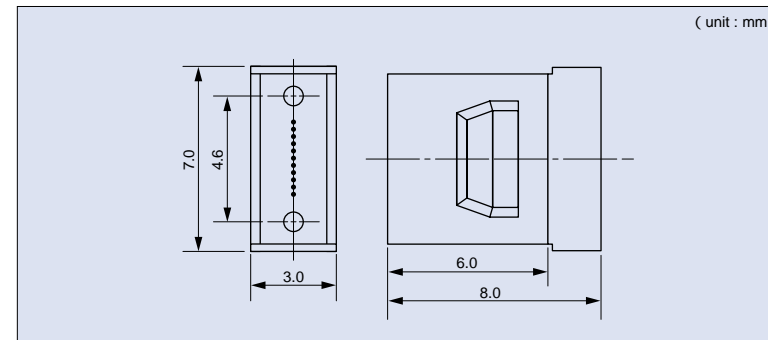
At FURUKAWA, the MT ferrule has been produced for 10 years. Recently production volume of the MT ferrule has been more than 1,000,000/year. All ferrule types have extremely accurate dimensions, and they are expected to have excellent optical characteristics.



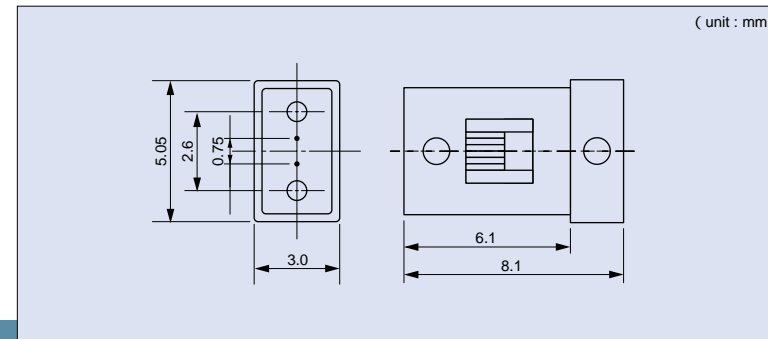
## Ferrule Varieties

Item	Varieties
Ferrule type	MT ferrule (for 4,8,12-fiber) Mini MT ferrule (for 1,2,4-fiber)
Polishing type	Physical contact Flat polish , Angled polish
Fiber type	Multi mode , Single mode

## Ferrule for MT connector



## Ferrule for mini-MT connector



## Ordering Information

[ ① ] [ ② ] - [ ③ ] - [ ④ ]

① Fiber type	MT
	Mini MT
② Fiber Number	1
	2
	4
	8
	12
③ Fiber type	SM (Single mode)
	MM (Multi mode )
④ Polishing method	Flat
	Angle

# Polishing machine FP-100



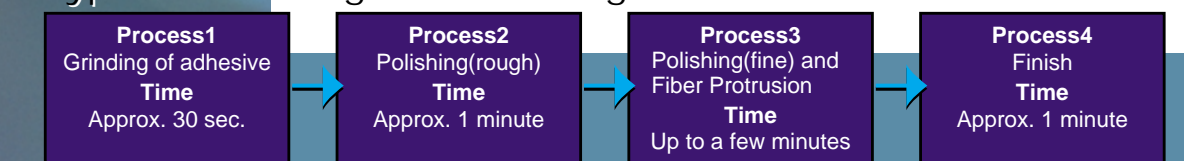
## Specification

Application	Mini-MT ferrule, MT ferrule
Polishing method	Physical Contact Flat polish / Angled Polish
Polishing capacity	Max. 12
Pressure source	Coil spring
Weight	Approx. 16 kg
Size	Approx. 230mm x 230mm x 255mm
Input Voltage	100-115V AC 50/60Hz or 220-240V AC 50Hz

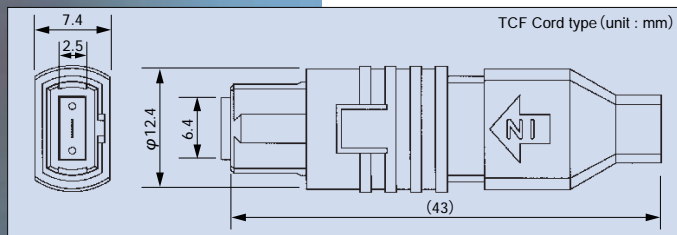
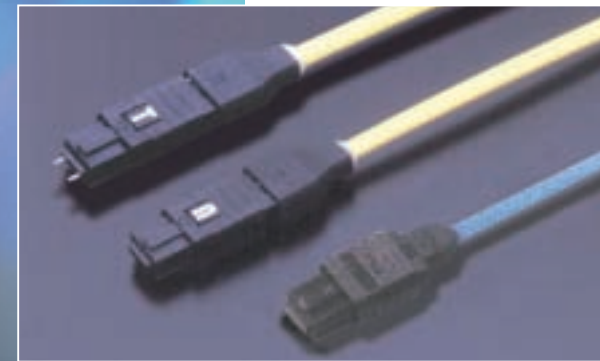
## Features & Benefits

- Available in MT ferrules
- Suitable for big production capacity
- Easy operation, No need for personal skill and
- Short polishing time
- Stabilized fiber protrusion and end face shape

## Typical Polishing Process Diagram



# MPO Connector



### Application

In recent years there has been a need for connectors that will provide high-density packing in the connection of optical fibers for communication equipments. The MPO connector enables high-density connection of up to 12 fibers.

### Feature&Benefits

- MT ferrule designed for 4, 8 or 12 fibers with 250 $\mu$ m pitch
- Push-on / Pull-off latching connection
- No need for matching material

### Performance

Following Figures and Table show typical performance data and specification of the mechanical and environmental properties for Single mode 12-fiber MPO connector. These properties are tested in accordance with IEC 61300 or Bellcore GR-1435-CORE. MPO connector surpasses all specifications.

Item	Condition	Specification
Insertion Loss		Max. : 1.6dB
Return Loss		Min. : 50dB
Impact Test	1.5 m x 8drops	Deviation Max. 0.2dB
Cable Retention	68.6 N	Deviation Max. 0.2dB
Durability	500 times	Deviation Max. 0.4dB
Flex Test	4.9 N x 100 times	Deviation Max. 0.2dB
Temperature Life	70°C	Deviation Max. 0.2dB
Humidity	65°C, 95%RH	Deviation Max. 0.2dB
Low Temperature	-20°C	Deviation Max. 0.2dB
Temperature Cycling	-10 ~ 70 °C	Deviation Max. 0.2dB

### Supply List

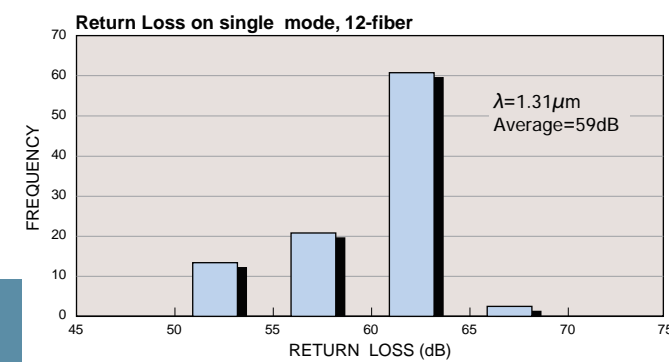
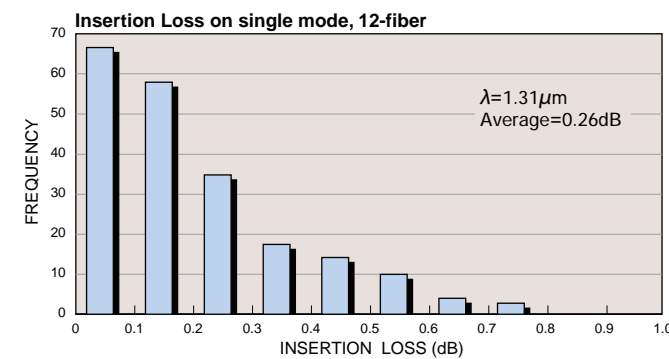
- Cord : Patch Cord, Fan-out Cord, Pigtail Cord
- Ferrule Fiber : Multi mode, Single mode  
Number : 4, 8, 12-fiber  
Polishing : Flat-PC, Angled-PC
- Plug : Male type, Female type
- Adapter

### <Ordering Information >

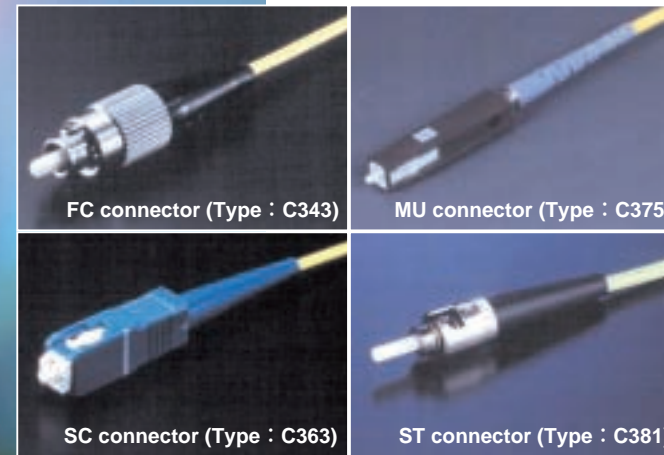
- Patch Cord : [ ① ][ ② ][ ⑥ ]-2-[ ③ / ④ ]-[ ⑤ ]m
- Fan-out Cord : [ ① ][ ② ][ ⑥ ]/[ ⑦ / ⑧ ]-[ ③ ]-[ ⑤ ]m

① Fiber number	C3304	4-fiber
	C3308	8-fiber
	C3312	12-fiber
② MPO connector type	T	With Guide Pin
	U	Without Guide pin
③ Fiber type	S	Single mode
	G	Multi mode(50/125)
	G62	Multi mode(62.5/125)
④ Cord type	T	Ribbon(Non-ruggedized)
	TCF	Ribbon with PVC sheath(Ruggedized)
⑤ Cable length (m)		
⑥ Polishing method	PC	Flat-PC
	APC	Angled-PC
⑦ Single connector type	C343	FC connector
	C363	SC connector
	C375	MU connector
	C381	ST connector
⑧ Polishing method of Single connector	PC	Physical contact
	SPC	Super physical contact

### ●Typical Properties



# Single-Fiber Connector



### <Ordering Information >

- Patch Cord, Pigtail Cord : [ ① / ② ]/[ ③ / ④ ]-[ ⑤ ]-[ ⑥ / ⑦ ]-[ ⑧ ]m

① Connector type	C343	FC connector
	C363	SC connector
	C375	MU connector
	C381	ST connector
② Polishing method	PC	Physical contact
	SPC	Super physical contact
④ Connector Number	1	Connectorized on one end
	2	Connectorized on both end
⑥ Fiber type	S	Single mode
	G	Multi mode(50/125)
	G62	Multi mode(62.5/125)
⑦ Cord type	CH	PVC sheath $\phi$ 2.8mm
	CS	PVC sheath $\phi$ 2.0mm
⑧ Cord length (m)		

### ●Specification

Item	Multi mode fiber	Single mode fiber
Insertion Loss	Max. 0.3dB (ST connector : Max. 0.5dB)	Max. 0.5dB
Return Loss	PC—Polishing	Min. 25dB
	SPC—Polishing	Min. 40dB
Durability 500times	Deviation	Max. 0.2dB
	Deviation	Max. 0.2dB
Temperature Cycling -25°C~+70°C	Deviation	Max. 0.2dB
Cable Retention GL=500mm, 5mm/min.	Min. 98N	

PC : Physical Contact, SPC : Super Physical contact

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# Optical Fiber Connector



MT-RJ Connector

MPO Connector

MT ferrule

Polishing machine

Single-Fiber Connector