

# MT Ferrule

Hakusan can offer a wide variety of Multi-fiber optical connection solutions with over 35 years of expertise and experience.



## 12/24/36/48 MT Ferrule



**12MT**



**36MT**



**24MT**



**48MT**

## 16/32 MT Ferrule



**16MT**



**32MT**

**Hakusan Inc.**



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HS-CN001 2026.06

# MT Ferrule

We've been producing a wide range of MT ferrule products lineup using ultra-high precision injection molding technology cultivated in our long manufacturing history. The premium, super low loss type is also available for single-mode and multi-mode transmission with various fiber counts.

## ▼ 12/24/36/48 MT Ferrule Series

Mode	Product Name	Expected Polishing	P/N	Fiber Count	Insertion loss (dB)		
					0.35	0.5	0.7
Single-mode	12MT-PA-S	Angled PC	90A11634	12			●
	12MT-PA-SLS	Angled PC	90A11427	12	●		
	24MT-PA-S	Angled PC	90A11450	24			●
	24MT-PA-SLS-10N*	Angled PC	ORD2025-087	24	●		
	24MT-PA-SLS-20N*	Angled PC	ORD2023-040	24	●		
	36MT-PA-SLS*	Angled PC	ORD2023-052	36	●		
	48MT-PA-S*	Angled PC	ORD2022-037	48			●
Multi mode	12MT-PF-M	Flat PC	90A11524	12		●	
	12MT-PF-SLM	Flat PC	90A11632	12	●		
	12MT-PA-SLM	Angled PC	90A11652	12	●		
	24MT-PF-M	Flat PC	90A11330	24		●	
	24MT-PF-SLM	Flat PC	90A11453	24	●		
	36MT-PF-M*	Flat PC	Not Fixed	36		●	
	48MT-PF-M*	Flat PC	ORD2023-010	48		●	

◆ Refer to the following standard : IEC 61754-5 / IEC 61754-7-1 / IEC 61754-7-2 / TIA-604-5-C

※: Under development (sample available only for red text ones)

■ MT ferrule manufactured by Hakusan Inc. has acquired technology transfer from NTT.

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# MT Ferrule

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## ▼ 16/32 MT Ferrule Series

Transmission Mode	Product Name	Expected Polishing	P/N	Fiber Count	Insertion loss (dB)		
					0.35	0.5	0.7
Single-mode	16MT-PA-S	Angled PC	90A11661	16			●
	16MT-PA-SLS	Angled PC	90A11619	16	●		
	32MT-PA-SLS*	Angled PC	ORD2023-032	32	●		
Multimode	16MT-PF-M	Flat PC	90A11663	16		●	
	16MT-PA-SLM	Angled PC	90A11662	16	●		
	16MT-PF-SLM	Flat PC	90A11664	16	●		
	32MT-PF-M	Flat PC	90A11503	32		●	
	32MT-PF-SLM	Flat PC	90A11647	32	●		
	32MT-PA-SLM	Angled PC	90A11648	32	●		

◆ Refer to the following standard : IEC 61754-5 / IEC 61754-7-3 / IEC 61754-7-4 / TIA 604-18

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# Metal Pin Clamp

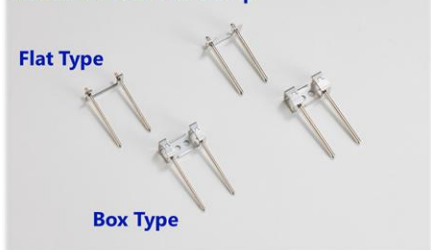
MT ferrule should have guide pins for optical connection.

Hakusan can offer a wide variety of Metal Pin Clamps based on the performance.

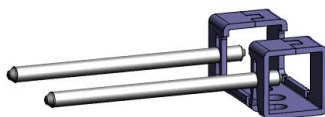
Metal Pin Clamp consists of Pin + Pin Keeper.

Pin Keeper Type	Application	Applicable MT Ferrules	Product Name	P/N	Grade
Box Type	MPO Connectors	12/24 MT	Metal Pin Clamp CMM	90A11517	MM-SL
			Metal Pin Clamp CSM	90A11518	MM-LL SM-SL
			Metal Pin Clamp CE	90A11532	SM-LL
		16/32 MT	Metal Pin Clamp 0.55 CMM	90A11547	MM-SL
			Metal Pin Clamp 0.55 CSM	90A11548	MM-LL SM-SL
			Metal Pin Clamp 0.55 CE	90A11549	SM-LL
Flat Type	MT-Jumper (for Optical Transceiver)	12/24 MT	Metal Pin Clamp FLAT CMM	90A11560	MM-SL
			Metal Pin Clamp FLAT CSM	90A11561	MM-LL SM-SL
			Metal Pin Clamp FLAT CE	90A11562	SM-LL
		16/32 MT	Metal Pin Clamp FLAT 0.55 CMM	90A11557	MM-SL
			Metal Pin Clamp FLAT 0.55 CSM	90A11558	MM-LL SM-SL
			Metal Pin Clamp FLAT 0.55 CE	90A11559	SM-LL

Standard Metal Pin Clamp



BOX Type



FLAT Type



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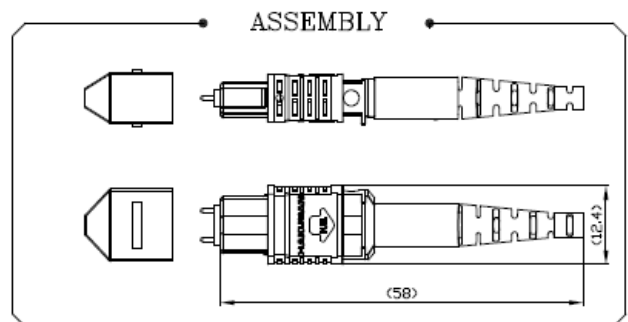
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# MPO Connector

Hakusan can offer Hakusan Brand MPO connectors and ensure quality with good-quality MT ferrule to support the market demands for multi-fiber optical connection solutions.

\*Hakusan's MPO kits exclude MT ferrules. You can choose relevant MT ferrule from MT ferrule product list.

Specifications	Details
Fiber Counts	12F/16F/24F/32F
Performance	Upon MT ferrules grade
Housing Color	Yellow/Green/Magenta/Aqua/Beige/Lime green
Boots Type *Standard color : Black *Optional Color: Green/Blue/White	Round Cable Type 1.6/2.0/2.4/3.0/3.2/3.5/3.8/5.0 (Standard Push Pull Boots and Nano Push Pull boots available) Bare Ribbon Boots Oval Round boots
Operating Temp.	-40°C~75°C
Durability	500 mating *TIA 568.3 based
*IEC 61754-7 and TIA/EIA 604-5 Compliant for MPO interfaces *Telcordia GR-1435-CORE Compliant	



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# MPO Connector

## ▼MPO Connector Typical Parts Description/Number List

### Parts Description Example

① 12F — ② YE — ③ R — ④ E — ⑤ BK — ⑥ PB

①	Fiber Counts	②	HSG Color	③	Cable Type	④	Pin Type	⑤	Boots Color	⑥	Option
12F	12 fibers	BE	Beige	B	Bare Ribbon	F	Female	BK	Black	PB	Push Pull
16F	16/32 fibers	AQ	Aqua	R	Round Cable(3.0)	M	Multimode* <sup>1)</sup>	GR	Green	FB	Flexible
24F	24 fibers	MA	Magenta	O	Oval Jacket Cable	S	Single-mode* <sup>2)</sup>	BL	Blue		
		LI	Limegreen	1.6R	1.6mm Round	E	Elite* <sup>3)</sup>	WH	White		
		GR	Green	2R	2.0mm Round						
		YE	Yellow	24R	2.4mm Round						
				32R	3.2mm Round						
				35R	3.5mm Round						
				38R	3.8mm Round						
				5R	5.0mm Round						

\*1) Male Pin for MultiMode Standard Loss

\*2) Male Pin for Single-mode Standard Loss and Multimode Low Loss

\*3) Male Pin for Single-mode Low Loss

\*MT ferrules must be ordered separately.

Please feel free to contact us,  
when you need any MPO housing kits.



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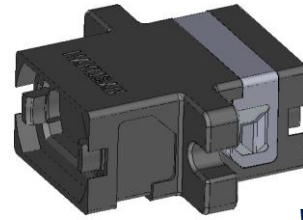
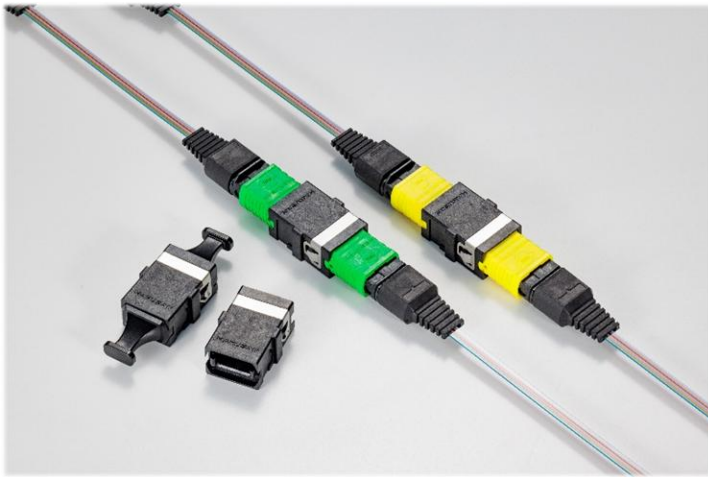
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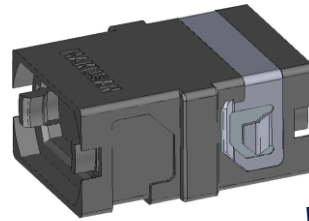
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# MPO-MPO Adapter

## Standard 12F/16F MPO-MPO Adapters (with/without flange) SC Footprint Type



*with flange*



*without flange*

Style	Type	Fiber	P/N
KEY UP-DOWN (Opposed Key)	w/h flange	12F/24F	ORD2024-053
		16F/32F	ORD2024-055
	w/o flange	12F/24F	ORD2024-052
		16F/32F	ORD2024-054
KEY UP-UP (Aligned Key)	w/h flange	12F/24F	ORD2025-083
		16F/32F	ORD2025-085
	w/o flange	12F/24F	ORD2025-082
		16F/32F	ORD2025-084

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# MPO Master Cord

*For Precise Insertion Loss Measurement*



➤ **12/16 Master Cord** ※Random Mating

- Multimode : IL MAX ≤ 0.15 dB
- Single-mode: IL MAX ≤ 0.20 dB

➤ **24 Master Cord** ※Random Mating

- Multimode : IL MAX ≤ 0.20 dB
- Single-mode: IL MAX ≤ 0.35 dB

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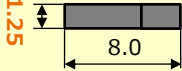
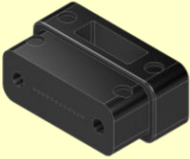
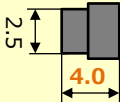
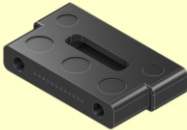
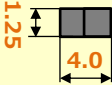
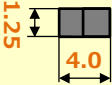


HS-CN008 2026.06

# MTCOMPACT®

We have a lineup of size-reduced MT ferrules.  
These MT ferrules are helpful for limited space within equipment.

## ▼ MTCOMPACT® Series

Product features		Transmission Mode	Product Name	Fiber Count
<b>Slim</b> Half thickness of standard MT Ferrule		Multimode	<b>12MT-PF-M-T1.25<sup>A)</sup></b> P/N: 90A11508	12
				
<b>Short</b> Half length of standard MT Ferrule		Multimode	<b>12MT-PF-M-L4<sup>A)</sup></b> P/N: ORD2023-087	12
				
<b>Slim &amp; Short</b> Half thickness & length of standard MT Ferrule		Single-mode	<b>16MT-PF-M-L4<sup>B)</sup>※</b> P/N: ORD2023-026	16
			<b>12MT-PA-S-L4<sup>A)</sup>※</b> P/N: ORD2022-005	12
		Multimode	<b>16MT-PA-S-L4<sup>B)</sup>※</b> P/N: ORD2023-025	16
			<b>12MT-PF-M-T1.25-L4<sup>A)</sup></b> P/N: 90A11553	12
		Single-mode	<b>16MT-PF-M-T1.25-L4<sup>B)</sup>※</b> P/N: ORD2023-051	16
			<b>12MT-PA-S-T1.25-L4<sup>A)</sup>※</b> P/N: ORD2022-014	12
		Single-mode	<b>16MT-PA-S-T1.25-L4<sup>B)</sup>※</b> P/N: ORD2023-080	16

A) Optical interfaces refer to with the following standards: : IEC 61754-5 / IEC 61754-7-1 / TIA-604-5

B) Optical interfaces refer to with the following standards: IEC 61754-7-3 / TIA 604-18

※: Under development (sample available only for red text ones)

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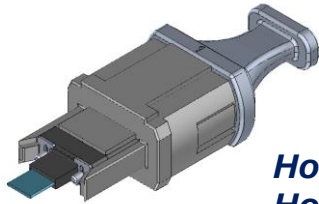
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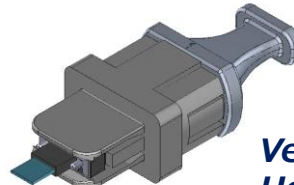
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# MT - MPO Adapter

## For standard MT Ferrule



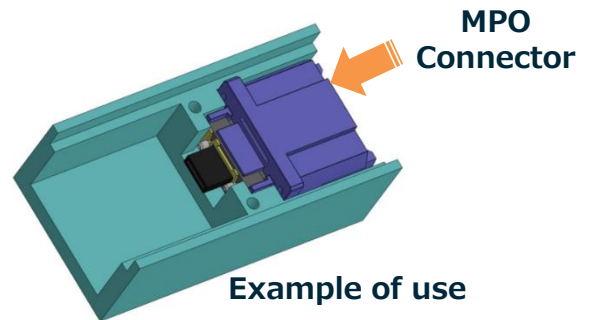
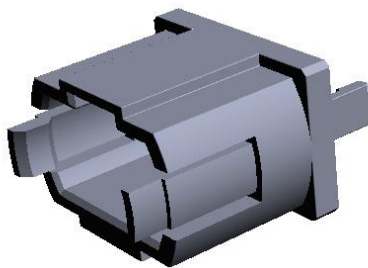
*Horizontal  
Holding Type*



*Vertical  
Holding Type*

## For MTCOMPACT® Short

The "Transceiver type" is suitable for expanding the mounting space in an optical transceiver.



Style	Type	Fiber	P/N
Standard MT-MPO adapter	Horizontal	12F	ORD2024-037
	Vertical	12F/24F	ORD2024-038
		16F/32F	ORD2024-085
MTCOMPACT Short - MPO adapter	-	12F	ORD2023-008
		16F	ORD2023-044

◆ Optical and mechanical reference planes refer to with the following standard: IEC 61754-7-1, IEC 61754-7-3

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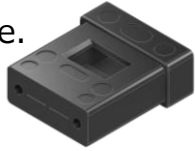
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# MTRCF®

We are on track with development for the MT ferrule with for reduced cladding fiber. The fiber hole of 80µm is available. These MT ferrules(MTRCF®) are the same size as the standard MT ferrule.



## ▼MTRCF®

Product features	Mode	Product Name	Fiber count
250µm pitch fiber hole	Single-mode	12MT-PA-SLS-φ80 <sup>A)</sup> ※ P/N: ORD2021-044	12
		16MT-PA-SLS-φ80 <sup>A)</sup> ※ P/N: ORD2021-045	16
		24MT-PA-SLS-φ80 <sup>A)</sup> ※ P/N: ORD2025-057	24
		32MT-PA-SLS-φ80 <sup>A)</sup> ※ P/N: ORD2024-009	32

## ▼MTDS® (Narrow-Pitch MT Ferrule)

Product features	Mode	Product Name	Fiber count
125µm pitch fiber hole	Multimode	24MT-PF-M-φ80-125 <sup>※</sup> P/N: ORD2023-056	24
127µm pitch fiber hole	Single-mode	32MT-PA-S-φ80-127 <sup>※</sup> P/N: ORD2024-086	32

A) Optical interfaces refer to with the following standards: IEC 61754-5 / IEC 61754-7-1 / TIA-604-5

B) Optical interfaces refer to with the following standards: IEC 61754-5 / IEC 61754-7-3 / TIA 604-18

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