

MT Ferrule

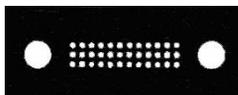
Hakusan can offer a wide variety of Multi-fiber optical connection solutions with over 35 years of expertise and experience.



12/24/36/48 MT Ferrule



12MT



36MT



24MT



48MT

16/32 MT Ferrule



16MT



32MT

Hakusan Inc.



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<https://hakusan-mfg.co.jp/en>

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HS-CN001 2026.01

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

Transmission 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*	Angled PC	ORD2023-040	24	●		
	36MT-PA-SLS*	Angled PC	ORD2023-052	36	●		
	48MT-PA-S*	Angled PC	ORD2022-037	48			●
Multimode	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

■ 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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HS-CN003 2026.01

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



BOX Type



FLAT Type



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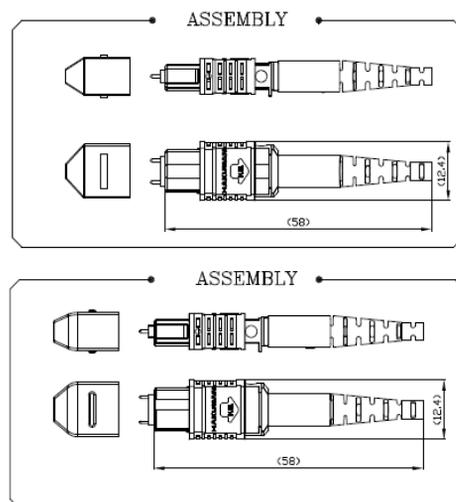
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MPO Connector

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 : Black Green/Blue/White optional	2.0/3.0/3.2/3.5/3.8/5.0 Round Boots 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

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

*1) Male Pin for MultiMode Standard Loss

*MT ferrules must be ordered separately.

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

*3) Male Pin for Single-mode Low Loss

▼Ex.SM Low Loss MPO Housing List for 3.0 Round Cable

Fiber Count	Housing Color	Cable Type	Pin Type	Boots Color	Part Description
12F	YE	R	F	BK	12F-YE-R-F-BK
12F	YE	R	E	BK	12F-YE-R-E-BK
16F	YE	R	F	BK	16F-YE-R-F-BK
16F	YE	R	E	BK	16F-YE-R-E-BK
24F	YE	R	F	BK	24F-YE-R-F-BK
24F	YE	R	E	BK	24F-YE-R-E-BK

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

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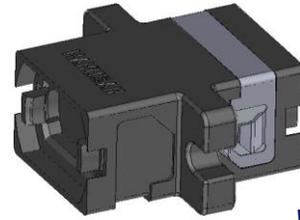
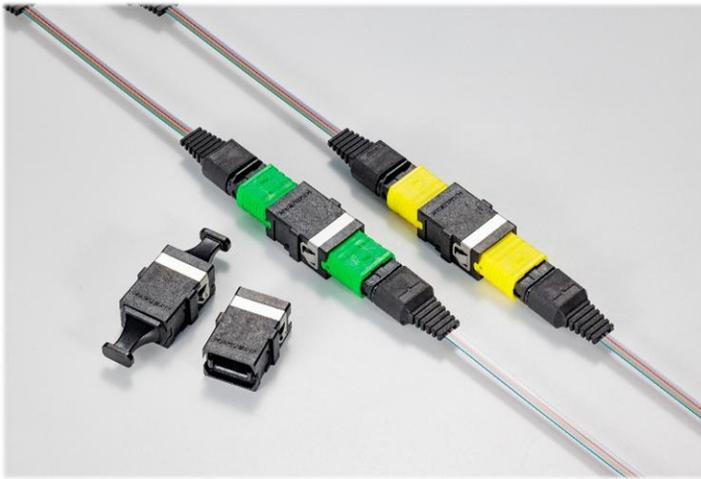
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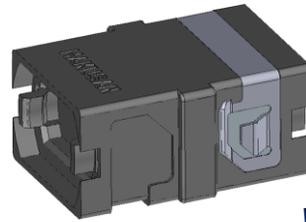
HS-CN006 2026.01

MPO-MPO Adapter

Standard 12F/16F MPO-MPO Adapters (with/without flange)



with flange



without flange

Style	Type	Fiber	P/N
Standard	with flange	12F/24F	ORD2024-053
		16F/32F	ORD2024-055
	w/o flange	12F/24F	ORD2024-052
		16F/32F	ORD2024-054

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MPO Master Cord

For Precise Insertion Loss Measurement



➤ Single-Mode 12/16 Master Cord

- VS.master IL MAX \leq 0.20 dB

➤ Single-Mode 24 Master Cord

- VS.master IL MAX \leq 0.25 dB

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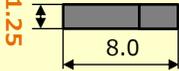
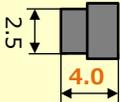
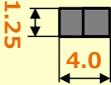


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MTCOMPACT®

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
Slim Half thickness of standard MT Ferrule		Multimode	12MT-PF-M-T1.25^{A)} P/N: 90A11508	12
				
Short Half length of standard MT Ferrule		Multimode	12MT-PF-M-L4^{A)} P/N: ORD2023-087	12
				
		Single-mode	12MT-PA-S-L4^{A)}※ P/N: ORD2022-005	12
			16MT-PA-S-L4^{B)}※ P/N: ORD2023-025	16
		Slim & Short Half thickness & length of standard MT Ferrule		Multimode
		16MT-PF-M-T1.25-L4^{B)}※ P/N: ORD2023-051	16	
		Single-mode	12MT-PA-S-T1.25-L4^{A)}※ P/N: ORD2022-014	12
			16MT-PA-S-T1.25-L4^{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

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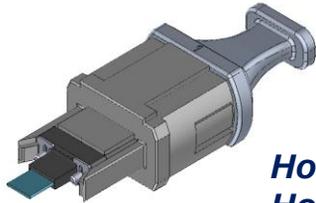
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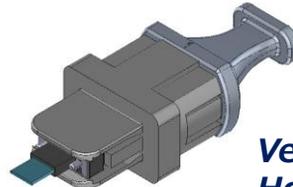
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MT - MPO Adapter

For standard MT Ferrule



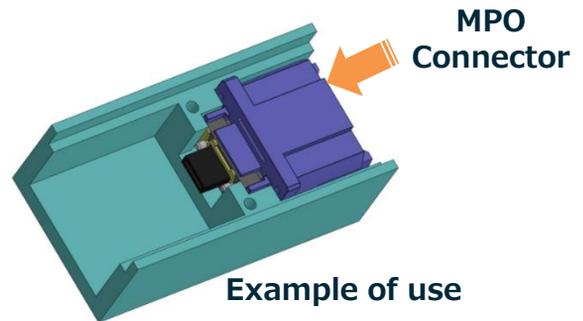
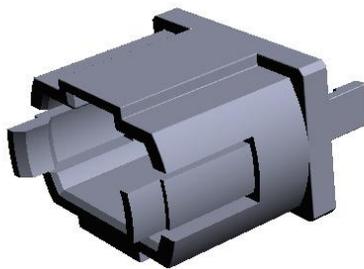
*Horizontal
Holding Type*



*Vertical
Holding Type*

For MTCOMPACT® Short

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



Example of use

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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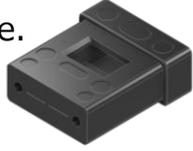
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MTRCF™

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 ^{A)} ※ P/N: ORD2021-044	12
		16MT-PA-SLS-φ80 ^{A)} ※ P/N: ORD2021-045	16
		24MT-PA-SLS-φ80 ^{A)} ※ P/N: ORD2025-057	24
		32MT-PA-SLS-φ80 ^{A)} ※ 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 [※] P/N: ORD2023-056	24
127μm pitch fiber hole	Single-mode	32MT-PA-S-φ80-127 [※] 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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