

MT Ferrule

Hakusan can offer a wide variety of Multi-fiber optical connection solutions with over 30 years of expertise and experience.



12/24/36/48 MT Ferrule



12MT



36MT



24MT



48MT

16/32 MT Ferrule



16MT



32MT

Hakusan Inc.



16-4, 2-chome, Minamiikebukuro, Toshima-ku, Tokyo 171-0022, Japan
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HS-CN001 2025.2

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-S*	Angled PC	ORD2022-013	36			●
	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		●	

◆ Comply with 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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HS-CN002 2025.2

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	90A11622	16			●
	16MT-PA-SLS	Angled PC	90A11619	16	●		
	32MT-PA-S*	Angled PC	ORD2021-036	32			●
	32MT-PA-SLS*	Angled PC	ORD2023-032	32	●		
Multi Mode	16MT-PF-M	Flat PC	90A11499	16		●	
	16MT-PA-SLM	Angled PC	90A11585	16	●		
	16MT-PF-SLM	Flat PC	90A11625	16	●		
	32MT-PF-M	Flat PC	90A11503	32		●	
	32MT-PF-SLM	Flat PC	90A11647	32	●		
	32MT-PA-SLM	Angled PC	90A11648	32	●		

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

※: Under development

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HS-CN003 2025.2

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

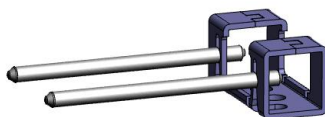
Standard Metal Pin Clamp

Flat Type



Box Type

BOX Type



FLAT Type



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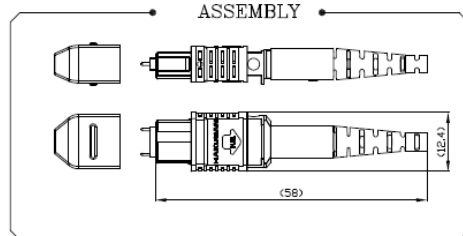
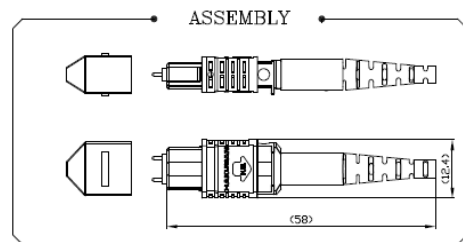
HS-CN004 2025.2

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
Performance	Upon MT ferrules grade
Housing Color	Yellow/Green/Magenta/Aqua/Beige
Boots Type *Standard : Black Green/Blue/White optional	2.0/3.0/3.2/3.5/3.8 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(3.0/3.2)	M Multimode ^{*1)}	GR Green
24F 24 fibers	GR Green	O Oval Jacket Cable	S Single-mode ^{*2)}	BL Blue
	YE Yellow	2R 2.0mm Round Cable (12F Only)	E Elite ^{*3)}	WH White
	MA Magenta	35R 3.5mm Round Cable (16F Only)		
		38R 3.8mm Round Cable		

*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 3.0/3.2 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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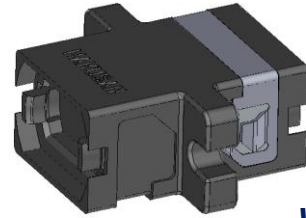
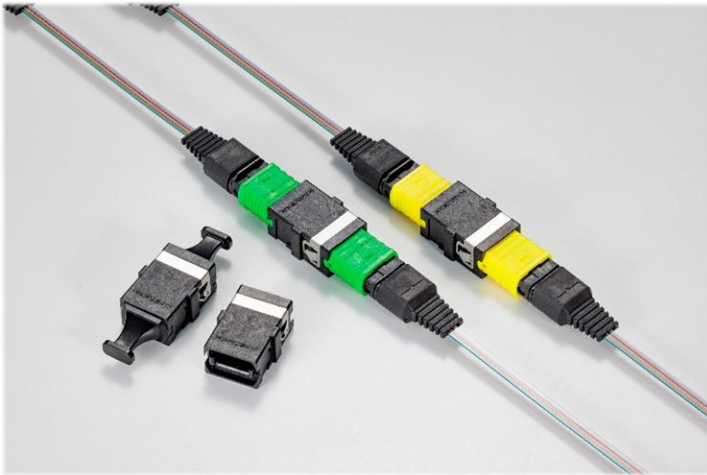
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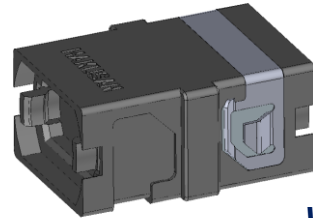
HS-CN006 2025.2

MPO Adapter

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

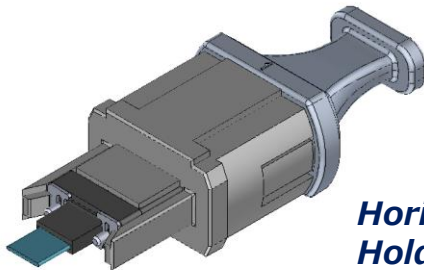


with flange

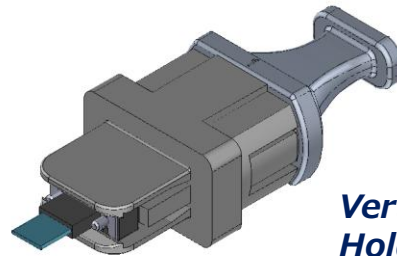


without flange

Standard MT-MPO adapter (Horizontal/Vertical)



*Horizontal
Holding Type*



*Vertical
Holding Type*

Style	Type	Fiber	P/N
MPO-MPO	with flange	12F/24F	ORD2024-053
		16F/32F	ORD2024-055
	w/o flange	12F/24F	ORD2024-052
		16F/32F	ORD2024-054
MT-MPO	Horizontal	12F	ORD2024-037
	Vertical	12F/24F	ORD2024-038
		16F	ORD2024-085

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HS-CN007 2025.2

MPO Master Cord

For Precise Insertion Loss Measurement



➤ Single-Mode 12/16 Master Cord

- VS.master IL MAX \leq 0.20 dB
- Random Mating IL 100% \leq 0.25 dB

➤ Single-Mode 24 Master Cord

- VS.master IL MAX \leq 0.25 dB
- Random Mating IL 100% \leq 0.35 dB

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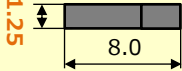
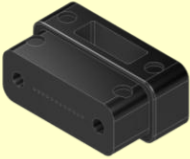
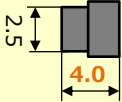
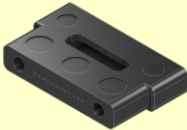
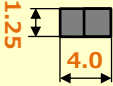
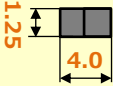


HS-CN008 2025.2

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		Multi Mode	12MT-PF-M-T1.25^{A)} P/N: 90A11508	12
				
Short Half length of standard MT Ferrule		Multi Mode	12MT-PF-M-L4^{A)} P/N: ORD2023-087	12
				
Slim & Short Half thickness & length of standard MT Ferrule		Single Mode	16MT-PF-M-L4^{B)}※ P/N: ORD2023-026	16
			12MT-PA-S-L4^{A)}※ P/N: ORD2022-005	12
		Multi Mode	16MT-PA-S-L4^{B)}※ P/N: ORD2023-025	16
			12MT-PF-M-T1.25-L4^{A)} P/N: 90A11553	12
		Single Mode	16MT-PF-M-T1.25-L4^{B)}※ P/N: ORD2023-051	16
			12MT-PA-S-T1.25-L4^{A)}※ P/N: ORD2022-014	12
		Single Mode	16MT-PA-S-T1.25-L4^{B)}※ P/N: ORD2023-080	16

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

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

※: Under development

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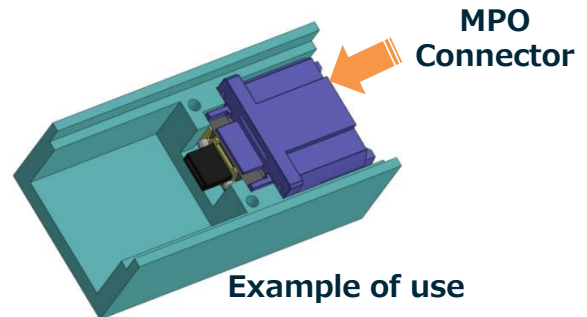
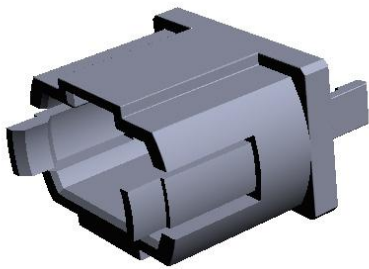
MTCOMPACT® Short - MPO Adapter

We've developed an adapter for MTCOMPACT® Short ferrule. This adapter connects the MTCOMPACT® Short ferrule to the MPO connector. We offer two types of adapters.



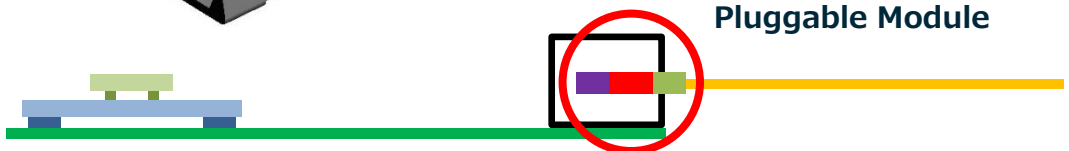
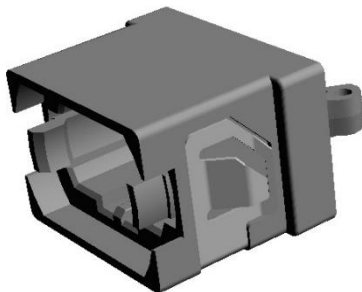
Transceiver type(12F/16F)

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



Panel type(12F)

The "Panel type" is suitable for expanding the mounting space inside the optical patch panel.



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

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HS-CN010 2025.2

MT Ferrule $\Phi 80$

We are on track with development for the MT ferrule with a fiber hole diameter of 80 μ m. These MT ferrules are the same size as the standard MT ferrule.



▼ $\Phi 80$ MT Series

	Product features	Mode	Product Name	Fiber count
250 μ m pitch fiber hole	<p>$P\ 0.250 \times 11 = 2.750$</p>	Single Mode	12MT-PA-SLS-$\phi 80^A$)\times P/N: ORD2021-044	12
	<p>$P\ 0.250 \times 15 = 3.750$</p>		16MT-PA-SLS-$\phi 80^B$)\times P/N: ORD2021-045	16
125 μ m pitch fiber hole	<p>$P\ 0.125 \times 11 = 1.375$</p>	Multi Mode	24MT-PF-M-$\phi 80$-125\times P/N: ORD2023-056	24

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

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

\times : Under development

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