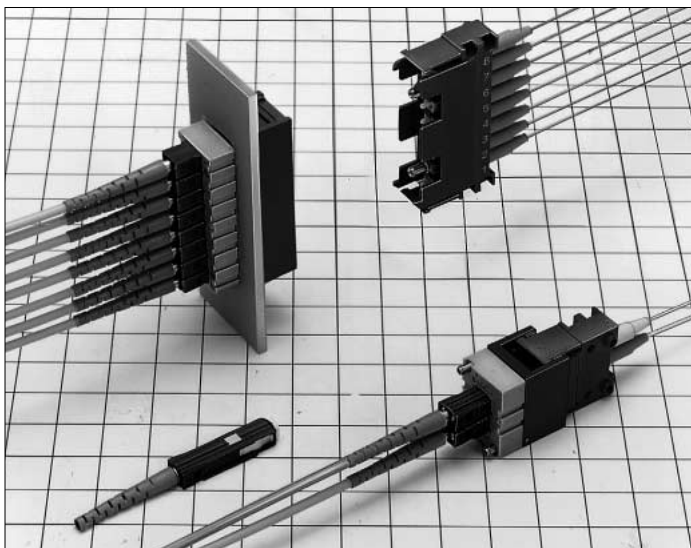
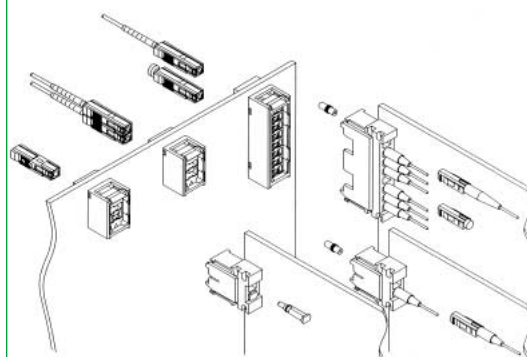


MU-type High-Density Plug-in Optical Fiber Connectors

HMU Series



HMUB-type Fiber Connectors



■Features

1. MU-type Correspondence

These connectors can be used with the NTT, MU-type optical fiber connectors.
JIS C5983 (F14 optical fiber connectors)
IEC 61754-6

2. Plug-in Housing

The plug-in housing has a self-holding mechanism which does not exert a pushing force on the back panel when in the coupled condition.

3. Back Panel Side Optical Terminals

Insertion and withdrawal of back panel side optical terminals is even possible when the back panel and the package are in the coupled condition.

4. Wide Variation of Connectors for Junction Applications

Type \ No. of Gangs	1	2	3
Board mounting	○	○	○
Junction panel mounting	○	○	○

5. Optical Terminals

The optical terminals (optical connectors) are ultra-miniature optical fiber connectors that use the same fastening mechanism as the SC-type optical fiber connectors (JIS C 5973).

■Applications

Optical terminal equipment, optical relay racks, measuring instruments, etc.

■Product Standards

Rating	Operating temperature range	-25℃～70℃	Storage temperature range	-25℃～70℃
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Item			Test Method (JIS C 5961)	Standard
Optical Performance	Insertion loss	(SM)	1,300nm wavelength (LD)	0.5 dB or less (PC, AdPC)
		(GI)	1,300nm wavelength (LED)	0.3 dB or less (PC)
	Reflection attenuation	(SM)	1,300nm wavelength (LD)	22 dB or greater (PC) 40 dB (AdPC)
		(GI)		22 dB or greater (PC)
Mechanical Performance	Coupling force and decoupling force		Measure when connectors are coupled and separated in the direction of the axis.	Simplex plugs Coupling force 20N or less Separation force 20N or less Duplex plugs Coupling force 30N or less Separation force 30N or less
	Split sleeve holding force of the sleeve holder and the adapter		Zirconia gauge of $\phi 1.249 \pm 0.0005$ mm	Zirconia 1~2.5N
	Cable clamp strength (Pulling in direction of axis)		70 N of pulling force between connector and cable for one minute	1) Insertion loss fluctuation after test: 0.2dB or less 2) No irregularity in clamp section or cable
	Repetitive operation		200 times (Plug-in housing) 500 times (Plug)	1) Insertion loss fluctuation after test: 0.2 dB or less 2) No damage, cracks, or part looseness
	Vibration resistance		Vibration range of 10 to 55 Hz Test in 3 directions, 2 hours each	
	Shock resistance		Acceleration of 981 m/s ² 3 axes, both directions, 5 times each (Total of 15 times)	
Environmental performance	Humidity resistance (Temperature and humidity cycle)		Temperature -10℃ to 65℃, humidity 90 to 96% 10 cycles	1) Insertion loss fluctuation after test: 0.2 dB or less 2) No damage, cracks, or part looseness
	Temperature cycle		Temperature - 25℃ to 70℃ 100 cycles	
	Heat resistance		Leave for 960 hours at a temperature of 85℃	
	Cold resistance		Leave for 960 hours at a temperature of - 25℃	
	Salt fog		Left in a 5% concentration of salt fog for 48 hours	No conspicuous corrosion

■Materials

Component	Material	Notes
Simplex plug casing	Polybutylene terephthalate	NTT, MU corresponding item
Coil spring	Piano wire	
Ferrule	Zirconia	
Simplex adapter casing	Polyphenylene sulfide	
Duplex adapter casing	Polyphenylene sulfide	
8-ganged adapter casing	Polyphenylene sulfide	
Plug-in connector casing	Polyphenylene sulfide	
Split sleeve	Zirconia or Copper alloy	

■Types

Types		No. of gangs	Cable Diameter	Notes	Polishing	Product Number
Back Panel Side	Plug housing	1	$\phi 2$	With knob	PC	HMUA-P2-H1
			$\phi 0.9$		AdPC	HMUA-P2-H2
		2	$\phi 2$	With knob	PC	HMUA-P1-H1
					AdPC	HMUA-P1-H2
			$\phi 0.9$		PC	HMUA-2P2-H1
					AdPC	HMUA-2P2-H2
					PC	HMUA-2P1-H1
					AdPC	HMUA-2P1-H2
	Receptacle attachment	1	—	—	HMUA-RA-1	
	Terminator		—	—	HMUA-TM-1	
	Connector housing	2	—	Package side	—	HMUB-L2PA-1
		8	—		—	HMUB-L8PA-1
		2	—	For back panel side 2.4mm panel	—	HMUB-L2HA-1
			—	For 3.2mm panel	—	HMUB-L2HB-1
		8	—	For 2.4mm panel	—	HMUB-L8HA-1
			—	For 3.2mm panel	—	HMUB-L8HB-1
	Sleeve holder	1	—	—	HMUB-SH-1	
	Ferrule		—	Small-diameter zirconia ferrule	—	HMUA-F3-A []
Package side	Plug housing	1	$\phi 2$	Without knob	PC	HMUAJ-P2-H1
			$\phi 0.9$		AdPC	HMUAJ-P2-H2
					PC	HMUAJ-P1-H1
					AdPC	HMUAJ-P1-H2
	Terminator	—	Without knob	—	HMUAJ-TM-1	
Adapter		1	—	For panel mounting	—	HMUA-A-1
			—	For screw mounting	—	HMUA-AS-1
			—	For board mounting	—	HMUA-AH-1
		2	—	For panel mounting	—	HMUA-2A-1
			—	For screw mounting	—	HMUA-2AS-1
			—	For board mounting	—	HMUA-2AH-1
		8	—	For panel mounting	—	HMUA-8A-1
			—	For screw mounting	—	HMUA-8AS-1
			—	For board mounting	—	HMUA-8AH-1

■Usage Precautions

Insertion and Withdrawal of Plugs by Tool

The various tools should be used properly according to the Application, Suitable Adapter and Connector Housing, and Suitable Plug as listed in the table below. These connectors are mounted in high density and require a reliable operation to be performed with a tool. Instruction manuals are available. Please request them.

Application	Applicable Adapter and Connector Housing	Applicable Plug (Plug housing name listed)	Tool Product Number
Insertion and withdrawal of plugs	HMUA-A-1,2A-1,8A-1,AS-1,2AS-1,8AS-1	HMUA-P1-H1 · 2,2P1-H1 · 2 HMUA-P2-H1 · 2,2P2-H1 · 2	HMUA-TP-1
	HMUB-L2HA-1,L2HB-1,L8HA-1,L8HB-1	HMUA-P1-H1 · 2,2P1-H1 · 2 HMUA-P2-H1 · 2,2P2-H1 · 2	HMUB-TP-1
Plug extraction	HMUB-L2PA-1,L8PA-1	HMUAJ-P1-H1 · 2,P2-H1 · 2	HMUB-TJ-1
Insertion and withdrawal of sleeve holders	HMUB-L2PA-1,L8PA-1	HMUAJ-P1-H1 · 2,P2-H1 · 2	HMUB-TS-1
Locking of plugs	—	HMUA-P2-H1 · 2,2P2-H1 · 2	HMUA-TK-1
	—	HMUAJ-P2-H1 · 2	HMUA-TK-2

■ Functions Diagram

Duplex plug

HMUA-2P2-H1 or
H2, and HMUA-
F3-A***



Terminator

HMUA-TM-1



Simplex plug

HMUA-P2-H1 or
H2, and HMUA-
F3-A***



8-Ganged housing

HMUB-L8HA-1 or
HMUB-L8HB-1



8-Ganged housing

HMUB-L8PA-1



Dust cap

HMUA-DP-1



Simplex plug

HMUAJ-P2-H1 or
H2, and HMUA-
F3-A***



Duplex housing

HMUB-L2HA-1 or
HMUB-L2HB-1



Sleeve holder

HMUB-SH-1



Dust cap

HMUB-DJ-1



Duplex housing

HMUB-L2PA-1



Simplex plug

HMUAJ-P1-H1 or
H2, and HMUA-
F3-A***



Terminator

HMUAJ-TM-1

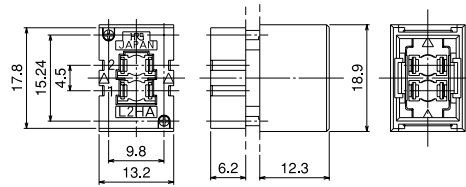


Back panel
t=2.4or3.2mm

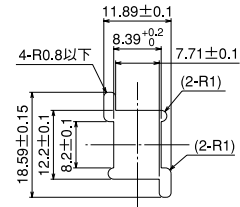
Package.

■Back Panel Side Connector Housing

●Duplex Back Panel Side Connector Housing



◆Mounting Hole Dimensions Diagram

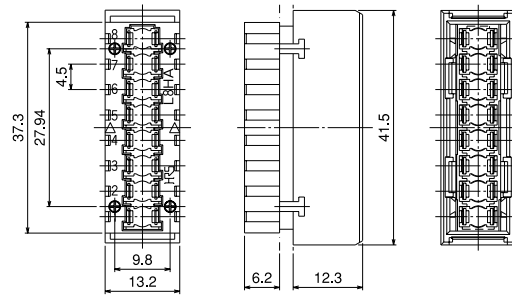


Product Number	HRS No.	Mounting Panel Thickness
HMUB-L2HA-1	CL710-0017-8	2.4mm
HMUB-L2HB-1	CL710-0018-0	3.2mm

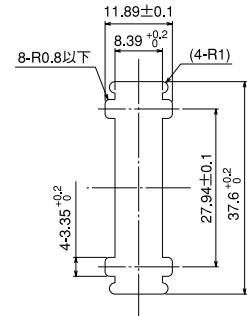
(NOTE 1) This duplex back panel side connector housing should be used in conjunction with a simplex or duplex plug housing furnished with a knob (for 2 cable, and for core wire).

(NOTE 2) The recommended clamp torque to be 3.1N

●8-Ganged Back Panel Side Connector Housing



◆Mounting Hole Dimensions Diagram

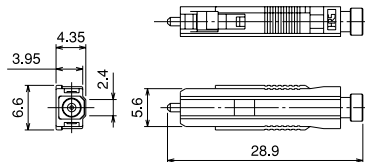


Product Number	Product Number	Mounting Panel Thickness
HMUB-L8HA-1	CL710-0019-3	2.4mm
HMUB-L8HB-1	CL710-0020-2	3.2mm

(NOTE 1) This 8-ganged back panel side connector housing should be used in conjunction with a simplex or duplex plug housing furnished with a knob (for 2 cable, and for core wire).

(NOTE 2) The recommended clamp torque to be 3.1N

■Terminator (Back Panel Side)



Product Number	HRS No.	Reflection Attenuation	Applicable Optical Fiber
HMUA-TM-P1	CL821-0007-6	≥40dB	SM-9.5/125

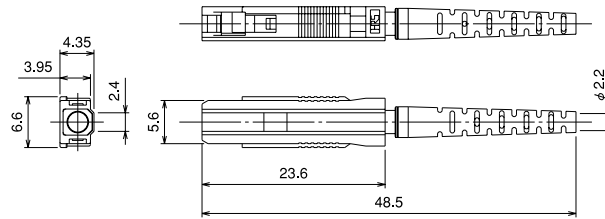
Specifications

Item	Standard Value
Rated input power	≤30mW
Reflection attenuation	≥40dB(48dB TYP.)
Suitable wavelength band	1.3μm, 1.55μm
Operating temperature	-25℃~70℃
Humidity	≤95%
Storage temperature	-40℃~80℃

(NOTE) See page 87 in detail

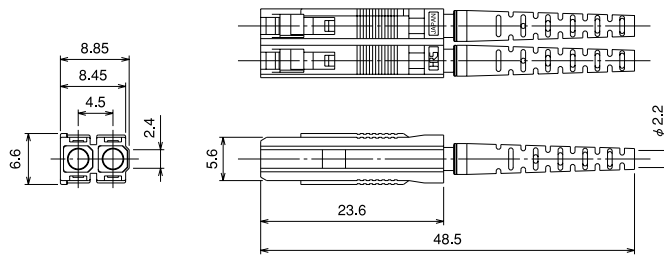
■Back Panel Side Plug Housing

●Plug Housing for Simplex $\phi 2$ Cable With Knob



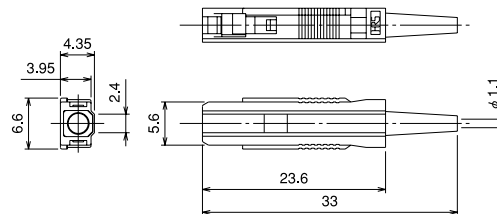
Product Number	HRS No.	Applicable Cable Diameter	Hood Color	Polishing Specification
HMUA-P2-H1	CL710-0047-9	$\phi 2\text{mm}$	Blue	For PC polishing
HMUA-P2-H2	CL710-0001-8	$\phi 2\text{mm}$	Light purple	For AdPC polishing

●Plug Housing for Duplex $\phi 2$ Cable With Knob



Product Number	HRS No.	Applicable Cable Diameter	Hood Color	Polishing Specification
HMUA-2P2-H1	CL710-0048-1	$\phi 2\text{mm}$	Blue	For PC polishing
HMUA-2P2-H2	CL710-0002-0	$\phi 2\text{mm}$	Light purple	For AdPC polishing

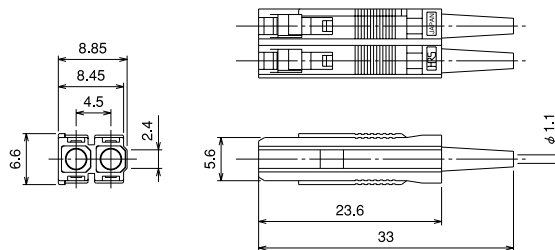
●Plug Housing for Simplex $\phi 0.9$ Cable With Knob



Product Number	HRS No.	Applicable Cable Diameter	Hood Color	Polishing Specification
HMUA-P1-H1	CL710-0068-9	$\phi 0.9\text{mm}$	Blue	For PC polishing
HMUA-P1-H2	CL710-0069-1	$\phi 0.9\text{mm}$	Light purple	For AdPC polishing

NOTE: Full length 28mm product also available.

●Plug Housing for Duplex $\phi 0.9$ Cable With Knob



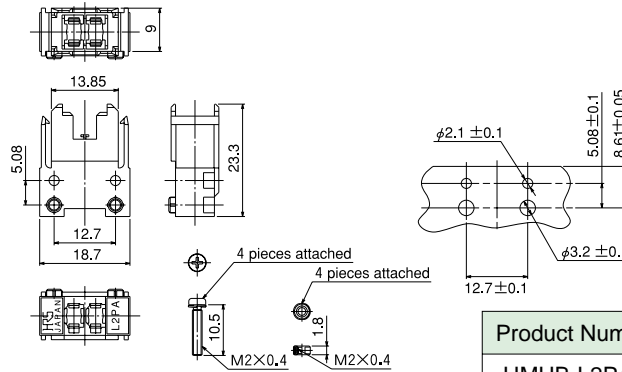
Product Number	HRS No.	Applicable Cable Diameter	Hood Color	Polishing Specification
HMUA-2P1-H1	CL710-0070-0	$\phi 0.9\text{mm}$	Blue	For PC polishing
HMUA-2P1-H2	CL710-0071-3	$\phi 0.9\text{mm}$	Light purple	For AdPC polishing

NOTE: Full length 28mm product also available.

■Package Side Connector Housing

●Duplex Package Side Connector Housing

◆Mounting Hole Dimensions Diagram



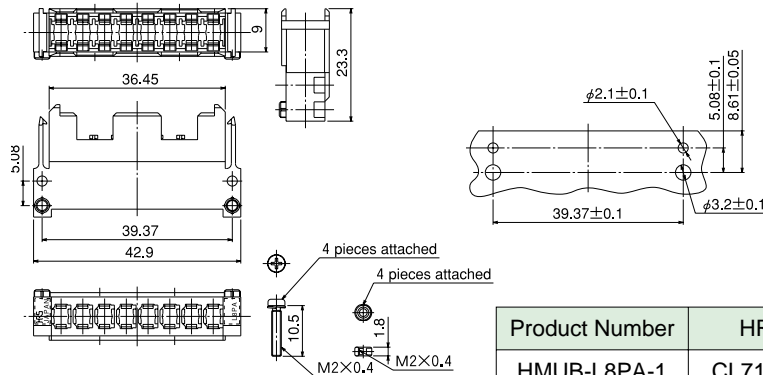
Product Number	HRS No.
HMUB-L2PA-1	CL710-0015-2

(NOTE 1) This duplex package side connector housing should be used in conjunction with a simplex sleeve holder and simplex plug housing without a knob (for $\phi 2$ cable, and for core wire).

(NOTE 2) The recommended clamp torque to be 14.9N

●8-Ganged Package Side Connector Housing

◆Mounting Hole Dimensions Diagram

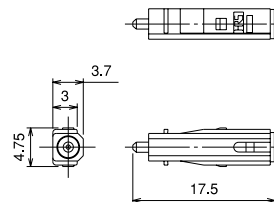


Product Number	HRS No.
HMUB-L8PA-1	CL710-0016-5

NOTE: This 8-ganged package side connector housing should be used in conjunction with a simplex sleeve holder and simplex plug housing without a knob (for $\phi 2$ cable, and for core wire).

(NOTE 2) The recommended clamp torque to be 14.9N

■Terminator (Package Side)



Product Number	HRS No.	Reflection Attenuation	Suitable Optical Fiber
HMUAJ-TM-P1	CL821-0008-9	$\geq 40\text{dB}$	SM-9.5/125

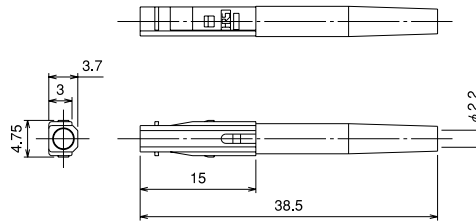
Specifications

Item	Standard Value
Rated input power	$\leq 30\text{mW}$
Reflection attenuation	$\geq 40\text{dB}$ (48dB TYP.)
Suitable wavelength band	1.3 μm , 1.55 μm
Operating temperature	- 25°C ~ 70°C
Humidity	$\leq 95\%$
Storage temperature	- 40°C ~ 80°C

(NOTE) See page 87 in detail

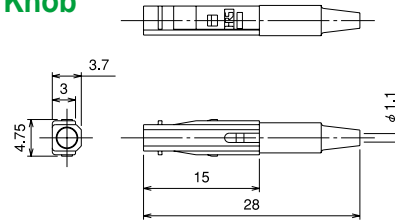
■Package Side Connector Housing

●Plug Housing for Simplex $\phi 2$ Cable Without Knob



Product Number	HRS No.	Applicable Cable Diameter	Hood Color	Polishing Specification
HMUAJ-P2-H1	CL710-0050-3	$\phi 2\text{mm}$	Blue	For PC polishing
HMUAJ-P2-H2	CL710-0004-6	$\phi 2\text{mm}$	Light purple	For AdPC polishing

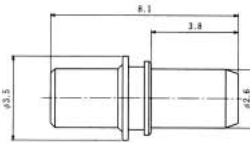
●Plug Housing for Simplex $\phi 0.9$ Cable Without Knob



Product Number	HRS No.	Applicable Cable Diameter	Hood Color	Polishing Specification
HMUAJ-P1-H1	CL710-0049-4	$\phi 0.9\text{mm}$	Blue	For PC polishing
HMUAJ-P1-H2	CL710-0003-3	$\phi 0.9\text{mm}$	Light purple	For AdPC polishing

NOTE: A jig is available for measuring the optical characteristics of a knobless plug through the use of an adapter. (HRS No. and Product Number: CL710-0085-8, HMUA-RH-1)

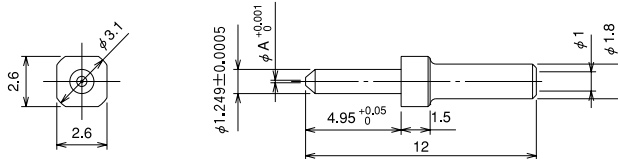
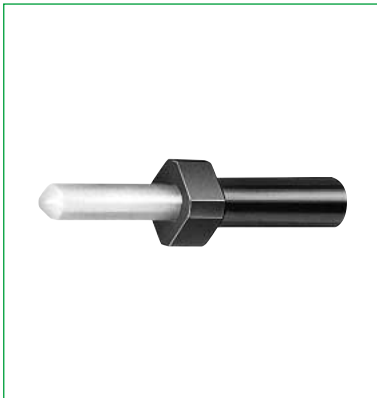
■Simplex Sleeve Holder



Product Number	HRS No.
HMUB-SH-1	CL710-0021-5

NOTE: This sleeve holder should be used in conjunction with a duplex and 8-ganged package side connector housing and a simplex _2cable/simplex _0.9 cable plug housing without a knob. Also note that assembly should be performed using a sleeve holder insertion and withdrawal tool (HMUB-TS-1), having the gold plated portion facing the direction of the package side connector housing.

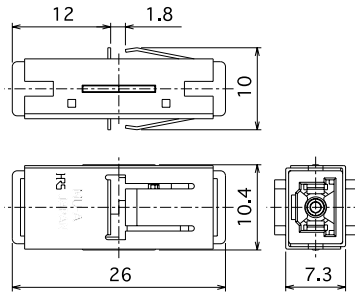
■Ferrule



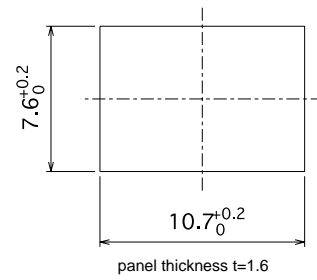
Product Number	HRS No.	Dimension A	Applicable Optical Fiber
HMUA-F3-A123	CL710-0022-8	0.123	SM-9.5/125 GI-50/125
HMUA-F3-A124	CL710-0023-0	0.124	
HMUA-F3-A125	CL710-0024-3	0.125	
HMUA-F3-A126	CL710-0025-6	0.126	
HMUA-F3-A127	CL710-0026-9	0.127	
HMUA-F3-A128	CL710-0027-1	0.128	

■Adapters

●Simplex Adapter Panel Mounting Type

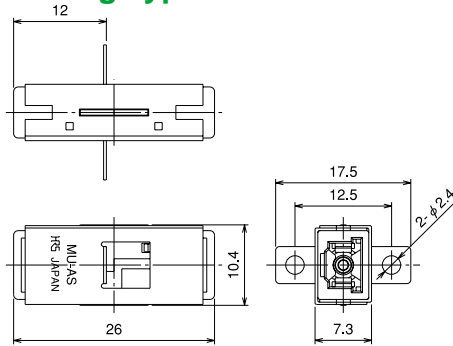


◆Mounting Hole Dimensions Diagram

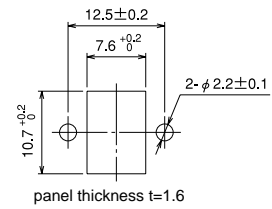


Product Number	HRS No.	Type of Mounting
HMUA-A-1	CL710-0005-9	Panel (1.6mm thick)

●Simplex Adapter Screw Mounting Type

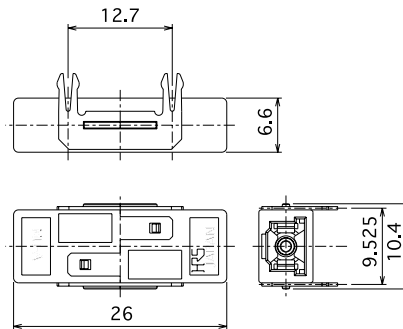


◆Mounting Hole Dimensions Diagram

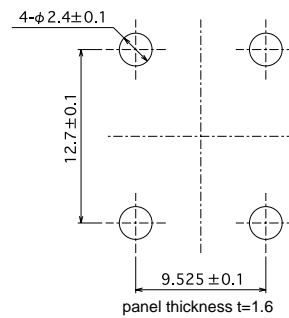


Product Number	HRS No.	Type of Mounting
HMUA-AS-1	CL710-0006-1	Panel (screw)

●Simplex Adapter Board Mounting Type

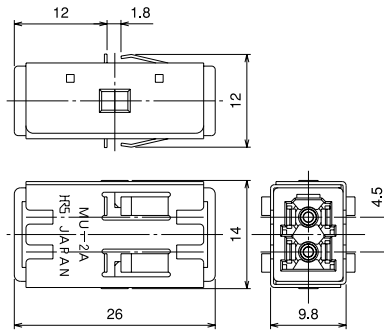


◆Mounting Hole Dimensions Diagram

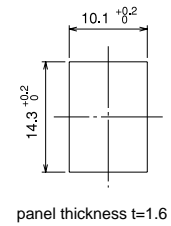


Product Number	HRS No.	Type of Mounting
HMUA-AH-1	CL710-0007-4	Board (1.6mm thick)

●Duplex Adapter Panel Mounting Type

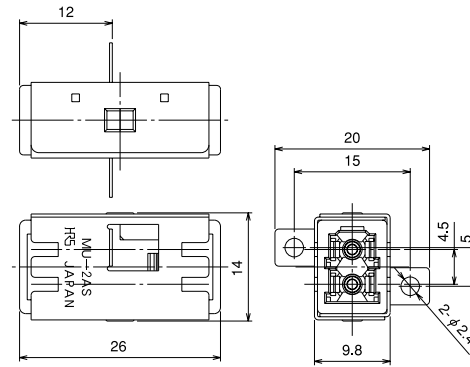


◆Mounting Hole Dimensions Diagram

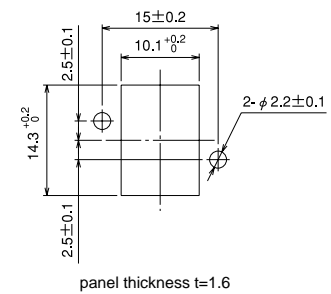


Product Number	HRS No.	Type of Mounting
HMUA-2A-1	CL710-0008-7	Panel (1.6mm thick)

●Duplex Adapter Screw Mounting Type

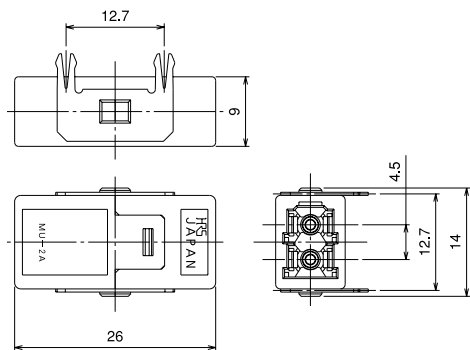


◆Mounting Hole Dimensions Diagram

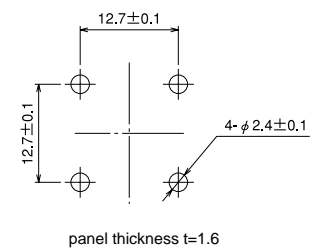


Product Number	HRS No.	Type of Mounting
HMUA-2AS-1	CL710-0009-0	Panel (screw)

●Duplex Adapter Board Mounting Type

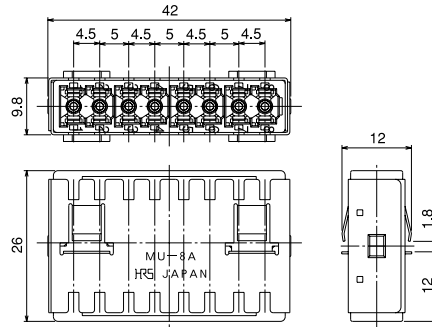


◆Mounting Hole Dimensions Diagram

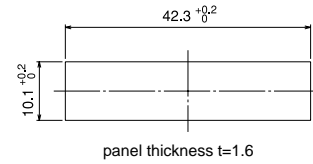


Product Number	HRS No.	Type of Mounting
HMUA-2AH-1	CL710-0010-9	Board (1.6mm thick)

●8-Ganged Adapter Panel Mounting Type

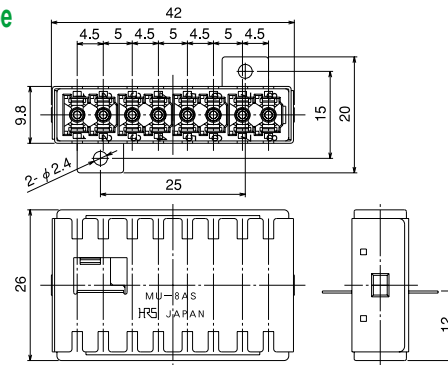


◆Mounting Hole Dimensions Diagram

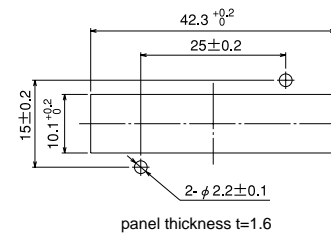


Product Number	HRS No.	Type of Mounting
HMUA-8A-1	CL710-0011-1	Panel (1.6mm thick)

●8-Ganged Adapter Screw Mounting Type

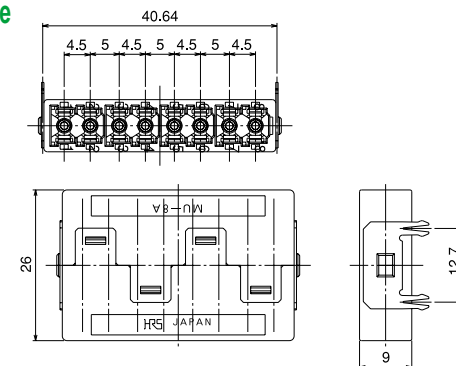


◆Mounting Hole Dimensions Diagram

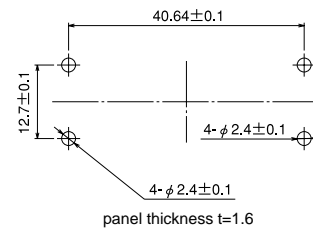


Product Number	HRS No.	Type of Mounting
HMUA-8AS-1	CL710-0012-4	Panel (screw)

●8-Ganged Adapter Board Mounting Type

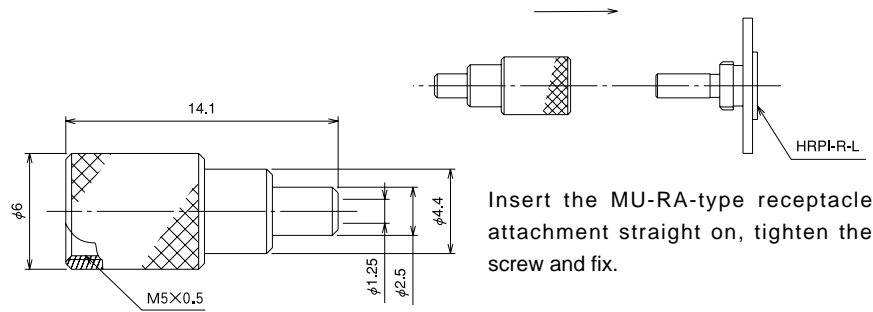


◆Mounting Hole Dimensions Diagram



Product Number	HRS No.	Type of Mounting
HMUA-8AH-1	CL710-0013-7	Board (1.6mm thick)

■ Simplex Receptacle Attachment



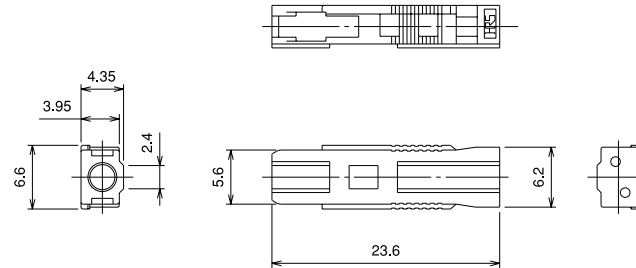
Insert the MU-RA-type receptacle attachment straight on, tighten the screw and fix.

Product Number	HRS No.	Notes
HMUA-RA-1	CL710-0014-0	For measurement of optical characteristics

NOTE: This receptacle attachment is used with HRPI-R-L as a set and attached to a measuring instrument such as a sensor for measurements of such as the optical power.

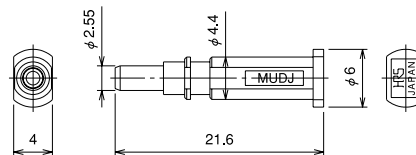
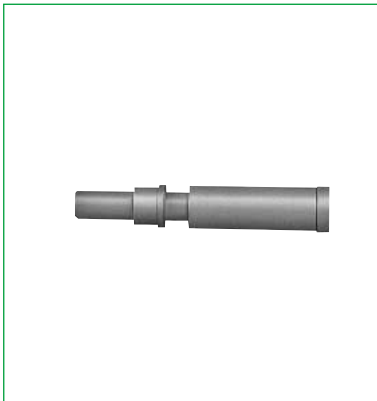
■ Dust Caps

● Plug Dust Cap (Back Panel Side)



Product Number	HRS No.	Applicable Adapter and Connector Housing
HMUA-DP-1	CL710-0059-8	HMUA-A-1,AS-1,AH-1 HMUA-2A-1,2AS-1,2AH-1 HMUA-8A-1,8AS-1,8AH-1 HMUB-L2HA-1,L2HB-1 HMUB-L8HA-1,L8HB-1

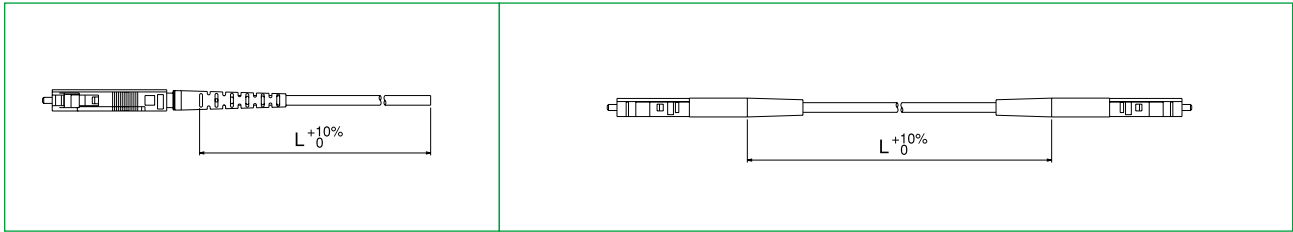
● Plug Dust Cap (Back Panel Side)



Product Number	HRS No.	Applicable Connector Housing
HMUB-DJ-1	CL710-0060-7	HMUB-L2PA-1 HMUB-L8PA-1

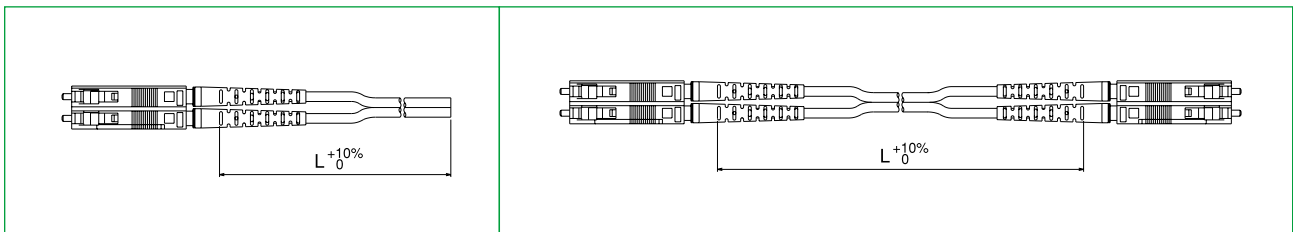
■Connectors with Cable Attached

●Plug Housing for Simplex $\phi 2$ Cable With Knob



Product Number	HRS No.	Notes	Applicable Optical Fiber	Type of Polishing	Cable Diameter
HMUA-SP1-F3Q-L	—	One end	SM-9.5/125	PC polishing	$\phi 2\text{mm}$
HMUA-SP2-F3Q-L	—	Both ends			
HMUA-ASP1-F3Q-L	CL710-0028-4	One end		AdPC polishing	
HMUA-ASP2-F3Q-L	CL710-0029-7	Both ends			
HMUA-SP1-F3P-L	CL710-0030-6	One end	GI-50/125	PC polishing	
HMUA-SP2-F3P-L	CL710-0031-9	Both ends			
HMUA-ASP1-F3P-L	CL710-0051-6	One end		AdPC polishing	
HMUA-ASP2-F3P-L	CL710-0052-9	Both ends			

●Plug Housing for Duplex $\phi 2$ Cable With Knob

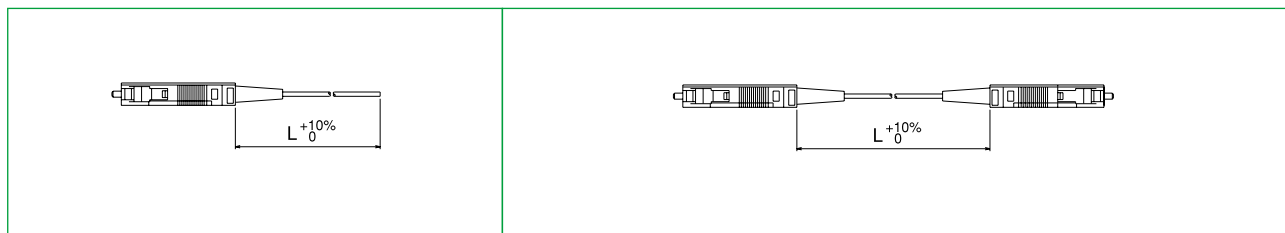


Product Number	HRS No.	Notes	Applicable Optical Fiber	Type of Polishing	Cable Diameter
HMUA-S2P1-F3QW-L	—	One end	SM-9.5/125	PC polishing	$\phi 2\text{mm}$
HMUA-S2P2-F3QW-L	—	Both ends			
HMUA-AS2P1-F3QW-L	CL710-0061-0	One end		AdPC polishing	
HMUA-AS2P2-F3QW-L	CL710-0062-2	Both ends			
HMUA-S2P1-F3PW-L	CL710-0034-7	One end	GI-50/125	PC polishing	
HMUA-S2P2-F3PW-L	CL710-0035-0	Both ends			
HMUA-AS2P1-F3PW-L	CL710-0053-1	One end		AdPC polishing	
HMUA-AS2P2-F3PW-L	CL710-0054-4	Both ends			

(NOTE 1) The "L" within the Product Number indicates the length of the cable illustrated in the diagram. Please specify values in meter units.

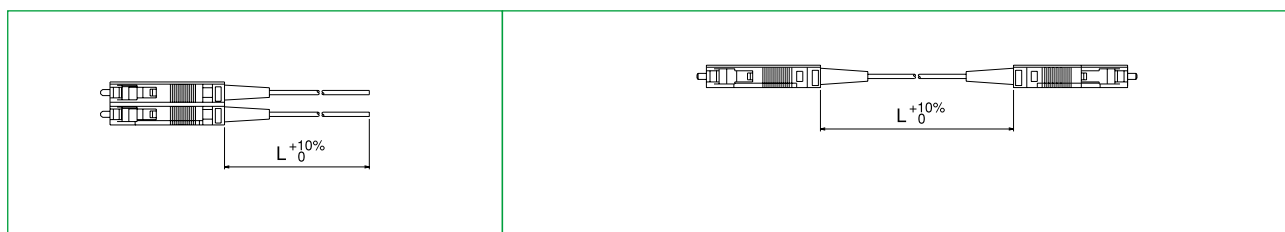
(NOTE 2) We will custom manufacture a great variety of conversion cables and products other than the aforementioned items to suit your needs.

●Plug Housing for Simplex $\phi 0.9$ Cable With Knob



Product Number	HRS No.	Notes	Applicable Optical Fiber	Type of Polishing	Cable Diameter
HMUA-SP1-F3L-L	—	One end	SM-9.5/125	PC polishing	$\phi 0.9\text{mm}$
HMUA-SP2-F3L-L	—	Both ends		AdPC polishing	
HMUA-ASP1-F3L-L	CL710-1001-3	One end		PC polishing	
HMUA-ASP2-F3L-L	CL710-1002-6	Both ends		AdPC polishing	
HMUA-SP1-F3M-L	CL710-1003-9	One end	GI-50/125	PC polishing	
HMUA-SP2-F3M-L	CL710-1004-1	Both ends		AdPC polishing	
HMUA-ASP1-F3M-L	CL710-1005-4	One end		PC polishing	
HMUA-ASP2-F3M-L	CL710-1006-7	Both ends		AdPC polishing	

●Plug Housing for Duplex $\phi 0.9$ Cable With Knob

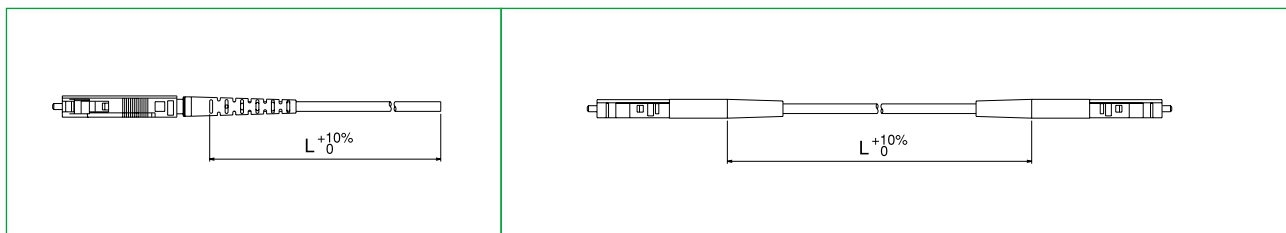


Product Number	HRS No.	Notes	Applicable Optical Fiber	Type of Polishing	Cable Diameter
HMUA-S2P1-F3L-L	—	One end	SM-9.5/125	PC polishing	$\phi 0.9\text{mm}$
HMUA-S2P2-F3L-L	—	Both ends		AdPC polishing	
HMUA-AS2P1-F3L-L	CL710-1007-0	One end		PC polishing	
HMUA-AS2P2-F3L-L	CL710-1008-2	Both ends		AdPC polishing	
HMUA-S2P1-F3M-L	CL710-1009-5	One end	GI-50/125	PC polishing	
HMUA-S2P2-F3M-L	CL710-1010-4	Both ends		AdPC polishing	
HMUA-AS2P1-F3M-L	CL710-1011-7	One end		PC polishing	
HMUA-AS2P2-F3M-L	CL710-1012-0	Both ends		AdPC polishing	

(NOTE 1) The "L" within the Product Number indicates the length of the cable illustrated in the diagram. Please specify values in meter units.

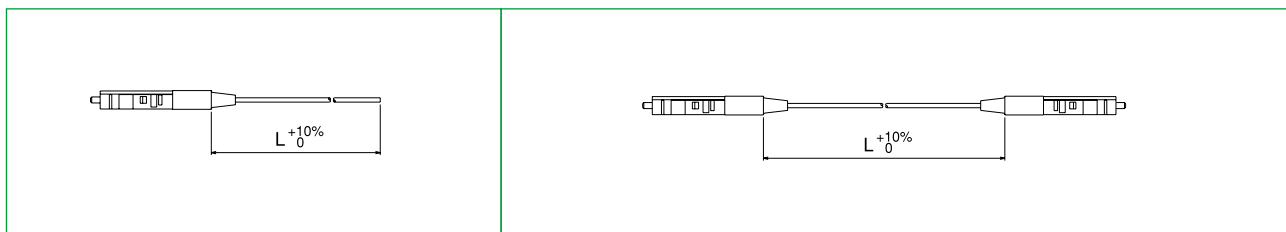
(NOTE 2) We will custom manufacture a great variety of conversion cables and products other than the aforementioned items to suit your needs.

●Plug Housing for Simplex $\phi 2$ Cable Without Knob



Product Number	HRS No.	Notes	Applicable Optical Fiber	Type of Polishing	Cable Diameter
HMUJ-SP1-F3Q-L	—	One end	SM-9.5/125	PC polishing	$\phi 2\text{mm}$
HMUJ-SP2-F3Q-L	—	Both ends		AdPC polishing	
HMUAJ-ASP1-F3Q-L	CL710-0040-0	One end		AdPC polishing	
HMUAJ-ASP2-F3Q-L	CL710-0041-2	Both ends		AdPC polishing	
HMUAJ-SP1-F3P-L	CL710-0042-5	One end	GI-50/125	PC polishing	
HMUAJ-SP2-F3P-L	CL710-0043-8	Both ends		PC polishing	
HMUAJ-ASP1-F3P-L	CL710-0057-2	One end		AdPC polishing	
HMUAJ-ASP2-F3P-L	CL710-0058-5	Both ends		AdPC polishing	

●Plug Housing for Simplex $\phi 0.9$ Cable Without Knob



Product Number	HRS No.	Notes	Applicable Optical Fiber	Type of Polishing	Cable Diameter
HMUAJ-SP1-F3A3-L	—	One end	SM-9.5/125	PC polishing	$\phi 0.9\text{mm}$
HMUAJ-SP2-F3A3-L	—	Both ends		AdPC polishing	
HMUAJ-ASP1-F3A3-L	CL710-0036-2	One end		AdPC polishing	
HMUAJ-ASP2-F3A3-L	CL710-0037-5	Both ends		AdPC polishing	
HMUAJ-SP1-F3B3-L	CL710-0038-8	One end	GI-50/125	PC polishing	
HMUAJ-SP2-F3B3-L	CL710-0039-0	Both ends		PC polishing	
HMUAJ-ASP1-F3B3-L	CL710-0055-7	One end		AdPC polishing	
HMUAJ-ASP2-F3B3-L	CL710-0056-0	Both ends		AdPC polishing	

(NOTE 1) The "L" within the Product Number indicates the length of the cable illustrated in the diagram. Please specify values in meter units.

(NOTE 2) We will custom manufacture a great variety of conversion cables and products other than the aforementioned items to suit your needs.

■Tools

●Optical Plug Insertion and Withdrawal Tool



Product Number	HRS No.	Color of Tip	Applicable Connector Housing
HMUA-TP-1	CL710-0074-1	Blue	HMUA-A-1,2A-1,8A-1
HMUB-TP-1	CL710-0075-4	Brown	HMUB-L2HA-1,L2HB-1 HMUB-L8HA-1,L8HB-1

●Optical Plug Extraction Tool



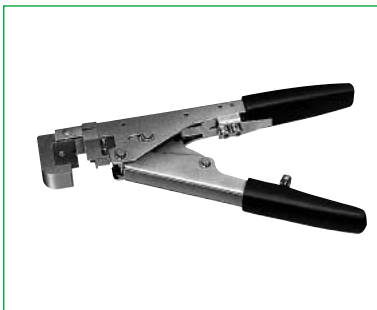
Product Number	HRS No.	Applicable Connector Housing
HMUB-TJ-1	CL710-0076-7	HMUB-L2PA-1,L8PA-1

●Sleeve Holder Insertion and Withdrawal Tool



Product Number	HRS No.	Applicable Connector Housing
HMUB-TS-1	CL710-0077-0	HMUB-L2PA-1,L8PA-1

●Locking Tools for Optical Plug Assembly



Product Number	HRS No.	Applicable Connector Housing
HMUA-TK-1	CL710-0080-4	HMUA-P2-H2,H1 HMUA-2P2-H2,H1



Product Number	HRS No.	Applicable Connector Housing
HMUAJ-TK-2	CL710-0081-7	HMUAJ-P2-H2,H1