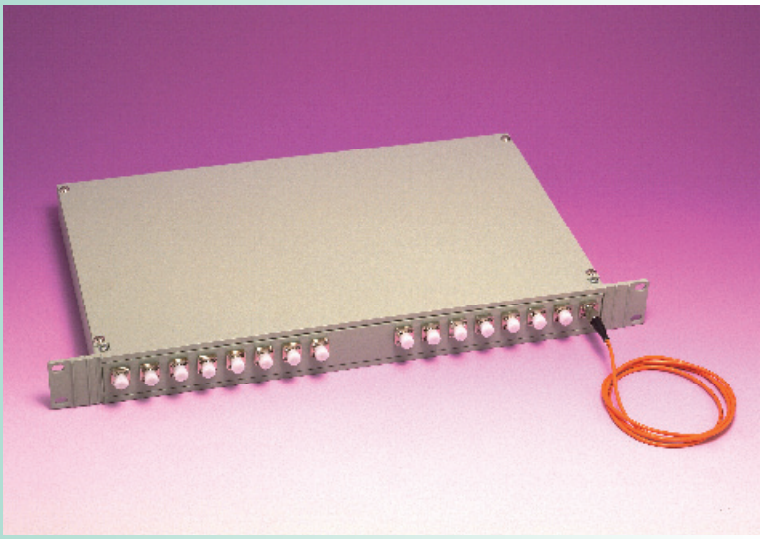
C-DX CUSTOM DESIGNED COUPLERS

Features:
- Low insertion loss
- Customized package available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV
- CCTV



Performance Specifications:

ITEM	Custom designed Couplers
Port Configuration	M x N (M, N = 1, 2, ..., 64)
Operating Wavelength, nm	1310 and / or 1550
Operating Temperature, °C	-40 ~ +75 (*)
Storage Temperature, °C	-55 ~ +85
Package Options	A2, A3, A5, M1, M2, M3, MA, MB

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.

CUSTOM DESIGNED COUPLERS

Ordering Information:

C - D □ - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Coupler Type

D	Dual windows
M	Multimode
S	Singlemode
U	Unitary
W	Wideband

Fiber Type

A	Corning SMF-28e+
B	Dispersion-shift fiber
C	50/125μm
D	62.5/125μm
X	Others, please specify

Package Option

Depending upon port configuration,
please refer to Appendix A.

Input Port No.

Please specify desired port number in two digits

Grade

H	High
A	Average

Output Port No.

Please specify desired port number in two digits

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	others, please specify

Wavelength

85	850nm	13	1310nm
15	1550nm	35	1310/1550nm
XX	Others, please specify		

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

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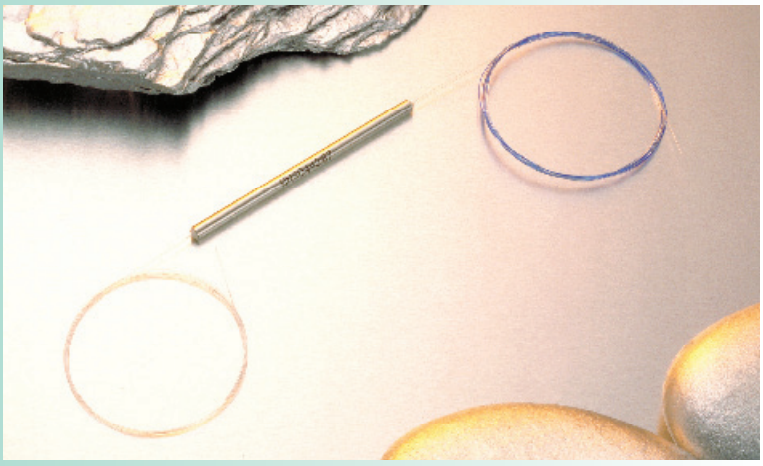
C-NM STANDARD MULTIMODE COUPLERS

Features:
- Low insertion loss
- Customized packaging available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- Video transmission
- Fiber optic sensing
- Testing instruments



Performance Specifications:

ITEM		Standard Multimode Couplers (50:50)	
Operating Wavelength, nm		850,1300	
Light Source Type		LED	
Grade		Super (S)	High (H)
Maximal Excess Loss, dB		0.7	1.0
Uniformity, dB (at specified wavelength)		0.7	1.0
Thermal Stability, dB (peak-peak)		≤0.20	≤0.25
Port Configuration		1 x 2 or 2 x 2	
Insertion Loss, dB		Please refer to the coupling ratio vs. insertion loss chart	
Directivity, dB		≥35	
Reflectance, dB		≥35	
Operating Temperature, °C		-40 ~ +85 (*)	
Storage Temperature, °C		-55 ~ +85	
Package Options (for different pigtailing)	1. coated fiber (250μm)	T5, MA,MB,M3	
	2. loose tube (900μm)	TA, MA,MB,M3	
	3. PVC cable (3.0mm)	A1, MA,MB,M3	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. Coupling ratio option: 1:99 to 50:50

Coupling Ratio VS. Insertion Loss:

Coupling Ratio (%)	Insertion Loss (dB)	
	Super Grade (S)	High Grade (H)
50 / 50	3.9	4.3
40 / 60	4.9 / 3.0	5.4 / 3.5
30 / 70	6.2 / 2.3	6.7 / 2.7
20 / 80	8.0 / 1.8	8.7 / 2.1
10 / 90	11.3 / 1.25	12.2 / 1.6
5 / 95	14.9 / 0.9	16.2 / 1.3
1 / 99	22.1 / 0.7	22.7 / 1.0

Note: 1. * Without Connector Loss Appendix.
2. * Test under LED.

STANDARD MULTIMODE COUPLERS

Ordering Information:

C - NM - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

C	50/125µm	G	50/125µm OM3
D	62.5/125µm	H	50/125µm OM4
X	Others, please specify		

Package Option

C	T5 with coated fiber
D	MA/MB/M3 with coated fiber
L	TA with loose tube cable
M	MA/MB/M3 with loose tube cable
O	A1 with PVC 2.0mm cable
Q	A1 with PVC 3.0mm cable
R	MA/MB/M3 with PVC 3.0mm cable
S	MA/MB/M3 with adaptors
X	Others, please specify

Coupling Ratio

01 - 50 please specify

Grade

S	Super
H	High

Port Number

12	1 x 2
22	2 x 2

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	others, please specify

Wavelength

85	850nm
13	1310nm
RX	1300nm

Connector Type (Input / Output)

FC	FC type	SC	SC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

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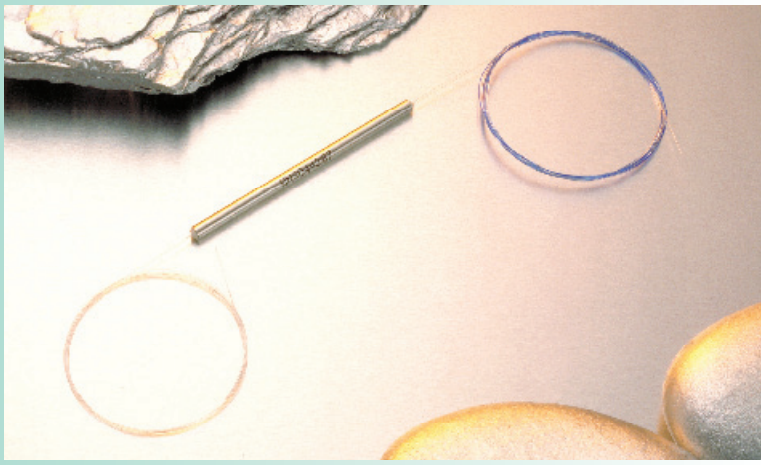
C-GM GIGABIT MULTIMODE COUPLERS

Features:
- Low insertion loss
- Customized packaging available
- Environmentally stable

Applications:
- Gigabit transmission
- Local area netwofk
- Video transmission
- Testing instruments



Performance Specifications:

ITEM	Gigabit Multimode Couplers
Operating Wavelength, nm	850nm
Light Source Type	VCSEL
Uniformity, dB (50:50,at specified wavelength)	1.2
Thermal Stability, dB (peak-peak)	<0.25
Coupling Ratio	1:99 to 50:50, (50:50 standard)
Insertion Loss, dB	Please refer to the coupling ratio vs. insertion loss chart
Directivity, dB	≥35
Reflectance, dB	≥35
Operating Temperature, °C	-40 ~ +85 (*)
Storage Temperature, °C	-55 ~ +85

Note: 1. The packaging option codes are explained in Appendix.
2. * -20°C ~ +70°C for PVC cable.

Coupling Ratio VS. Insertion Loss:

Coupling Ratio (%)	Insertion Loss (dB)
(1*2) 50 / 50	4.5 / 4.5
(1*2) 40 / 60	5.4 / 3.5
(1*2) 30 / 70	6.8 / 2.6
(1*2) 20 / 80	2.1 / 8.4

Note: Insertion Loss Include Connector Loss.

GIGABIT MULTIMODE COUPLERS

Ordering Information:

C - GM - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

C	50/125µm	D	62.5/125µm
G	50/125µm OM3 fiber	H	50/125µm OM4 fiber
X	Others, please specify		

Package Option

C	T5 with coated fiber
D	MA/MB/M3 with coated fiber
L	TA with loose tube cable
M	MA/MB/M3 with loose tube cable
O	A1 with PVC 2.0mm cable
Q	A1 with PVC 3.0mm cable
R	MA/MB/M3 with PVC 3.0mm cable
S	MA/MB/M3 with adaptors
X	Others, please specify

Coupling Ratio

00 - 50 please specify

Grade

S	Super
H	High

Port Number

12	1 x 2

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	others, please specify

Wavelength

85	850nm

Connector Type (Input / Output)

FC	FC type	SC	SC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

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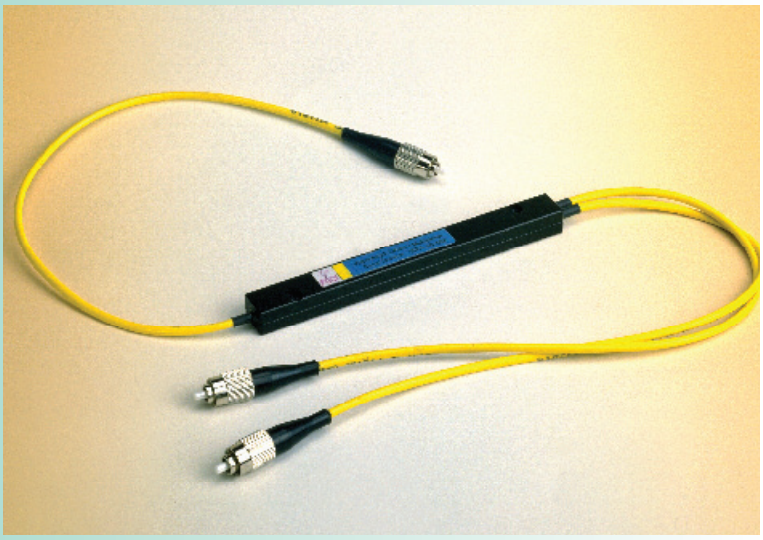
C-NS STANDARD SINGLEMODE COUPLERS

Features:

- Low insertion loss
- Customized packaging available
- Environmentally stable

Applications:

- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV
- Point to point systems
- Wide area networks



Performance Specifications:

ITEM		Standard Singlemode Couplers (50:50)	
Operating Wavelength, nm		1310 ± 10 or 1550 ± 10	
Grade		Super (S)	High (H)
Typical Excess Loss, dB		0.06	0.15
Uniformity, dB		0.5	0.9
Thermal Stability, dB (peak-peak)		≤0.2	≤0.3
Polarization Stability, dB		≤0.1	≤0.15
Port Configuration		1 x 2 or 2 x 2	
Insertion Loss, dB		Please refer to the coupling ratio vs. insertion loss chart	
Directivity, dB		≥50 (1 x 2), ≥60 (2 x 2)	
Reflectance, dB		≥55	
Operating Temperature, °C		-40 ~ +85(*)	
Storage Temperature, °C		-55 ~ +85	
Package Options (for different pigtailing)	1. coated fiber (250μm)	T5, MA, MB, M3	
	2. loose tube (900μm)	TA, MA, MB, M3	
	3. PVC cable (3.0μm)	A1, MA, MB, M3	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. Coupling ratio option: 1:99 to 50:50

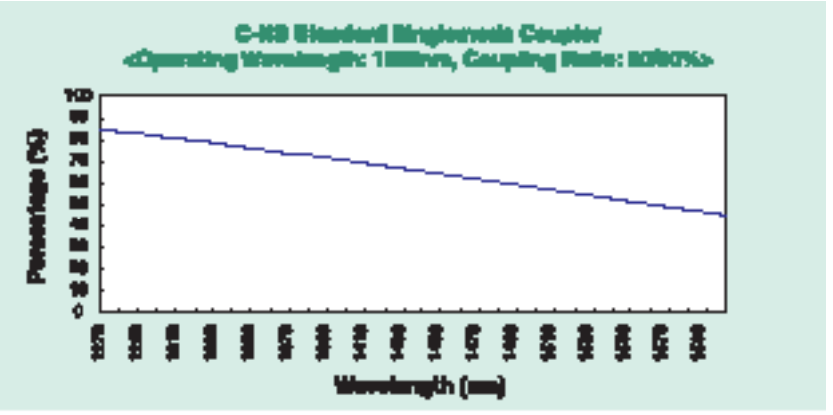
STANDARD SINGLEMODE COUPLERS

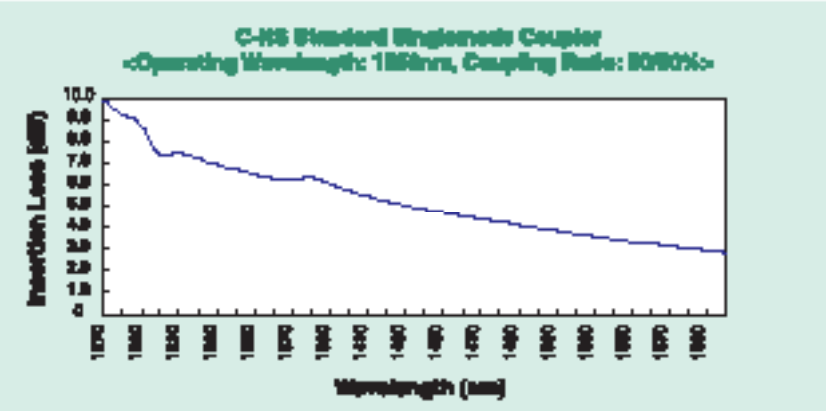
Coupling Ratio VS. Insertion Loss:

Coupling Ratio (%)	Insertion Loss (dB)	
	Super Grade (S)	High Grade (H)
50 / 50	3.4	3.6
40 / 60	4.4 / 2.5	4.7 / 2.8
30 / 70	5.7 / 1.8	6.0 / 2.0
20 / 80	7.5 / 1.2	8.0 / 1.4
10 / 90	10.8 / 0.7	11.5 / 0.9
5 / 95	14.6 / 0.4	15.5 / 0.6
1 / 99	21.6 / 0.2	22.0 / 0.3

* Without Connector Loss

Spectral Performance:





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STANDARD SINGLEMODE COUPLERS

Ordering Information:

C - NS - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

A	Corning SMF-28e+	J	G.657. A1 fiber
B	Dispersion-shift fiber		
X	Others, please specify		

Package Option (for both ends)

C	T5 with coated fiber
D	MA/MB with coated fiber
L	TA with loose tube cable
M	MA/MB/M3 with loose tube cable
O	A1 with PVC 2.0mm cable
Q	A1 with PVC 3.0mm cable
R	MA/MB/M3 with PVC 3.0mm cable
S	MA/MB/M3 with adaptors
X	Others, please specify

Coupling Ratio

01 ~ 50 please specify

Grade

S	Super
H	High

Port Number

12	1 x 2
22	2 x 2

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	others, please specify

Wavelength

13	1310nm
15	1550nm
XX	Others, please specify

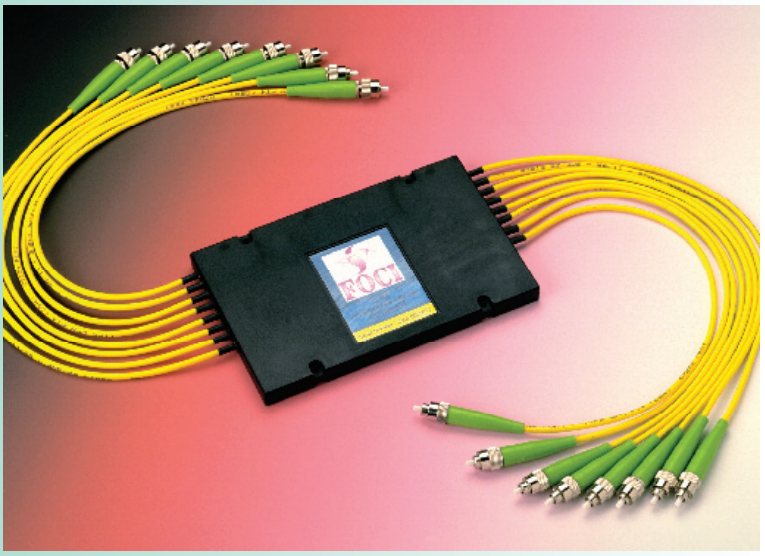
Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

C-SD DUAL WINDOW STAR COUPLERS

Features:
- Low insertion loss
- Customized packaging available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV



Performance Specifications:

ITEM		Dual Window Star Couplers							
Port Configuration		4 x 4		8 x 8		16 x 16		32x32	
Operating Wavelength, nm		1310 ± 40 and 1550 ± 40							
Grade		H	A	H	A	H	A	H	A
Maximal Insertion Loss, dB		7.2	7.6	10.8	11.7	14.5	15.5	18.5	20.0
Uniformity, dB		1.0	1.4	2.1	3.2	2.7	4.0	3.0	6.0
Operating Temperature, °C		-40 ~ +85 (*)							
Storage Temperature, °C		-55 ~ +85							
Package Options (for different pigtailing)	1. coated fiber (250μm)	A3, MA, MB, M3		A5, MB, M1, M2		M1, M2		M2	
	2. loose tube (900μm)	A3, MA, MB, M3		A5, MB, M1, M2		M1, M2		M2	
	3. PVC cable (3.0mm)	A3, MB , M3		A5, MB, M1,M2		M1, M2		M2	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.

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DUAL WINDOW STAR COUPLERS

Ordering Information:

C - SD - □ □ - □□ - □ - □□ □□ - 35 - □□ / □□

Fiber Type

A	Corning SMF-28e+
J	G.657. A1 fiber

Package Option Fiber Type

C	A3/A5 with coated fiber
D	MA/MB/M1/M2/M3 with coated fiber
L	A3/A5 with loose tube cable
M	MA/MB/M1/M2/M3 with loose tube cable
O	A3/A5 with PVC 2.0mm cable
Q	A3/A5 with PVC 3.0mm cable
R	MA/MB/M1/M2/M3 with PVC 3.0mm cable
S	MB/M1/M2/M3 with adaptors
X	Others, please specify

Input Port No.

Please specify desired port number in two digits

Grade

H	High
A	Average

Output Port No.

Please specify desired port number in two digits.

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	others, please specify

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

C-TD DUAL WINDOW TREE COUPLERS

Features:

- Low insertion loss
- Customized packaging available
- Environmentally stable

Applications:

- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments

Performance Specifications:

ITEM		Dual Window Tree Couplers							
Port Configuration		1(2) x 4		1(2) x 8		1(2) x 16		1(2) x 32	
Operating Wavelength, nm		1310 ± 40 and 1550 ± 40							
Grade		H	A	H	A	H	A	H	A
Maximal Insertion Loss, dB		7.2	7.6	11.0	11.7	14.5	15.5	18.5	20.0
Uniformity, dB		0.9	1.4	2.1	3.2	2.6	4.0	3.0	6.0
Directivity, dB		≥50							
Reflectance, dB		≥50							
Operating Temperature, °C		-40 ~ +85 (*)							
Storage Temperature, °C		-55 ~ +85							
Package Options	1. coated fiber (250μm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	
(for different pigtailing)	2. loose tube (900μm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	
	3. PVC cable (3.0mm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. I.L.: Without Connector Loss.

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DUAL WINDOW TREE COUPLERS

Ordering Information:

C - TD - □ □ - □□ - □ - □□ □□ - 35 - □□ / □□

Fiber type

A	Corning SMF-28e+
J	G.657. A1 fiber

Package Option Fiber type

C	A2/A3/A5 with coated fiber
D	MA/MB/M1/M2/M3 with coated fiber
L	A2/A3/A5 with loose tube cable
M	MA/MB/M1/M2/M3 with loose tube cable
O	A2/A3/A5 with PVC 2.0mm cable
Q	A2/A3/A5 with PVC 3.0mm cable
R	MA/MB/M1/M2/M3 with PVC 3.0mm cable
S	MA/MB/M1/M2/M3 with adaptors
X	Others, please specify

Input Port No.

01	1
02	2

Grade

H	High
A	Average

Output Port No.

Please specify desired
port number in two digits.

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	others, please specify

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

C-TS SINGLEMODE TREE COUPLERS

Features:
- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- Fiber to the home
- Video transmission
- Fiber optic sensing
- Testing instruments

Performance Specifications:

ITEM		Singlemode Tree Couplers							
Port Configuration		1(2) x 4		1(2) x 8		1(2) x 16		1(2) x32	
Operating Wavelength, nm		1310 ± 10 or 1550 ± 10							
Grade		H	A	H	A	H	A	H	A
Insertion Loss, dB		6.6	7.2	10	11.5	13.6	14.5	17.1	18.2
Uniformity, dB		0.7	1.7	1.1	2.5	1.7	3.5	2.2	4.3
Directivity, dB		≥50							
Reflectance, dB		≥50							
Operating Temperature, °C		-40 ~ +85 (*)							
Storage Temperature, °C		-55 ~ +85							
Package Options (for different pigtailing)	1. coated fiber (250μm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	
	2. loose tube (900μm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	
	3. PVC cable (3.0mm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. I.L.: Without Connector Loss.

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SINGLEMODE TREE COUPLERS

Ordering Information:

C - TS - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

A	Corning SMF-28e+	J	G.657. A1 fiber

Package Option

C	A2/A3/A5 with coated fiber
D	MA/MB/M1/M2/M3 with coated fiber
L	A2/A3/A5 with loose tube cable
M	MA/MB/M1/M2/M3 with loose tube cable
O	A2/A3/A5 with PVC 2.0mm cable
Q	A2/A3/A5 with PVC 3.0mm cable
R	MA/MB/M1/M2/M3 with PVC 3.0mm cable
S	MA/MB/M1/M2/M3 with adaptors
X	Others, please specify

Input Port No.

01	1
02	2

Grade

H	High
A	Average

Output Port No.

Please specify desired port number in two digits

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Wavelength

13	1310nm
15	1550nm
XX	Others, please specify

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

C-TW WIDEBAND TREE COUPLERS

Features:

- Wide bandwidth
- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:

- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments

Performance Specifications:

ITEM		Wideband Tree Couplers							
Port Configuration		1(2) x 4		1(2) x 8		1(2) x 16		1(2) x 32	
Operating Wavelength, nm		1310 ± 40 or 1550 ± 40							
Grade		H	A	H	A	H	A	H	A
Maximal Insertion Loss, dB		7.0	7.4	10.6	11.5	14.0	15.3	18	19
Uniformity, dB		0.8	1.2	1.4	3.0	2.4	3.8	2.6	5.0
Directivity, dB		≥50							
Reflectance, dB		≥50							
Operating Temperature, °C		-40 ~ +85 (*)							
Storage Temperature, °C		-55 ~ +85							
Package Options	1. coated fiber (250μm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	
(for different pigtailing)	2. loose tube (900μm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	
	3. PVC cable (3.0mm)	A2, MA, MB, M3		A3, MA, MB, M3		A5, MA, MB, M1		A5, M1, M2	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. I.L.: Without Connector Loss.

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WIDEBAND TREE COUPLERS

Ordering Information:

C - TW - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

A	Corning SMF-28e+	J	G.657. A1 fiber
B	Dispersion-shift fiber		
X	Others, please specify		

Package Option

C	A2/A3/A5 with coated fiber
D	MA/MB/M1/M2/M3 with coated fiber
L	A2/A3/A5 with loose tube cable
M	MA/MB/M1/M2/M3 with loose tube cable
O	A2/A3/A5 with PVC 2.0mm cable
Q	A2/A3/A5 with PVC 3.0mm cable
R	MA/MB/M1/M2/M3 with PVC 3.0mm cable
S	MA/MB/M1/M2/M3 with adaptors
X	Others, please specify

Input Port No.

Please specify desired port number in two digits

Grade

H	High
A	Average

Output Port No.

Please specify desired port number in two digits

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Wavelength

13	1310nm
15	1550nm
XX	Others, please specify

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

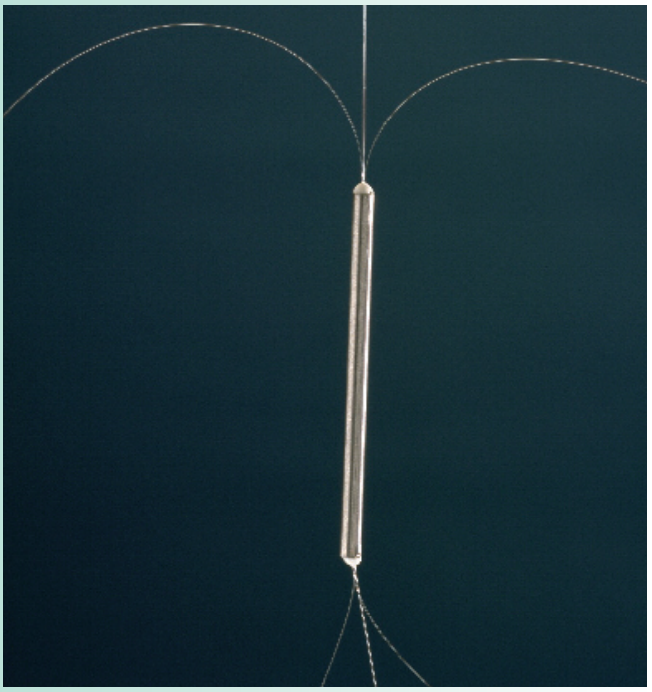
C-US UNITARY 1X3 COUPLERS

Features:

- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:

- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



Performance Specifications:

ITEM		Unitary 1 x 3 Couplers (33:33:33)	
Operating Wavelength, nm		1310 ± 10 or 1550 ± 10	
Port Configuration		1 x 3	
Grade		High (H)	Average (A)
Maximal Insertion Loss, dB		5.6	6.3
Maximal Uniformity, dB (33:33:33)		0.9	1.3
Thermal Stability, dB (peak-peak)		≤0.4	
Polarization Stability, dB		≤0.2	
Directivity, dB		≥50	
Reflectance, dB		≥50	
Operating Temperature, °C		-40 ~ +85 (*)	
Storage Temperature, °C		-55 ~ +85	
Package Options (for different pigtailing)	1. coated fiber (250μm)	T3, A2, MA, MB, M3	
	2. loose tube (900μm)	TC, A2, MA, MB, M3	
	3. PVC cable (3.0mm)	A2, MA, MB, M3	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. I.L.: Without Connector Loss.
4. Coupling Ratio: 33:33:33 (standard) or customer specify.

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UNITARY 1 x 3 COUPLERS

Ordering Information:

C - US - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

A	Corning SMF-28e+	J	G.657. A1 fiber
X	Others, please specify		

Package Option

C	T3 with coated fiber
D	A2/MA/MB/M3 with coated fiber
L	TC with loose tube cable
M	A2/MA/MB/M3 with loose tube cable
O	A2 with PVC 2.0mm cable
Q	A2 with PVC 3.0mm cable
R	MA/MB/M3 with PVC 3.0mm cable
S	MA/MB/M3 with adaptors
X	Others, please specify

Coupling Ratio

05 ~ 45	Please specify the different port

Grade

H	High
A	Average

Input Port Number

01	1 port

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Wavelength

13	1310nm
15	1550nm

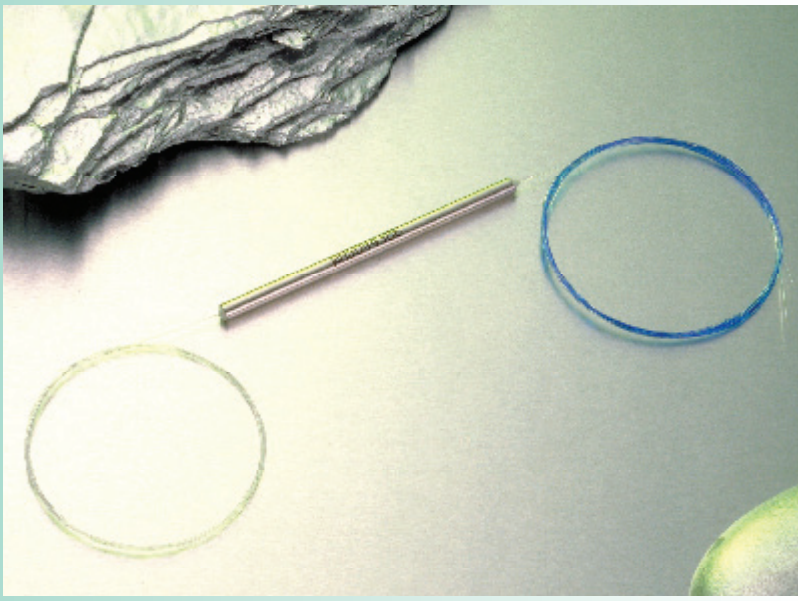
Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

C-UW UNITARY 1X3 WIDEBAND COUPLERS

Features:
- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



Performance Specifications:

ITEM		Unitary 1 x 3 Wideband Couplers (33:33:33)	
Operating Wavelength, nm		1310 ± 30 or 1550 ± 30	
Port Configuration		1 x 3	
Grade		High (H)	Average (A)
Maximal Insertion Loss, dB		5.8	6.3
Maximal Uniformity, dB (33:33:33)		1.2	1.7
Thermal Stability, dB (peak-peak)		≤0.4	
Polarization Stability, dB		≤0.2	
Directivity, dB		≥50	
Reflectance, dB		≥50	
Operating Temperature, °C		-40 ~ +85 (*)	
Storage Temperature, °C		-55 ~ +85	
Package Options (for different pigtailing)	1. coated fiber (250μm)	T3, A2, MA, MB, M3	
	2. loose tube (900μm)	TC, A2, MA, MB, M3	
	3. PVC cable (3.0mm)	A2, MA, MB, M3	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. I.L.: Without Connector Loss.
4. Coupling Ratio: 33:33:33 (standard) or customer specify.

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UNITARY 1 x 3 WIDEBAND COUPLERS

Ordering Information:

C - UW - □ □ - □□ - □ - 01 - □□ - □□ - □□ / □□

Fiber Type

A	Corning SMF-28e+	J	G.657. A1 fiber
X	Others, please specify		

Package Option

C	T3 with coated fiber
D	A2/MA/MB with coated fiber
L	TC with loose tube cable
M	A2/MA/MB with loose tube cable
O	A2 with PVC 2.0mm cable
Q	A2 with PVC 3.0mm cable
R	MA/MB with PVC 3.0mm cable
S	MA/MB with adaptors
X	Others, please specify

Coupling Ratio

05 ~ 45 Please specify the different port

Grade

H	High
A	Average

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Wavelength

13	1310nm
15	1550nm

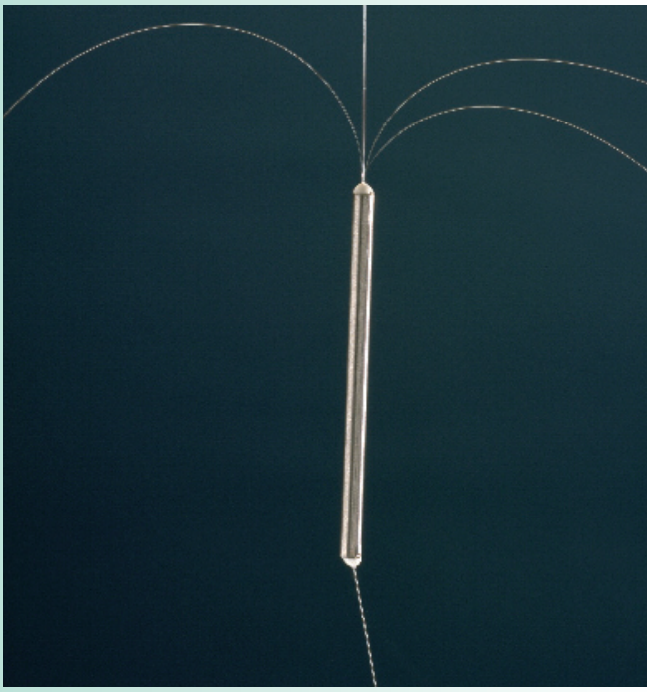
Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

C-UD UNITARY 1X3/1X4 DUAL WINDOW COUPLERS

Features:
- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



Performance Specifications:

ITEM		1x3 / 1x4 Unitary Dual Wideband Couplers (equal ratio)	
Operating Wavelength, nm		1310 ± 40 and 1550 ± 40	
Port Configuration		1 x 3	1 x 4
Maximal Insertion Loss, dB		5.4	7.5
Maximal Uniformity, dB		1.0	1.5
Excess Loss, dB (typical)		0.15	0.30
Polarization Stability, dB		0.30	
Minimum Return Loss, dB		50	
Operating Temperature, °C		-40 ~ +85 (*)	
Storage Temperature, °C		-55 ~ +85	
Package Options	1. coated fiber (250μm)	3*55mm	
(for different pigtailing)	2. loose tube (900μm)	4*70mm	

Note: 1. The packaging option codes are explained in Packaging Dimensions below.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. I.L.: Without Connector Loss.

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UNITARY 1x3 / 1x4 DUAL WINDOW WIDEBAND COUPLERS

Ordering Information:

C - UD - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type

A	Corning SMF-28e+	J	G.657. A1 fiber
X	Others, please specify		

Package Option

C	Metal tube with coated fiber
L	Metal tube with 900μm loose tube cable

Coupling Ratio

25	25:25:25:25	33	33:33:33
XX	Please specify the different port		

Grade

H	High
A	Average

Input Port Number

13	1x3
14	1x4

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Wavelength

35	1310 / 1550nm

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

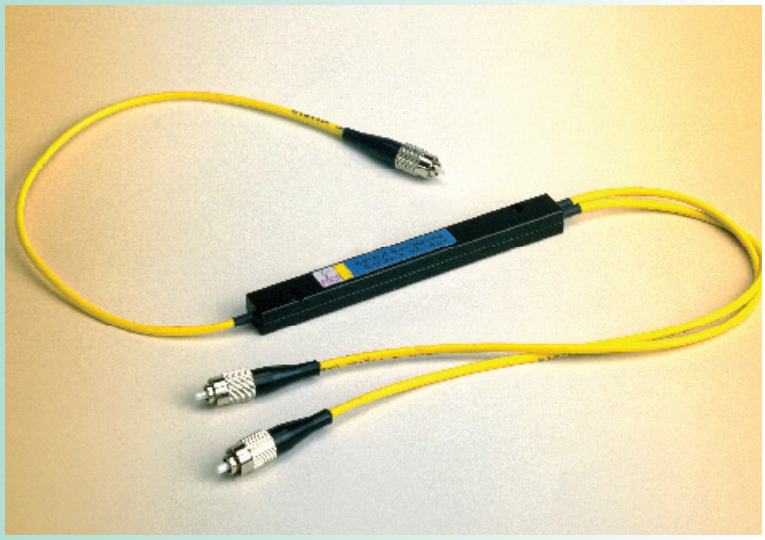
C-WD DUAL WINDOW WIDEBAND COUPLERS

Features:

- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:

- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV



Performance Specifications:

ITEM		Dual Window Wideband Couplers (50:50)	
Operating Wavelength, nm		1310 ± 40 and 1550 ± 40	
Grade		Super (S)	High (H)
Typical Excess Loss, dB		0.08	0.2
Uniformity, dB (50:50)		0.8	1.2
Thermal Stability, dB (peak-peak)		≤0.2	≤0.3
Polarization Stability, dB		≤0.15	≤0.20
Port Configuration		1 x 2 or 2 x 2	
Coupling Ratio		1:99 to 50:50, (50:50 standard)	
Insertion Loss, dB		Please refer to the coupling ratio vs. insertion loss chart	
Directivity, dB		≥50 (1 x 2), ≥60 (2 x 2)	
Reflectance, dB		≥50	
Operating Temperature, °C		-40 ~ +85 (*)	
Storage Temperature, °C		-55 ~ +85	
Package Options (for different pigtailing)	1. coated fiber (250μm)	T5, MA, MB, M3	
	2. loose tube (900μm)	TA, MA, MB, M3	
	3. PVC cable (3.0mm)	A1, MA, MB, M3	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. Coupling Ratio option: 1:99 to 50:50

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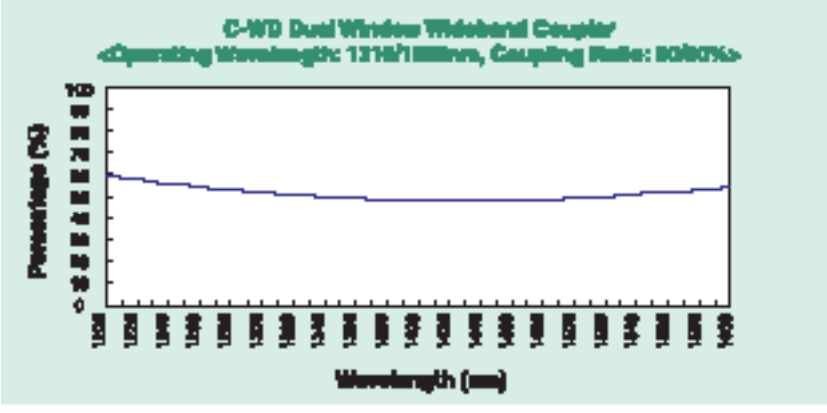
DUAL WINDOW WIDEBAND COUPLERS

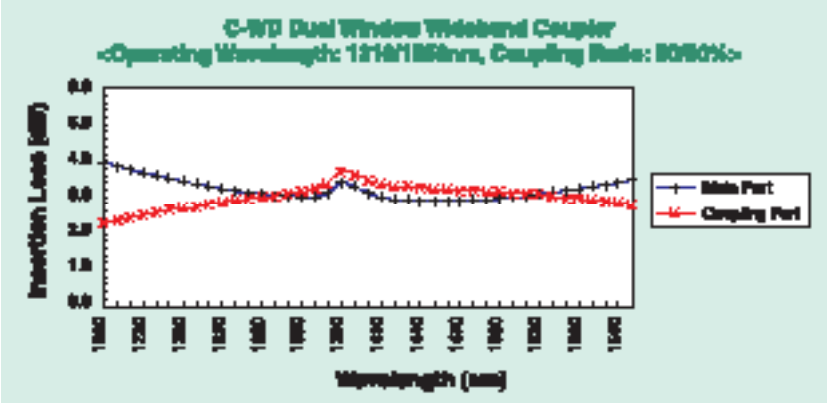
Coupling Ratio VS. Insertion Loss:

Coupling Ratio (%)	Insertion Loss (dB)	
	Super Grade (S)	High Grade (H)
50 / 50	3.6	3.8
45 / 55	4.15 / 3.15	4.45 / 3.3
40 / 60	4.7 / 2.7	5.0 / 2.9
35 / 65	5.35 / 2.3	5.7 / 2.5
30 / 70	6.0 / 1.9	6.4 / 2.1
25 / 75	6.95 / 1.7	7.45 / 1.9
20 / 80	7.9 / 1.4	8.5 / 1.5
15 / 85	9.6 / 1.0	10.6 / 1.1
10 / 90	11.0 / 0.7	12.7 / 0.8
5 / 95	14.6 / 0.5	18.4 / 0.55
1 / 99	21.6 / 0.3	21.6 / 0.4

* Without Connector Loss

Spectral Performance:





DUAL WINDOW WIDEBAND COUPLERS

Ordering Information:

C - WD - □ □ - □□ - □ - □□ □□ - 35 - □□ / □□

Fiber Type (for both ends)

A	Corning SMF-28e+
J	G.657. A1 fiber

Pigtail Type (for both ends)

C	T5 with coated fiber
D	MA/MB/M3 with coated fiber
L	TA with loose tube cable
M	MA/MB/M3 with loose tube cable
O	A1 with PVC 2.0mm cable
Q	A1 with PVC 3.0mm cable
R	MA/MB/M3 with PVC 3.0mm cable
S	MA/MB/M3 with adaptors
X	Others, please specify

Coupling Ratio

01 ~ 50 Please specify

Grade

S	Super
H	High

Port Number

12	1 x 2
22	2 x 2

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Connector Type (Input / Output)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

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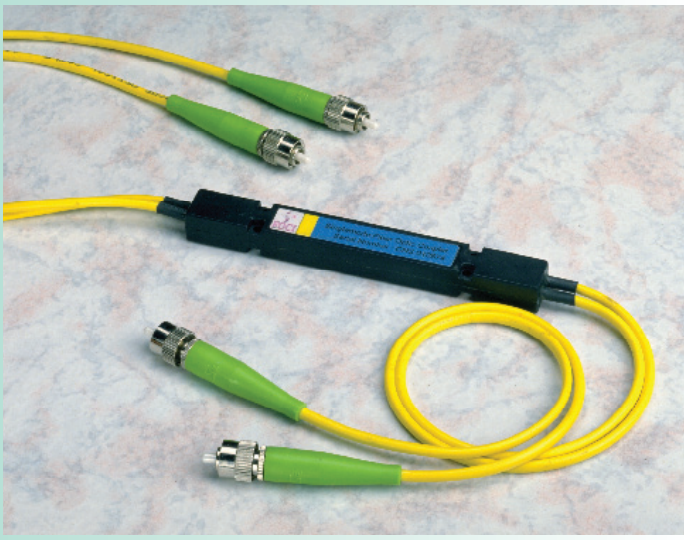
C-WS SINGLEMODE WIDEBAND COUPLERS

Features:
- Low insertion loss
- High uniformity
- Customized packaging available
- Environmentally stable

Applications:
- Telecommunications
- Local area network
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- CATV
- Local area networks
- Point to point systems



Performance Specifications:

ITEM		Singlemode Wideband Couplers (50:50)	
Operating Wavelength, nm		1310 ± 40 or 1550 ± 40	
Grade		Super (S)	High (H)
Typical Excess Loss, dB		0.1	0.2
Uniformity, dB (50:50)		0.6	1.0
Thermal Stability, dB (peak-peak)		≤0.2	≤0.3
Polarization Stability, dB		≤0.10	≤0.15
Port Configuration		1 x 2 or 2 x 2	
Insertion Loss, dB		Please refer to the coupling ratio vs. insertion loss chart	
Directivity, dB		≥50 (1 x 2), ≥60 (2 x 2)	
Reflectance, dB		≥55	
Operating Temperature, °C		-20 ~ +70 (*)	
Storage Temperature, °C		-55 ~ +85	
Package Options	1. coated fiber (250μm)	T5, MA,MB,M3	
	2. loose tube (900μm)	TA, MA,MB,M3	
	3. PVC cable (3.0mm)	A1, MA,MB,M3	

Note: 1. The packaging option codes are explained in Appendix.
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. Coupling Ratio option: 1:99 to 50:50

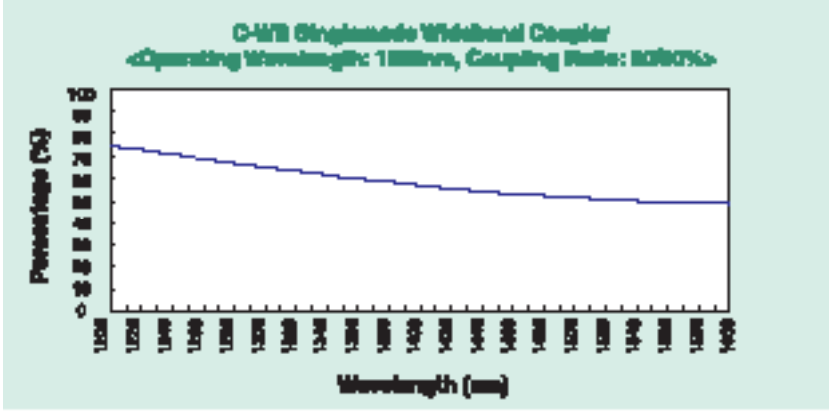
SINGLEMODE WIDEBAND COUPLERS

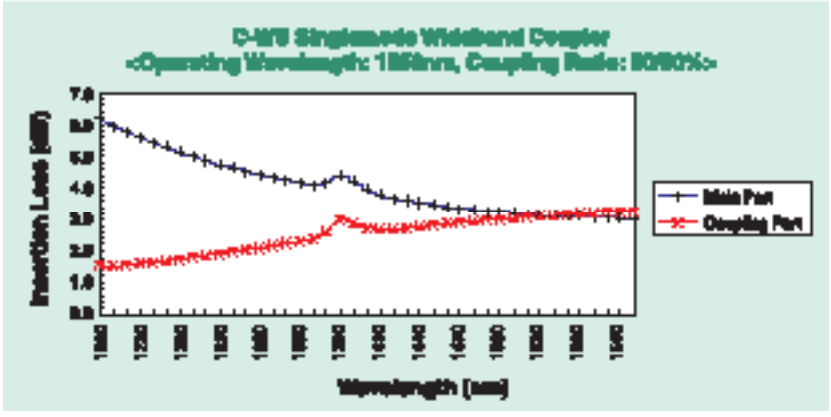
Coupling Ratio VS. Insertion Loss:

Coupling Ratio (%)	Insertion Loss (dB)	
	Super Grade (S)	High Grade (H)
50 / 50	3.4	3.6
45 / 55	3.9 / 2.9	4.25 / 3.25
40 / 60	4.4 / 2.5	4.7 / 2.7
35 / 65	5.1 / 2.2	5.45 / 2.4
30 / 70	5.8 / 1.9	6.0 / 1.9
25 / 75	6.7 / 1.6	7.05 / 1.7
20 / 80	7.6 / 1.1	7.9 / 1.2
15 / 85	9 / 0.96	10.46 / 1.05
10 / 90	11.0 / 0.63	12.9 / 0.8
5 / 95	14.6 / 0.4	18.4 / 0.5
1 / 99	21.6 / 0.3	21.6 / 0.4

* Without Connector Loss

Spectral Performance:





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SINGLEMODE WIDEBAND COUPLERS

Ordering Information:

C - WS - □ □ - □□ - □ - □□ □□ - □□ - □□ / □□

Fiber Type(for booh ends)

A	Corning SMF-28e+
J	G.657. A1 fiber

Package Option

C	Corning SMF-28e
D	MA/MB/M3 with coated fiber
L	TA with loose tube cable
M	MA/MB/M3 with loose tube cable
O	A1 with PVC 2.0mm cable
Q	A1 with PVC 3.0mm cable
R	MA/MB/M3 with PVC 3.0mm cable
S	MA/MB/M3 with adaptors
X	Others, please specify

Coupling Ratio

01 ~ 50 Please specify

Grade

S	Super
H	High

Port Number

12	1 x 2
22	2 x 2

Pigtail Length (for each port)

10	1 meter	05	0.5 meter
20	2 meter	15	1.5 meter
00	Modulized	XX	Others, please specify

Wavelength

13	1310nm
15	1550nm

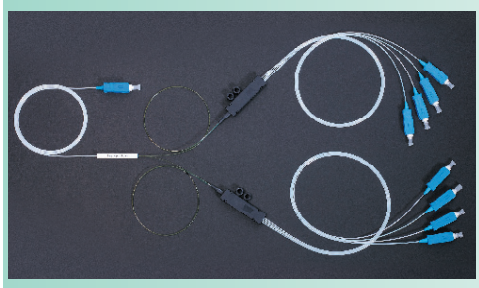
Connector Type (Input / Output)

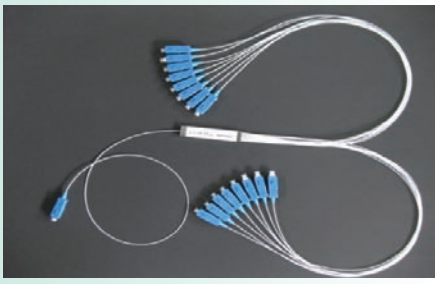
FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	LC	LC type
MU	MU type	NC	None
XX	Others, please specify		

O-TS 1(2)xN PLC SPLITTERS

Features:

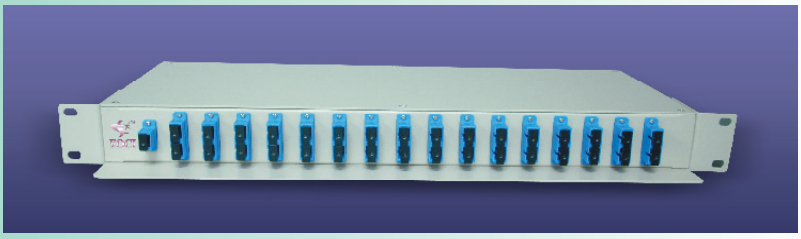
- Environmentally stable
- Easy installation
- Custom-defined specification
- Low insertion loss
- High uniformity
- High reliability





Applications:

- Metro
- Network protection
- Monitoring
- Access/PON distribution
- CATV



Performance Specifications:

ITEM		1xN Splitters					
Type		1x2	1x4	1x8	1x16	1x32	1x64
Insertion Loss, dB		≤4.2	≤7.4	≤10.7	≤13.7	≤16.9	≤21.5
Uniformity, dB		≤0.6	≤0.8	≤1.0	≤1.2	≤1.5	≤2.0
Operating Wavelength, nm		1260~1650					
Directivity, dB		≥55					
Optical Input Return Loss, dB		≥55					
Polarization Dependent Loss, dB		≤0.2	≤0.3				≤0.4
Package Size, mm (±0.2mm) (L x W x H)	(1)	40x4x4			40x4x4	50x7x4	60x12x4
Package Size, mm (±0.2mm) (L x W x H)	(2)	55x7x4			60X12X4	80X20X6	100x40x6
Storage Temperature, °C		-40 ~ 85 (*)					
Operating Temperature, °C		-40 ~ 85 (*)					
Connectors		SC,SC/APC,LC,LC/APC,ribbon,or others					

ITEM		2xN Splitters					
Type		2x2	2x4	2x8	2x16	2x32	2x64
Insertion Loss, dB		≤4.2	≤7.6	≤10.9	≤14.2	≤17.5	≤21.5
Uniformity, dB		≤0.8	≤1.0	≤1.2	≤1.50	≤1.80	≤2.0
Operating Wavelength, nm		1260~1650					
Directivity, dB		≥55					
Optical Input Return Loss, dB		≥55					
Polarization Dependent Loss, dB		≤0.2	≤0.3				≤0.4
Package Size, mm (±0.2mm) (L x W x H)	(1)	40x4x4	45x5x4		55x7x4	55x7x4	65x12x4
Package Size, mm (±0.2mm) (L x W x H)	(2)	55x7x4	55x7x4		60x12x4	80x20x6	100x40x6
Storage Temperature, °C		-40 ~ 85 (*)					
Operating Temperature, °C		-40 ~ 85 (*)					
Connectors		SC,SC/APC,LC,LC/APC,ribbon,or others					

Note: 1. Without Connector Loss
2. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.
3. Package Size: (1):Standard type w / fanout box at ouput ports
(2):Small form type w /o fanout box at output ports

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04172012 revised

1(2) x N PLC SPLITTERS

Ordering Information:

O - TS - □ □ - □□□ - □□ / □□ - WB - □□ / □□ - □ - □

Fiber Type (Input End)

C	Singlemode bare fiber	O	2.0 mm
L	Singlemode 900um tube	Q	3.0 mm
S	Modulized		
X	Others, please specify		

Fiber Type (Output End)

C	Singlemode bare fiber	O	2.0 mm
L	50cm bare fiber +900μm ribbon fan-out	Q	3.0 mm
H	900μm tube w/o fan out	S	Modulized
X	Others, please specify		

Input Port No.

1	1 x N
2	2 x N

Output Port Number

02	2 ports
04	4 ports
08	8 ports
16	16 ports
32	32 ports
64	64 ports
XX	Others, please specify

Input Fiber Length

10	100 cm
15	150 cm
00	Modulized
XX	Others, please specify

Output Cable Length

10	100 cm
20	200 cm
00	Modulized
XX	Others, please specify

Connector Type (Input / Output)

LC	LC type	AL	LC/APC type
SC	SC type	AS	SC/APC type
E2	E2000 type	AE	E2000/APC type
MU	MU type	NC	None type
XX	Others, please specify		

Package Option(mm)

2	40(L) x 4.0(W) x 4.0(H) for 1(2)x2, 1x4, 1x8, 1x16	3	50(L) x 7.0(W) x 4.0(H) for 1x32
4	55(L) x 7.0(W) x 4.0(H) for 2x16,2x32	5	45(L) x5.0(W) x4.0(H) for 2x4, 2x8
6	A6 plastic box (120x80x18mm) with pigtails (for 1(2)x2,1(2)x4,1(2)x8,1(2)x16,1(2)x32)	7	A5 plastic box (141x115x18mm) with pigtail (for 1x32)
		A	60(L)x12(W)x4.0(H) for small form 1(2)x16 900 μm tube
0	Modulized (with adaptors)	8	55(L)x7(W)x4.0(H) for small form 1(2)x2,1(2)x4,1(2)x8 900 μm tube
B	65(L)x12(W)x4.0(H) for 1x64		
D	65(L)x12(W)x4.0(H) for 2x64	E	80(L)x20(W)x6(H) for small form 900 μm tube (1(2)x32)

Package Option(mm)

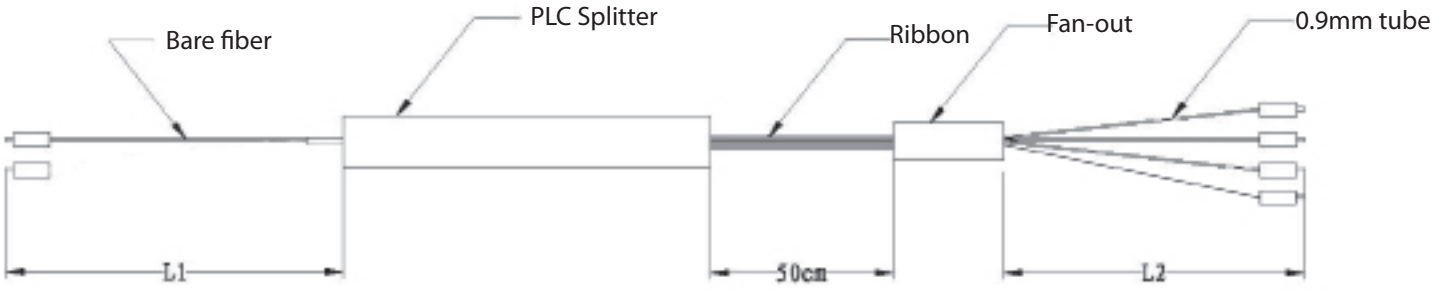
A:Singlemode fiber(G.652D)

J: Singlemode fiber(G.657. A1)

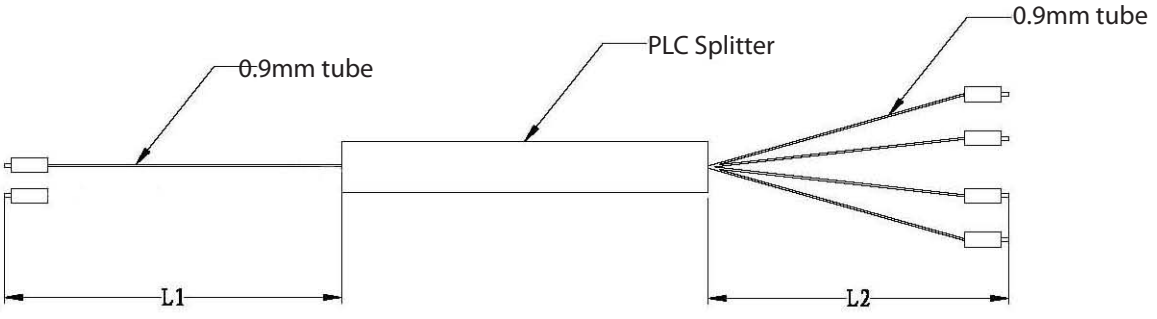
1(2) x N PLC SPLITTERS

Packaging Options:

Standard Type:



Small Form Type:



Note:L1: Input
L2: Output

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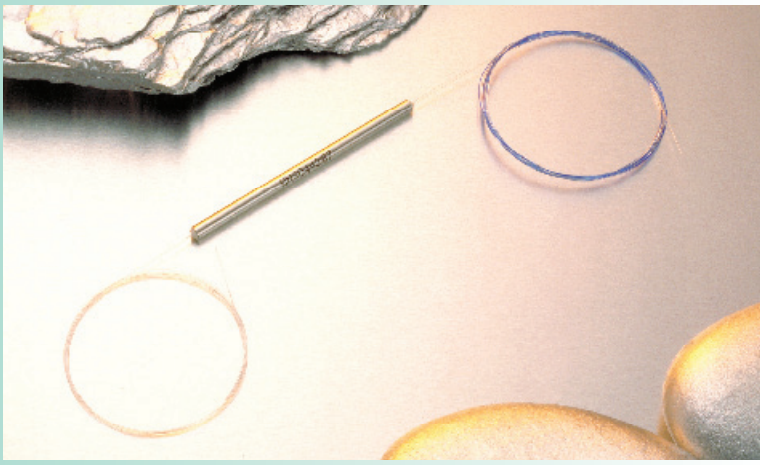
M-FM Thin Film Filter type Multimode Splitter



Performance Specifications:

ITEM		Gigabit Multimode Couplers
Operating Wavelength, nm		850 or 1310 or 1550
Port Configuration		1 X 2
Coupling Ratio		1:99 to 50:50, (50:50 standard)
Insertion Loss, dB		Please refer to the coupling ratio vs. insertion loss chart
Directivity, dB		≥25
Reflectance, dB		≥25
Operating Temperature, °C		-20 ~ +70 (*)
Storage Temperature, °C		-40 ~ +85
Package Options (for different pigtail)	1. Coated fiber (250 μ m)	Φ3.8x32mm metal tube
	2. Loose tube (900 μ m)	Φ3.8x32mm metal tube
	3. PVC cable (2.0/3.0mm)	A1(100x12x10mm) package

Note: 1. The packaging option codes are explained in Packaging Dimensions below.
2. * -20°C ~ +70°C for PVC cable.

Coupling Ratio VS. Insertion Loss:

Coupling Ratio (%)	Insertion Loss (dB)	
	Without Connector	With Connector
R50/ T50	4.2/4.2	4.5/4.5
R60/ T40	2.8/4.8	3.1/5.1
R70/ T30	2.1/6.2	2.4/6.5
R67/ T33	2.4/6.0	2.7/6.3
R80/ T20	1.6/7.8	1.8/8.1
R90/ T10	1.1/11.2	1.3/11.5
R95/ T05	0.7/14.2	1.0/14.5
R98/ T02	0.5/20.0	0.8/20.3
R99/ T01	0.4/22.0	0.7/22.3

Thin Film Filter type Multimode Splitter

Ordering Information:

M - FM - □ □ - □□□□□□ - □□□□ - □□□ - □□ - □□ - □□

Fiber Type

C	OM2 50/125µm	D	OM1 62.5/125µm
G	OM3 50/125µm	H	OM4 50/125µm
X	Others, please specify		

Package Option

C	coated fiber
L	loose tube
O	PVC 2.0mm cable
Q	PVC 3.0mm cable
X	Others, please specify

Coupling Ratio

R50T50	50% Reflect and 50% Pass
R70T30	70% Reflect and 30% Pass

Pigtail Length (for each port, m)

0001	1.0 m	X050	0.5 m
X150	1.5 m	0002	2.0 m
0000	Modulized	XXXX	others, please specify

Wavelength

V85	VCSEL 850nm
L85	LED 850nm
E85	EF compliant LED 850nm
L35	LD 1310 and 1550 nm

Connector Type Common/ Reflect/Pass)

FC	FC type	SC	SC type
ST	ST type	LC	LC type
MU	MU type	AS	SC/APC type
AP	FC/APC type	AL	LC/APC type
XX	Others, please specify		

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A-AF FIXED ADAPTOR TYPE ATTENUATORS

Features:
- Environmentally stable
- Easy installation
- Custom designed specifications
- Low return loss
- Readily panel mountable
- Compact packaging

Applications:
- Telecommunications
- LAN
- CATV
- Fiber optic sensors
- Testing instruments
- Fiber to the home
- Multi-channel subscriber loop
- Optical transmission system

Performance Specifications:

ITEM		Wideband Fixed Adaptor Type Attenuator (Doping type)	
Mode Type		SM	
Operating Wavelength, nm		1310 or 1550	
Bandwidth, nm		±40	
Attenuation Accuracy (typical, including connector)	ITEM	H grade	A grade
	1~10dB	±1.0	±1.5
	11~15dB	±1.5	±2.0
	16~20dB	±2.0	±2.5
Back Reflection, dB		≤-40 (for convex polishing), ≤-60 (for Angled types)	
Operating Temperature, °C		-40 ~ 75	
Connector Type		FC, SC, ST, FC/APC, SC/APC, LC, MU	

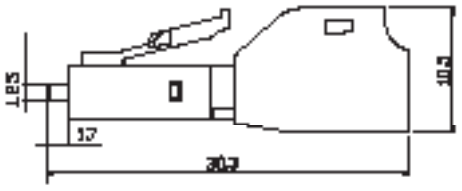
ITEM		Dual Window Fixed Adaptor Type Attenuator (Doping type)		
Mode Type		SM		
Operating Wavelength, nm		1310 and 1550		
Bandwidth, nm		±40		
Attenuation Accuracy typical, including connector	ITEM	S grade (*)	H grade	A grade
	1~5dB	±0.5	±1.0	±1.5
	6~10dB	±1.0	±1.5	±2.0
	11~15dB	±1.5	±2.0	±2.5
	16~20dB	±2.0	±2.5	±3.0
Back Reflection, dB		≤-40 (for convex polishing), ≤-60 (for Angled types)		
Operating Temperature, °C		-40 ~ 75		
Connector Type		FC, SC, ST, FC/APC, SC/APC, LC, MU		

* For SC , LC type only.

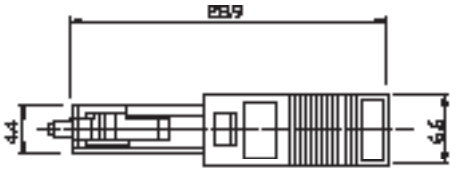
FIXED ADAPTOR TYPE ATTENUATORS

Mechanical Drawings:

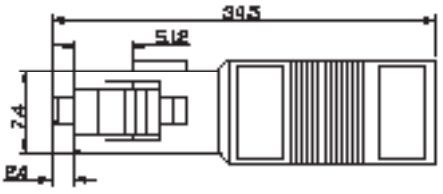
Unit: mm



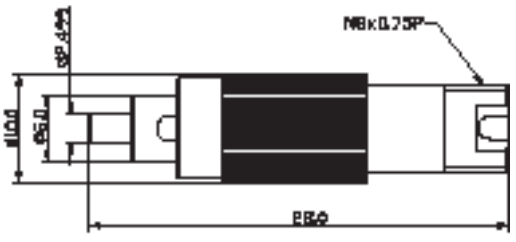
A-AF-AM (LC type)



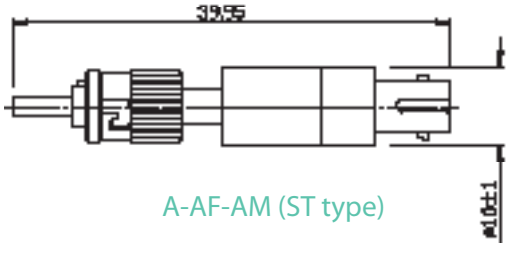
A-AF-AM (MU type)



A-AF-AM (SC type)



A-AF-AM (FC type)



A-AF-AM (ST type)

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FIXED ADAPTOR TYPE ATTENUATORS

Ordering Information:

A - AF - □ □ - □□ - □ - FMML - □□ - □□ / □□

Fiber Type

A	Siglemode fiber
X	Other type of fiber

Attenuator Type

M	Doping type (Standard)

Attenuation Value

00	0 dB (attenuation accuracy < 0.5 dB)
03	3 dB
05	5 dB
XX	XXdB (01~20, please specify)

Attenuation Accuracy

S	Super grade (for LC , SC type only)
H	High grade
A	Average grade

Operating Wavelength

35	1310nm & 1550nm
3W	1310 ± 40nm
5W	1550 ± 40nm
XX	Others, please specify

Connector Type (for both ends)

FC	FC type	LC	LC type
AP	FC/APC type	MU	MU type
SC	SC type	AL	LC/APC type
AS	SC/APC type	ST	ST type
XX	others, please specify		

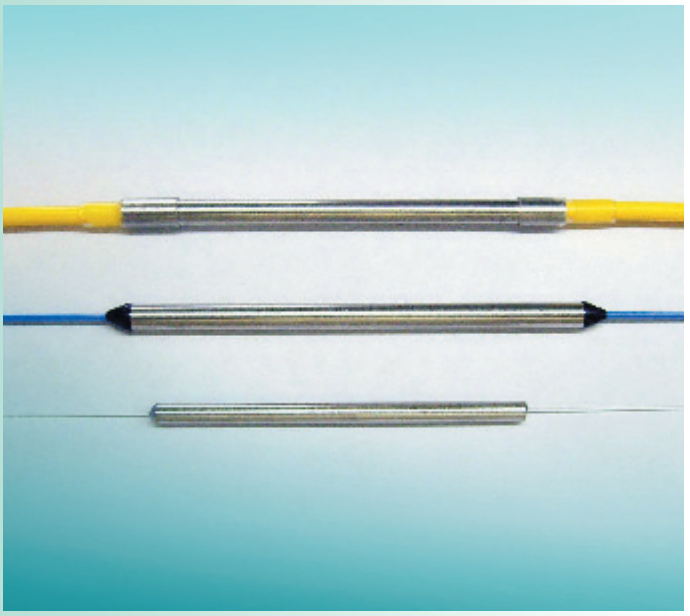
A-IF FIXED IN-LINE TYPE ATTENUATORS

Features:

- Environmentally stable
- Easy installation
- Custom designed specifications
- Low return loss
- Low insertion loss
- Readily panel mountable
- Compact packaging

Applications:

- Telecommunications
- LAN
- CATV
- Fiber optic sensors
- Testing instruments
- Fiber to the home
- Multi-channel subscriber loop
- Optical transmission system



Performance Specifications:

<Single-Mode>

ITEM		Standard	Wideband	Dual Windows
Operating Wavelength, nm		1310 or 1550	1310 or 1550	1310 and 1550
Bandwidth, nm		±10	±40	±40
Attenuation, dB		1 ~ 30, or otherwise specified		
Attenuation Accuracy, dB typical, not including connector termination		± 0.5 (for 1 ~ 10dB) ± 10% (for 11 ~ 25dB)		
Back Reflection, dB		≤-50		
Operating Temperature, °C		-40 ~ 85 (*)		
Package Options (for different pigtailing)	1. coated fiber (250μm)	TE		
	2. loose tube (900μm)	TA		
	3. PVC cable (3.0mm)	TA		

<Multi-Mode>

ITEM		Standard
Operating Wavelength, nm		850 or 1310
Bandwidth, nm		±10
Attenuation, dB		1 ~ 30, or otherwise specified
Attenuation Accuracy, dB typical, including connector		± 0.5 (for 1 ~ 5dB), ± 10% (for 6 ~ 20dB)
Operating Temperature, °C		-40 ~ 85 (*)
Package Options (for different pigtailing)	1. coated fiber (250μm)	TE
	2. loose tube (900μm)	TA
	3. PVC cable (3.0mm)	TA

Note: 1. * 0°C ~ +70°C for 900μm, 2.0mm, or 3.0mm cable.

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FIXED IN-LINE TYPE ATTENUATORS

Ordering Information:

A - IF - □ □ - □□ - □ - □□□□ - □□ - □□ / □□

Fiber Type

A	Singlemode Fiber
C	50/125μm
D	62.5/125μm
X	Other type of fiber

Cable Type

C	TE with coated fiber, 250μm
L	TA with loose tube, 900μm
O	TA with PVC cable, 2.0mm
Q	TA with PVC cable, 3.0mm
X	Others, please specify

Attenuation Value

01 ~ 30 Please specify

Attenuation Accuracy

H	High grade (± 0.5dB)
A	Average grade (± 10%)

Pigtail Length (for each end)

4-digit number, please specify in cm

Operating Wavelength and Bandwidth

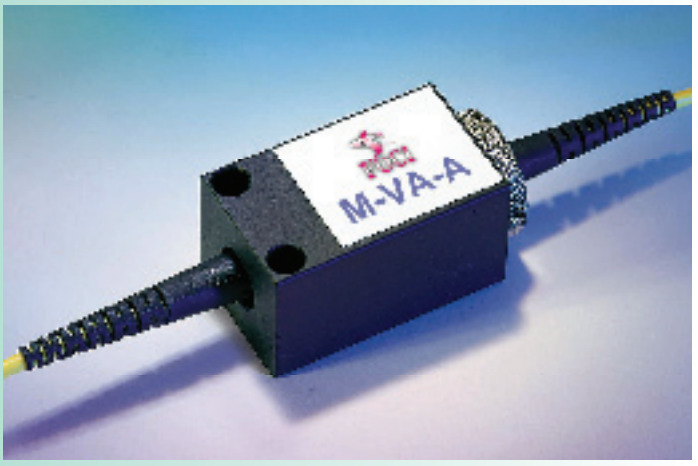
85	850nm	13	1310nm
15	1550nm	3W	1310 ± 40nm
35	1310/1550nm dual windows	5W	1550 ± 40nm
00	Others, please specify	RX	1300nm

Connector Type (for both ends)

FC	FC type	AP	FC/APC type
SC	SC type	AS	SC/APC type
ST	ST type	NC	None
LC	LC type	MU	MU type
XX	Others, please specify		

M-VA-A MECHANICAL VARIABLE AIRGAP-TYPE ATTENUATORS

Features:
- Environmentally stable
- Easy installation
- Custom designed specifications
- Low return loss
- Readily panel mountable
- Compact packaging



Performance Specifications:

Parameter	Mechanical Variable Airgap-Type Attenuators	
Mode Type	SM	MM
Optical Wavelength, nm	1260 to 1600	850, 1310
Max. Residual Attenuation, dB	1.5	1.5
Min. Attenuation Range, dB	35	25
Max. Resolution, dB	0.15	0.15
Min. Optical Return Loss, dB	55	-
Max. Polarization Sensitivity, dB	0.2	-
Max. Thermal Stability, dB/°C	0.03	-
Max. Optical Power, mW	300	-
Operation Temperature, °C	0 ~ +60	
Storage Temperature, °C	-40 ~ +75	
Packaging Dimension, mm	50 x 27 x 25	

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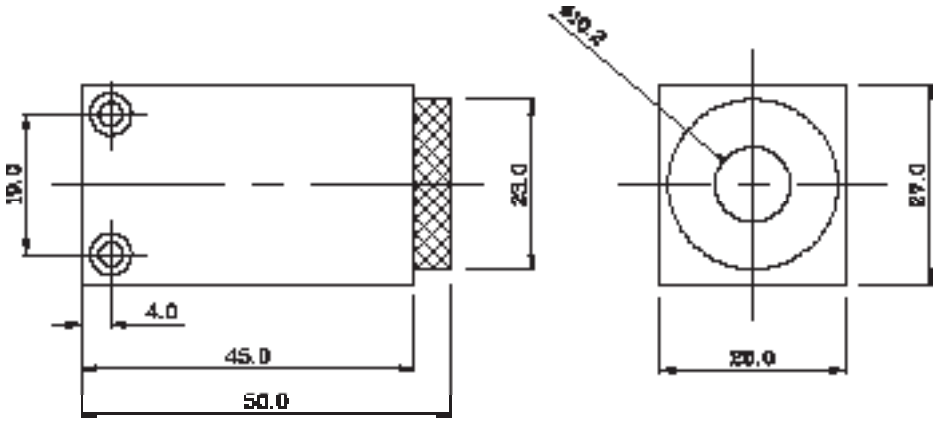
MECHANICAL VARIABLE AIRGAP-TYPE ATTENUATORS

Mechanical Drawings:

Unit: mm



Ordering Information:

M - VA - A - □ - □ - □□ - □□ / □□

Fiber Type (Input / Output)

A	Singlemode Fiber	D	MM 62.5/125μm
C	MM 50/125μm	X	Others

Cable Type

Q	3mm cable	O	2mm cable
X	Others		

Fiber Length (For Each End)

01	1m	15	15m
05	5m	20	20m
10	10m	XX	Others

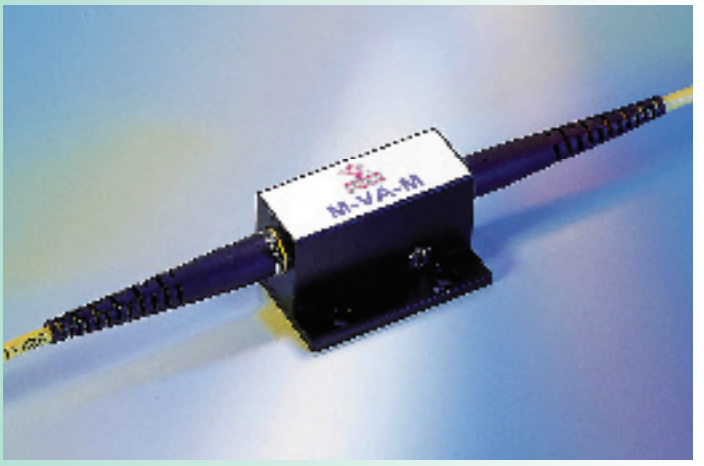
Connector Type (Input / Output)

NC	None	AP	FC/APC type
FC	FC type	AS	SC/APC type
SC	SC type	ST	ST type
LC	LC type	MU	MU type
XX	Others		

M-VA-M MECHANICAL VARIABLE MICRO-OPTICS-TYPE ATTENUATORS

Features:

- Environmentally stable
- Easy installation
- Custom designed specifications
- Low return loss
- Readily panel mountable
- Compact packaging



Performance Specifications:

Parameter	Mechanical Variable Micro-Optics Type Attenuators	
Mode Type	SM	MM
Optical Wavelength, nm	1260 to 1600	850 or 1310
Max. Residual Attenuation, dB	1.5	2.5
Min. Attenuation Range, dB	50	30
Max. Resolution, dB	0.1	0.1
Min. Optical Return Loss, dB	55	-
Max. Polarization Sensitivity, dB	0.2	-
Max. Thermal Stability, dB/°C	0.03	-
Max. Optical Power, mW	300	-
Operation Temperature, °C	0~+60	
Storage Temperature, °C	-40~+75	
Packaging Dimension, mm	38x30x21.5	

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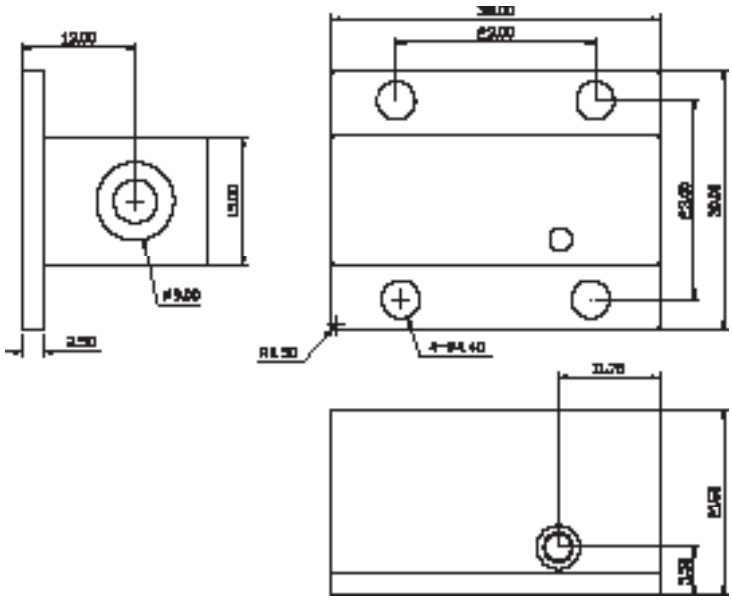
MECHANICAL VARIABLE MICRO-OPTICS-TYPE ATTENUATORS

Mechanical Drawings:

Unit: mm



Ordering Information:

M - VA - M - □ - □ - □□ - □□ / □□

Fiber Type (Input / Output)

A	Singlemode Fiber	D	MM 62.5/125μm
C	MM 50/125μm	X	Others

Cable Type

Q	3mm cable	O	2mm cable
X	Others		

Fiber Length (For Each End)

01	1m	02	2m
XX	Others		

Connector Type (Input / Output)

NC	None	AP	FC/APC type
FC	FC type	AS	SC/APC type
SC	SC type	ST	ST type
LC	LC type	MU	MU type
XX	Others		