

# LEAD Fiber Optics PRODUCT CATALOGUE

## FIBER OPTIC COUPLER

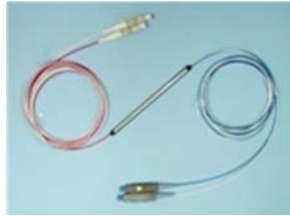
## **LFO Fiber Optic Coupler Series**



### **Standard Single-Mode Coupler**

Standard Single-Mode Couplers (Single window Standard Single-Mode Couplers) are bi-directional multi-port devices which combine or separate optical signals over 1310nm or 1550nm wavelength windows. They are manufactured using the fused bionics taper (FBT) process ensure consistency in quality, reliability and high performance in a wide range of applications.

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### **Standard Multi-Mode Coupler**

Standard Multimode Couplers are fabricated from graded index fibers with core diameters of 50um or 62.5um. Standard multimode couplers are commonly used in short distance communications with LED sources operating at 1310nm or 850nm. They can be widely used in Local Access Networks (LAN), Passive Optical Networks (PON), Optical Communications, Testing Instrument and Optical Fiber Sensor.

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### **Single-Mode Wideband Coupler**

Single Mode Wideband Couplers (Single window Single Mode Wideband Couplers) have 80nm bandwidth, compared to 20nm of standard single mode couplers. They are working at center wavelength other than 1310nm or 1550nm can also be provided. They are manufactured using the fused bionics taper (FBT) process ensure consistency in quality, reliability and high performance in a wide range of applications.

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### **Dual Window Wideband coupler**

Dual Window Wideband couplers (Dual Window Wideband Single mode couplers) are bi-directional passive devices which split or combine different optical signals over 1310nm and 1550nm wavelength windows. They are manufactured using the fused bionics taper (FBT) process ensure consistency in quality, reliability and high performance in a wide range of applications.

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### **Single-Mode Standard Tree coupler**

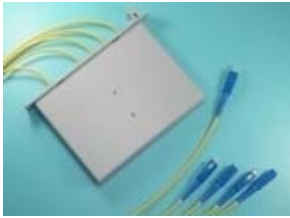
Single-Mode Standard Tree couplers (Single Window Single-Mode Standard Tree couplers) have 80nm bandwidth, compared to 20nm of standard single mode couplers They are working at 1310nm or 1550nm wavelength windows. They are fused bionics tapered couplers cascaded in series to achieve the desired port configuration. These couplers are used to branch 1(2) input fibers into N (3, 4, 8,...16 ..) out put fibers with minimum loss.

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### **Single-Mode Wideband Tree coupler**

Single-Mode Standard Tree couplers (Single Window Single-Mode Standard Tree couplers) are bi-directional high-port count units for splitting or combining optical signals over 1310nm or 1550nm wavelength windows. They are fused bionics tapered couplers cascaded in series to achieve the desired port configuration. These couplers are used to branch 1(2) input fibers into N (3, 4, 8,...16 ..) out put fibers with minimum loss.



### ***Dual Window Tree Coupler***

Dual Window Tree Couplers (Dual Window Single Mode Tree couplers) are bi-directional high-port count units for splitting or combining different optical signals over 1310nm and 1550nm wavelength windows. These Tree couplers are fused bionics tapered couplers cascaded in series to achieve the desired port configuration. They are used to branch 1(2) input fibers into N (3, 4, 8,...16 ..) out put fibers with minimum loss.

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### ***Dual Window Star Coupler***

Dual Window Star Couplers (Dual Window Single Mode Star Couplers) are bi-directional high-port count units for splitting or combining different optical signals over 1310nm and 1550nm wavelength windows. These Star Couplers are fused t bionics tapered couplers cascaded in series to achieve the desired port configuration. They are used to branch N (4, 8...16..) input fibers into N (4, 8...16..) out put fibers with minimum loss.

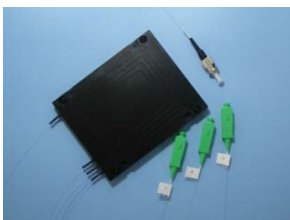
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### ***Unitary 1X3 and 3X3 Coupler***

Unitary 1X3 and 3X3 Couplers are multi-port components based on single fusion of multi fibers using advanced Fused Bionics Taper Technology. They have wide operation wavelength window, including 1310nm or 1550nm. These Couplers have compact package size, low insertion loss, wide bandwidth and high reliability in performance.

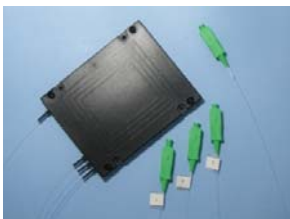
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### ***Unitary 1X3 Wideband Coupler***

Unitary 1X3 Wideband Couplers are multi-port components based on single fusion of multi fibers using advanced Fused Bionics Taper Technology. They have 60nm bandwidth, compared to 20nm of Unitary 1X3Couplers. They have wide operation wavelength window, including 1310nm or 1550nm. These Couplers have compact package size, low insertion loss, wide bandwidth and high reliability in performance.

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### ***Unitary 1X3 and 1X4 Dual Window Wideband***

Unitary 1X3 and 1X4 Dual Window Wideband are multi-port components based on single fusion of multi fibers using advanced Fused Bionics Taper Technology. They have wide operation wavelength window, including 1310nm and 1550nm. These Couplers have compact package size, low insertion loss, wide bandwidth and high reliability in performance.

## Standard Single-Mode Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- Point to point system
- WAN



## Specifications

ITEM		VALUE	
Operation Wavelength ,nm		1310nm±10 or 1550nm±10	
Grade		Supper(s)	High(H)
Typical Excess Loss ,dB		0.06	0.15
Uniformity, dB(50:50)		0.5	0.9
Thermal Stability , dB (peak-peak)		≤0.2	≤0.3
Polarization Stability ,dB		≤0.1	≤0.15
Port Configuration		1×2 or 2×2	
Coupling Ratio		1 : 99 to 50 : 50, (50 : 50 standard)	
Insertion Loss ,dB		Refer to Coupling ratio vs. insertion Loss chart	
Directivity ,dB		≥50(1×2), ≥60(2×2)	
Reflectance ,dB		≥55	
Operation Temperature,°C		-40°C ~ 85°C(*)	
Storage temperature, °C		-55°C ~ 85°C	
<b>Package Options (for different pigtail)</b>	1.coated fiber (250 μ m)	T5,MA,MB,M3	
	2.Loose tube (900 μ m)	TA,MA,MB,M3	
	3.PVC cable(3.0mm)	A1,MA,MB,M3	

Note: (\*) -20°C ~ +70°C for PVC cable

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

# Standard Singlemode Coupler Ordering information

CO-SM    XX/XX    XX    XX    X    X    XX    XX    XXX(cm)

**Connector(for both ends)**

- 11-ST
- 21-FC/PC
- 22-FC/APC
- 31-SC/PC
- 32-SC/APC
- 41-LC/PC
- 51-MU/PC
- 00-None
- XX-Others

**Pigtail length (for each port)**

- 050- 50cm
- 100- 100cm
- 150- 150cm
- 200- 200cm
- 000- Modulized
- XXX-Others

**Wavelength**

- 31-1310 nm
- 551550 nm
- XX-Others

**Coupling ratio**

00 ~ 50 please specify

**Package option(for both ends)**

- 01-T5 with coated fiber
- 02-MA/MB with coated fiber
- 11-TA with loose tube cable
- 12-MA/MB/M3 with loose tube cable
- 21-A1 with PVC cable(2.0mm)
- 31-A1 with PVC cable(3.0mm)
- 32-MA/MB/M3 with PVC cable(3.0mm)
- 33-MA/MB/M3 with adapters
- XX-Others

**Port number**

- 12- 1 x 2
- 22- 2 x 2

**Fiber type**

- A- Corning SMF-28e
- D-Dispersion-shift fiber
- X-Others

**Grade**

- S- Super
- H- High

## Standard Multimode Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- Video transmission
- Fiber optic sensing
- Testing instruments



## Specifications

ITEM	VALUE	
Operation Wavelength , nm	850nm or 1310nm	
Grade	Super(S)	High(H)
Excess Loss ,dB	0.7	1.0
Uniformity, dB (50 : 50,at specified wavelength)	0.7	1.0
Thermal Stability, dB (peak-peak)	≤0.20	≤0.25
Coupling Ratio	1 : 99 to 50 : 50 , (50 : 50 standard)	
Insertion Loss, dB	Refer to the coupling ratio vs. insertion loss chart	
Directivity, dB	≥ 35	
Reflectance, dB	≥ 35	
Operation Temperature, °C	-40°C ~85°C (*)	
Storage temperature , °C	-55°C ~85°C	
<b>Package Options (for different pigtail)</b>		
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: (\*) -20°C ~ +70°C for PVC cable.

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

# Standard Multimode Coupler Ordering information

CO-MM    XX/XX    XX    XX    X    X    XX    XX    XXX(cm)

**Connector (for both ends)**  
 11-ST  
 21-FC/PC  
 31-SC/PC  
 41-LC/PC  
 51-MU/PC  
 00-None  
 XX-Others

**Pigtail length (for each port)**  
 050- 50cm  
 100- 100cm  
 150- 150cm  
 200- 200cm  
 000- Modulized  
 XXX-Others

**Wavelength**  
 31-1310 nm  
 30-1300 nm  
 85-850 nm

**Coupling ratio**  
 00 ~ 50 please specify

**Package option**  
 01-T5 with coated fiber  
 02-MA/MB/M3 with coated fiber  
 11-TA with loose tube cable  
 12-MA/MB/M3 with loose tube cable  
 21-A1 with PVC cable(2.0mm)  
 31-A1 with PVC cable(3.0mm)  
 32-MA/MB/M3 with PVC cable(3.0mm)  
 33-MA/MB/M3 with adapters  
 XX-Others

**Port number**  
 12- 1 x 2  
 22- 2 x 2

**Fiber type**  
 2- 50/125um  
 3- 62.5/125um  
 X-Others

**Grade**  
 S- Super  
 H- High

## Singlemode Wideband Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments
- Point to point system
- WAN



## Specifications

ITEM	VALUE	
Operation Wavelength ,nm	1310nm±40 or 1550nm±40	
Grade	Supper(s)	High(H)
Typical Excess Loss ,dB	0.1	0.2
Uniformity, dB(50:50)	0.6	1
Thermal Stability ,dB(peak-peak)	≤0.2	≤0.3
Polarization Stability ,dB	≤0.1	≤0.15
Port Configuration	1×2 or 2×2	
Coupling Ratio	1 : 99 to 50 : 50, (50 : 50 standard)	
Insertion Loss ,dB	Refer to Coupling ratio vs. insertion Loss chart	
Directivity ,dB	≥ 50(1×2), ≥ 60(2×2)	
Reflectance ,dB	≥ 55	
Operation Temperature, °C	-40°C ~ 85°C	
Storage temperature, °C	-55°C ~ 85°C	
<b>Package Options (for different pigtail)</b>	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: (\*) -20°C ~ +70°C for PVC cable

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	11/0.63	12.9/0.8
5/95	14.6/0.4	18.4/0.5
1/99	21.6/0.3	21.6/0.4

# Singlemode Wideband Coupler Ordering information

CO-SW XX/XX XX XX X XX XX XXX(cm)

**Connector(for both ends)**  
 11-ST  
 21-FC/PC  
 22-FC/APC  
 31-SC/PC  
 32-SC/APC  
 41-LC/PC  
 51-MU/PC  
 00-None  
 XX-Others

**Pigtail length (for each port)**  
 050- 50cm  
 100- 100cm  
 150- 150cm  
 200- 200cm  
 000- Modulized  
 XXX-Others

**Wavelength**  
 31-1310 nm  
 35-1550 nm

**Coupling ratio**  
 00 ~ 50 please specify

**Package option**  
 01-Corning SMF-28e  
 02-MA/MB/M3 with coated fiber  
 11-TA with loose tube cable  
 12-MA/MB/M3 with loose tube cable  
 21-A1 with PVC cable(2.0mm)  
 31-A1 with PVC cable(3.0mm)  
 32-MA/MB/M3 with PVC cable(3.0mm)  
 33-MA/MB/M3 with adapters  
 XX-Others

**Port number**  
 12- 1 x 2  
 22- 2 x 2

**Grade**  
 S- Super  
 H- High

## Dual Window Wideband Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



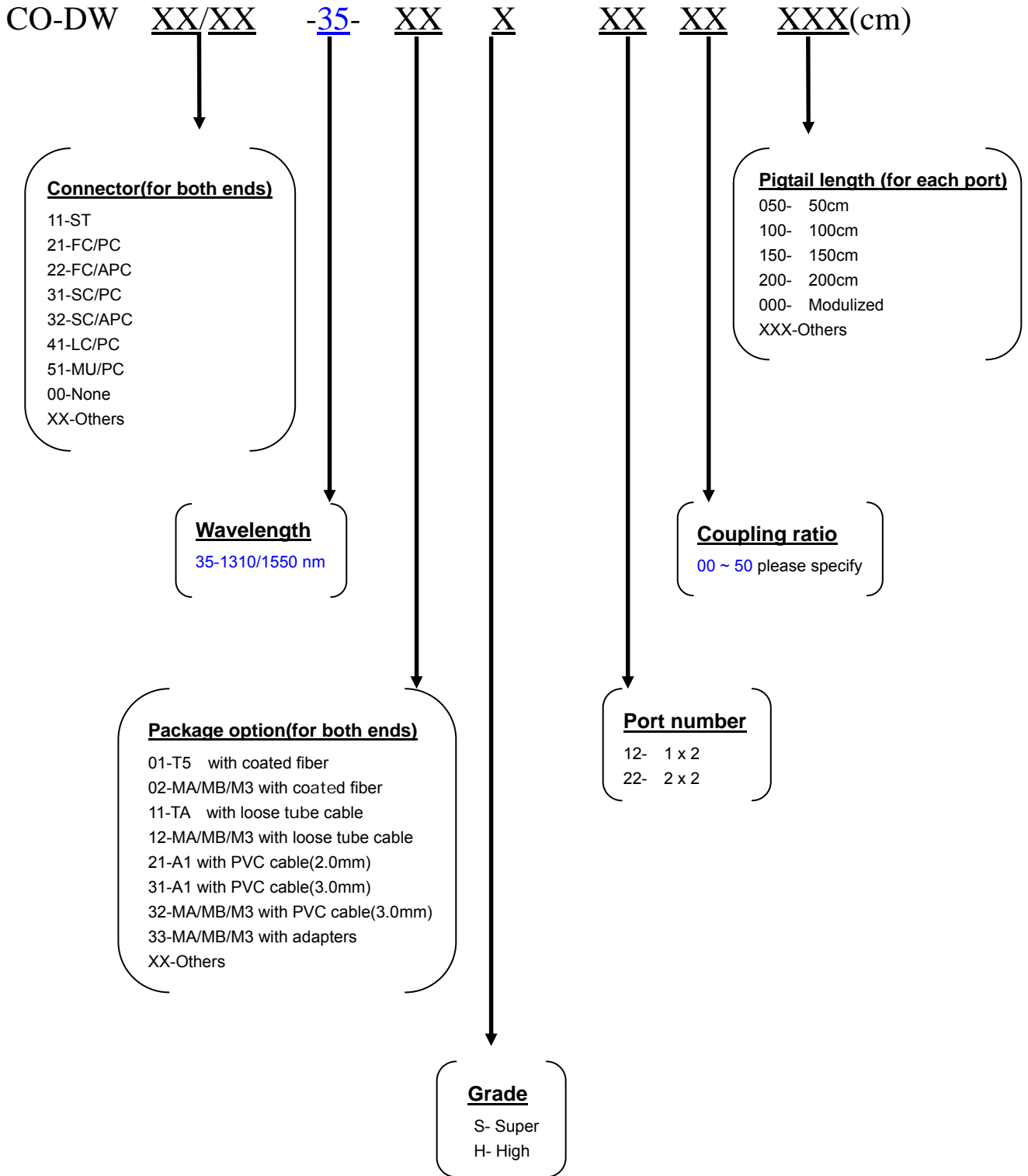
## Specifications

ITEM	VALUE	
Operation Wavelength ,nm	1310nm±10 and 1550nm±10	
Grade	Supper(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	≤0.1	≤0.15
Port Configuration	1×2 or 2×2	
Coupling Ratio	1 : 99 to 50 : 50, (50 : 50 standard)	
Insertion Loss ,dB	Refer to Coupling ratio vs. insertion Loss chart	
Directivity ,dB	≥50(1×2), ≥60(2×2)	
Reflectance ,dB	≥50	
Operation Temperature,°C	-40°C ~ 85°C	
Storage temperature, °C	-55°C ~ 85°C	
<b>Package Options (for different pigtail)</b>	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: (\*) -20°C ~ +70°C for PVC cable

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

# Dual Window Wideband Coupler Ordering information



**LEAD Fiber Optics Co.,Ltd.**

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**Lfo**

## Singlemode Standard Tree Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments

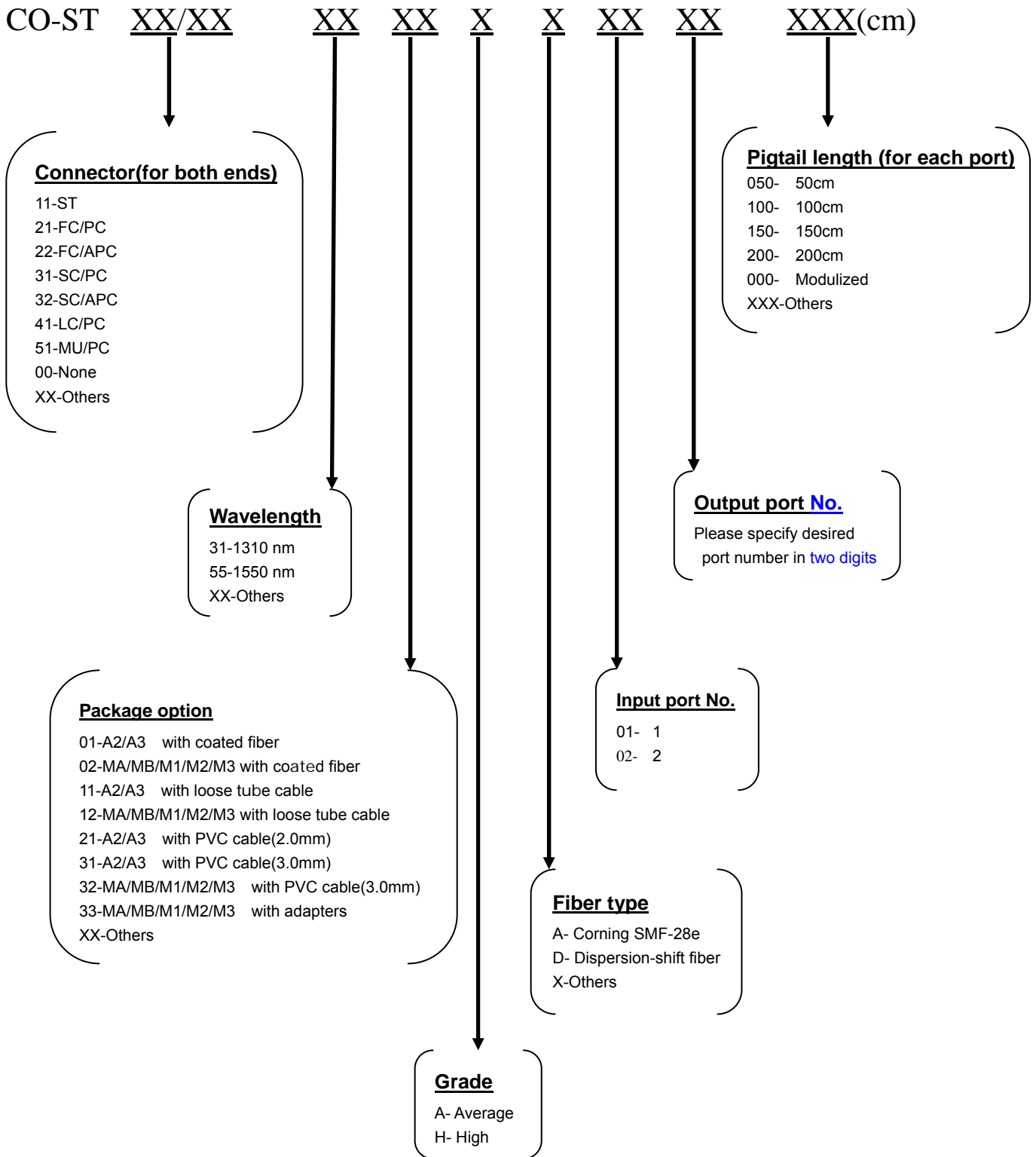


## Specifications

ITEM	VALUE							
Port Configuration	1(2)×4		1(2)×8		1(2)×16		1(2)×32	
Operation Wavelength, nm	1310nm±10 or 1550nm±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	28.2
Uniformity, dB	0.7	1.7	1.1	2.5	1.7	3.5	2.2	4.3
Operation Temperature, °C	-40°C ~ 85°C (*)							
Storage temperature, °C	-55 °C ~ 85°C							
<b>Package Options (for different pigtail)</b>								
1.coated fiber (250 μ m)	A2,MA,MB,M3	A3,MA,MB,M3	MA,MB,M1	M1,M2				
2.Loose tube (900 μ m)	A2,MA,MB,M3	A3,MA,MB,M3	MA,MB,M1	M1,M2				
3.PVC cable(3.0mm)	A2,MA,MB,M3	A3,MA,MB,M3	MA,MB,M1	M1,M2				

Note: (\*) -20°C ~ +70°C for PVC cable

# Singlemode Standard Tree Coupler Ordering information



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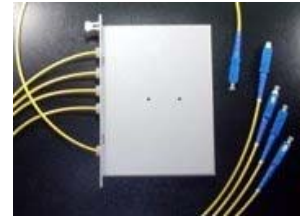
## Singlemode Wideband Tree Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



## Specifications

ITEM	VALUE							
Port Configuration	1(2)×4		1(2)×8		1(2)×16		1(2)×32	
Operation Wavelength, nm	1310nm±40 or 1550nm±40							
Grade	H	A	H	A	H	A	H	A
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
Operation Temperature, °C	-40°C ~ 85°C (*)							
Storage temperature, °C	-55°C ~ 85°C							
<b>Package Options (for different pigtail)</b>								
1.coated fiber (250µm)	A2,MA,MB,M3		A3,MA,MB,M3		MA,MB,M1		M1,M2	
2.Loose tube (900µm)	A2,MA,MB,M3		A3,MA,MB,M3		MA,MB,M1		M1,M2	
3.PVC cable(3.0mm)	A2,MA,MB,M3		A3,MA,MB,M3		MA,MB,M1		M1,M2	

Note: (\*) -20°C ~ +70°C for PVC cable.

# Singlemode Wideband Tree Coupler Ordering information

CO-WT XX/XX - X- XX X X XX - XX XXX(cm)

## Connector (for both ends)

11-ST  
21-FC/PC  
22-FC/APC  
31-SC/PC  
32-SC/APC  
41-LC/PC  
51-MU/PC  
00-None  
XX-Others

## Pigtail length (for each port)

050- 50cm  
100- 100cm  
150- 150cm  
200- 200cm  
000- Modulized  
XXX-Others

## Wavelength

31-1310 nm  
55-1550 nm  
X-Others

## Output port No.

Please specify desired port number in **two digits**

## Package option

01-A2/A3 with coated fiber  
02-MA/MB/M1/M2/M3 with coated fiber  
11-A2/A3 with loose tube cable  
12-MA/MB/M1/M2/M3 with loose tube cable  
21-A2/A3 with PVC cable(2.0mm)  
31-A2/A3 with PVC cable(3.0mm)  
32-MA/MB/M1/M2/M3 with PVC cable(3.0mm)  
33-MA/MB/M1/M2/M3 with adapters  
XX-Others

## Input port No.

Please specify desired port number in **two digits**

## Fiber type

A- Corning SMF-28e  
D- Dispersion-shift fiber  
X-Others

## Grade

A- Average  
H- High

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**Lfo**

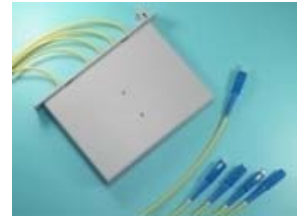
## Dual Window Tree Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



## Specifications

ITEM	VALUE							
Port Configuration	1(2)×4		1(2)×8		1(2)×16		1(2)×32	
Operation Wavelength, nm	1310nm±40 and 1550nm±40							
Grade	H	A	H	A	H	A	H	A
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
Operation Temperature, °C	-40°C ~ 85°C(*)							
Storage temperature, °C	-55°C ~ 85°C							
<b>Package Options (for different pigtail)</b>								
1.coated fiber (250 μm)	A2,MA,MB,M3	A3,MA,MB,M3		MA,MB,M1		M1,M2		
2.Loose tube (900 μm)	A2,MA,MB,M3	A3,MA,MB,M3		MA,MB,M1		M1,M2		
3.PVC cable(3.0mm)	A2,MA,MB,M3	A3,MA,MB,M3		MA,MB,M1		M1,M2		

Note: (\*) -20°C ~ +70°C for PVC cable

# Dual Window Tree Coupler Ordering information

CO-DT XX/XX -35 - XX X XX XX XXX(cm)

**Connector(for both ends)**

- 11-ST
- 21-FC/PC
- 22-FC/APC
- 31-SC/PC
- 32-SC/APC
- 41-LC/PC
- 51-MU/PC
- 00-None
- XX-Others

**Pigtail length (for each port)**

- 050- 50cm
- 100- 100cm
- 150- 150cm
- 200- 200cm
- 000- Modulized
- XXX-Others

**Wavelength**  
35-1310/1550 nm

**Output port No.**  
Please specify desired port number in **two digits**

**Package option**

- 01-A2/A3 with coated fiber
- 02-MA/MB/M1/M2/M3 with coated fiber
- 11-A2/A3 with loose tube cable
- 12-MA/MB/M1/M2/M3 with loose tube cable
- 21-A2/A3 with PVC cable(2.0mm)
- 31-A2/A3 with PVC cable(3.0mm)
- 32-MA/MB/M1/M2//M3 with PVC cable(3.0mm)
- 33-MA/MB/M1/M2/M3 with adapters
- XX-Others

**Input port No.**

- 03- 1
- 04- 2

**Grade**

- A- Average
- H- High

## Dual Window Star Coupler

### Features

- Low insertion Loss
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments

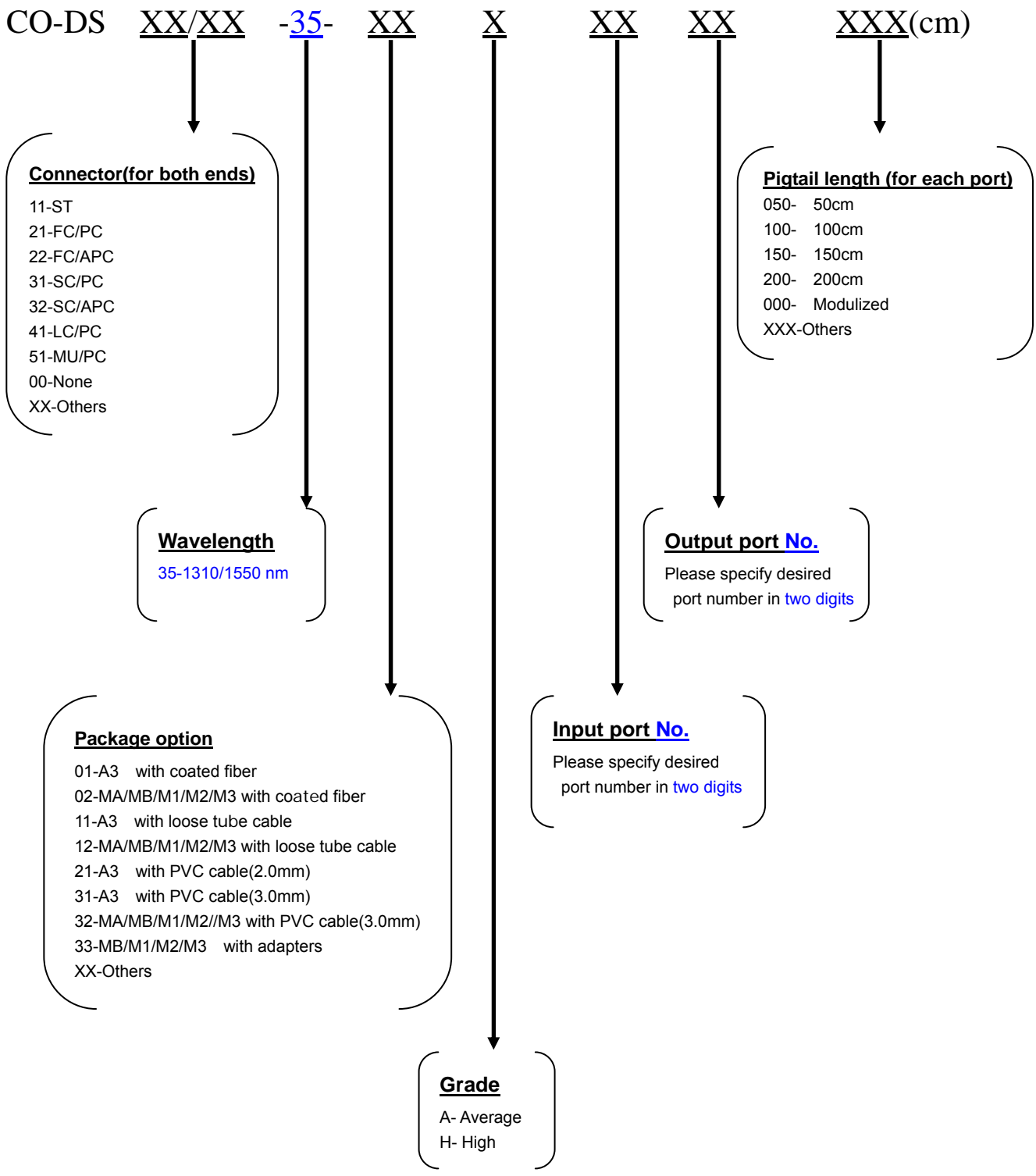


## Specifications

ITEM	VALUE							
Port Configuration	4×4		8×8		16×16		32×32	
Operation Wavelength, nm	1310nm±40 and 1550nm±40							
Grade	H	A	H	A	H	A	H	A
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	21	3.2	2.7	4.0	3.0	6.0
Operation Temperature, °C	-40°C ~ 85°C(*)							
Storage temperature, °C	-55°C ~ 85°C							
<b>Package Options (for different pigtail)</b>								
1.coated fiber (250µm)	A3,MA,MB,M3		MB,M1,M2		M1,M2		M2	
2.Loose tube (900µm)	A3,MA,MB,M3		MB,M1,M2		M1,M2		M2	
3.PVC cable(3.0mm)	A3,MB,M3		MB,M1,M2		M1,M2		M2	

Note: (\*) -20°C ~ +70°C for PVC cable

# Dual Window Star Coupler Ordering information



## Unitary 1×3 and 3×3 Coupler

### Features

- Low insertion Loss
- High uniformity
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments

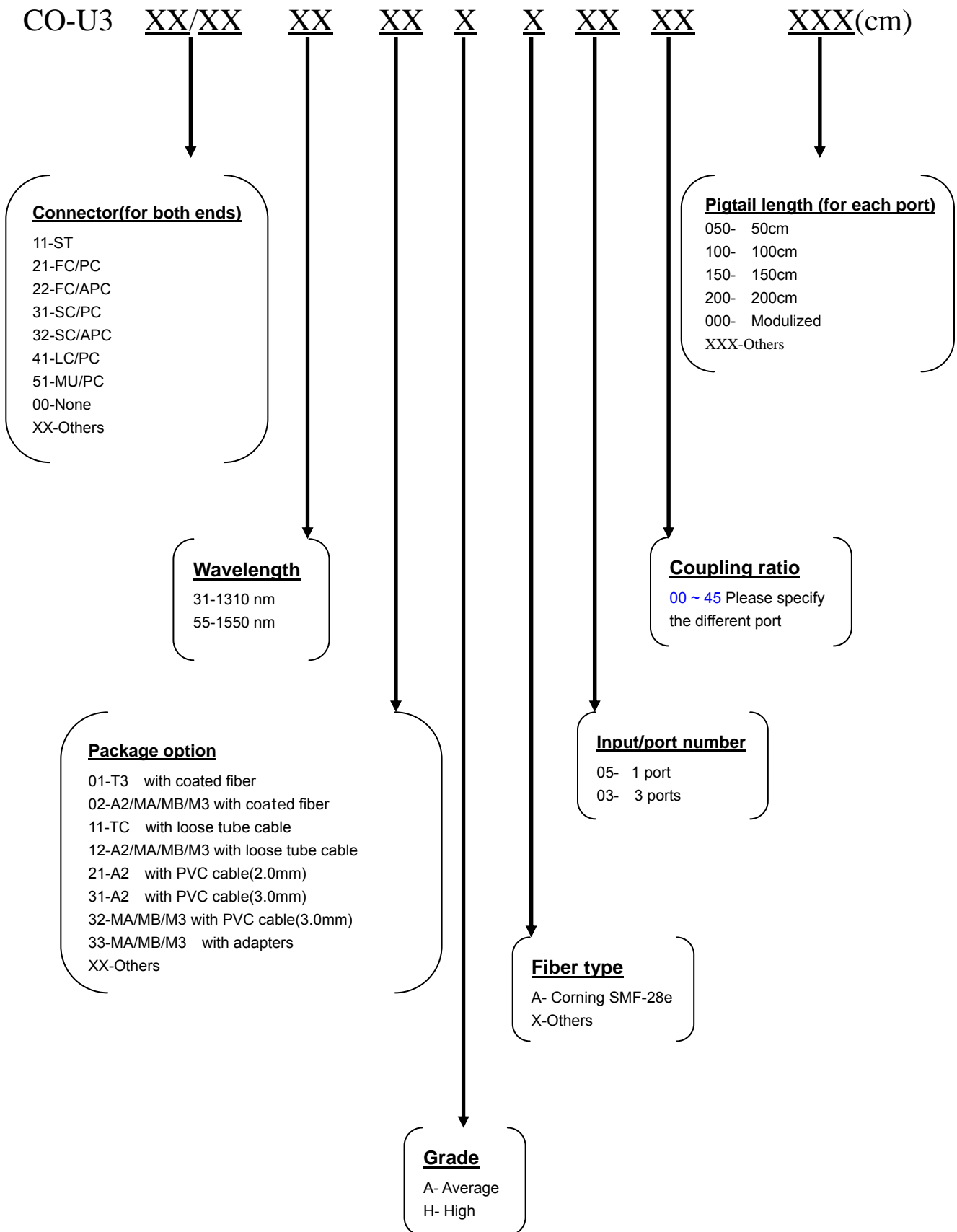


## Specifications

ITEM	VALUE			
Port Configuration	1×3		3×3	
Operation Wavelength	1310nm±10 or 1550nm±10			
Grade	High(H)	Average(A)	High(H)	Average(A)
I Insertion Loss (dB)	5.6	6.3	6.2	6.5
Uniformity, dB(33:33:33)	0.9	1.3	1.5	2.2
Thermal Stability, dB(peak-peak)	≤ 0.4			
Polarization Stability, dB	≤ 0.2			
Coupling Ratio	33 : 33 : 33 or Customer Specify			
Directivity ,dB	≥ 50(1×3 ), ≥ 60(3×3)			
Reflectance, dB	≥ 50			
Operation Temperature, °C	-40°C ~ 85°C(*)			
Storage temperature, °C	-55°C ~ 85°C			
<b>Package Options (for different pigtail)</b>				
1.coated fiber (250µm)	T3,A2,MA,MB,M3			
2.Loose tube (900µm)	TC,A2,MA,MB,M3			
3.PVC cable(3.0mm)	TC,A2,MA,MB,M3			

Note: (\*) -20°C ~ +70°C for PVC cable.

# Unitary 1x3 and 3x3 Coupler Ordering information



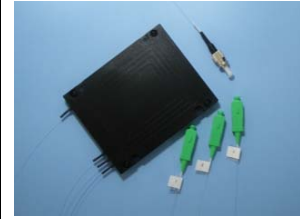
## Unitary 1×3 Wideband Coupler

### Features

- Low insertion Loss
- High uniformity
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



## Specifications

ITEM	VALUE	
Operation Wavelength	1310nm±30 or 1550nm±30	
Port Configuration	1×3	
Grade	High(H)	Average(A)
Insertion Loss ,dB	5.8	6.3
Uniformity, dB(33:33:33)	1.2	1.7
Thermal Stability, dB(peak-peak)	≦0.4	
Polarization Stability, dB	≦0.2	
Coupling Ratio	33 : 33 : 33 or Customer Specify	
Directivity, dB	≧50	
Reflectance, dB	≧50	
Operation Temperature,℃	-40℃ ~ 85℃(*)	
Storage temperature,℃	-55℃ ~ 85℃	
<b>Package Options (for different pigtail)</b>		
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: (\*) -20℃ ~ +70℃ for PVC cable

# Unitary 1x3 Wideband Coupler Ordering information

CO-U1 XX/XX XX XX X X XX XXX(cm)

**Connector(for both ends)**  
 11-ST  
 21-FC/PC  
 22-FC/APC  
 31-SC/PC  
 32-SC/APC  
 41-LC/PC  
 51-MU/PC  
 00-None  
 XX-Others

**Pigtail length (for each port)**  
 050- 50cm  
 100- 100cm  
 150- 150cm  
 200- 200cm  
 000- Modulized  
 XXX-Others

**Wavelength**  
 31-1310 nm  
 55-1550 nm

**Coupling ratio**  
 05 ~ 45 Please specify the different port

**Package option**  
 01-T3 with coated fiber  
 02-A2/MA/MB with coated fiber  
 11-TC with loose tube cable  
 12-A2/MA/MB with loose tube cable  
 21-A2 with PVC cable(2.0mm)  
 31-A2 with PVC cable(3.0mm)  
 32-MA/MB with PVC cable(3.0mm)  
 33-MA/MB with adapters  
 XX-Others

**Fiber type**  
 A- Corning SMF-28e  
 X-Others

**Grade**  
 A- Average  
 H- High

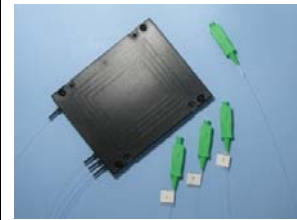
## Unitary 1×3 and 1×4 Dual Window Wideband Coupler

### Features

- Low insertion Loss
- High uniformity
- Customized Package available
- Environmentally stable.

### Applications

- Telecommunication networks
- LAN
- FTTH deployments
- Video transmission
- Fiber optic sensing
- Testing instruments



## Specifications

ITEM	VALUE	
Operation Wavelength	1310nm±40 and 1550nm±40	
Port Configuration	1×3	1×4
Coupling Ratio	33 : 33 : 33	25 : 25 : 25 : 25
Insertion Loss (dB)	5.4	7.2
Uniformity, dB(Typical)	1.0	1.5
Excess Loss, dB(Typical)	0.15	0.30
Polarization Stability, dB	0.3	
Return Loss, dB	50	
Operation Temperature ,°C	-40°C ~ 85°C(*)	
Storage temperature, °C	-55°C ~ 85°C	
<b>Package Options (for different pigtail)</b>		
1.coated fiber (250 μm)	3*60mm	
2.Loose tube (900 μm)	4*70mm	

Note: (\*) -20°C ~ +70°C for PVC cable

# Unitary 1x3 and 1x4 Dual Window Wideband Coupler Ordering information

CO-U4 XX/XX -35- XX X X XX XX XXX(cm)

**Connector(for both ends)**

- 11-ST
- 21-FC/PC
- 22-FC/APC
- 31-SC/PC
- 32-SC/APC
- 41-LC/PC
- 51-MU/PC
- 00-None
- XX-Others

**Wavelength**

35-1310 / 1550 nm

**Pigtail length (for each port)**

- 050- 50cm
- 100- 100cm
- 150- 150cm
- 200- 200cm
- 000- Modulized
- XXX-Others

**Coupling ratio**

- 25- 25:25:25:25
- 33- 33:33:33
- XX-Others

**Package option**

- 01-Metal tube with coated fiber
- 11-Metal tube with loose tube cable(900um)
- XX-Others

**Input/output port**

- 13- 1 x 3
- 14- 1 x 4

**Fiber type**

- A- Corning SMF-28e
- X-Others

**Grade**

- A- Average
- H- High

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**Lfo**