

## TABLE OF CONTENTS

MPO Connector	2
MTX Connector	4
Micro MPO Connector	5
Nano MOI Connector	6
MPO Loopback	7
MPO Adapter	8
MT-MPO Adapter	9
MTRJ	10
MPO Stackable Adapter	11
MPO Related Products	12
Optical Fiber Flex Circuit	13
LC Connector	14
Unibody LC Connector	16
LCX Connector	17
Mini/Micro LC Connector	18
LC Adapter	19
LC Stackable Adapter	20
LC Loopback	22

SC Shutter	23
Uniboot MU Connector	24
MU Connector	25
MU Adapter	26
MU Stackable Adapter	27
HOptic	28
LC-H	29
LC-IP	30
MT-IP	31
SC-IP	32
Allegro	33
Build-Out Attenuator	34
Variable Optical Attenuator	36
Hybrid Adapter& Attenuator	38
Terminator	40
Switch	41



#### \* Ideal for round, oval and bare ribbon fiber cable assembly \* High performance IL & RL

- \* Housing can be removed for re-polishing
- \* Can be un-plugged from adapter with push-pull tab
- \* Diversity Green, Beige, Aqua, Yellow. Black and Magenta are available upon request
- \* Available for 45-degree, 90-degree and flexible boot
- \* IEC 61754-7 and TIA/EIA 604-5 Compliant for MPO/MTP® interfaces
- \* Telcordia GR-1435-Core Compliant

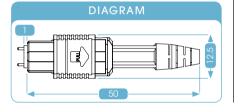
**E** Features

unit: mm

#### Round Cable

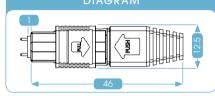


Connector



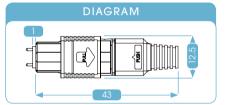
#### **Oval Jacket Cable**



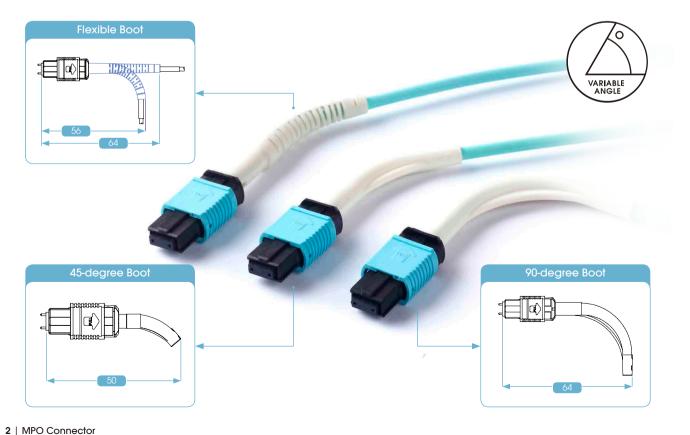


#### Bare Ribbon Fiber





#### **Connector with Angled Boot**



#### MPO Connector with Push-Pull Tab





#### Specifications

Item	MPO Connector (4F, 8F, 12F, 24F)	
Mode	Single mode	Multi mode
Durability (50 matings)	< 0.	3dB
Fiber Diameter	9/125um	50/125um & 62.5/125um
Insertion Loss (Typical)	Standard loss 0.25dB (0.5dB for 24F) Low Loss 0.1dB	Standard loss 0.2dB Low Loss 0.1dB
Insertion Loss (Maximum)	Standard loss $\leq$ 0.75dB (1.0dB for 24F) Low Loss $\leq$ 0.35dB	Standard loss $\leq 0.6$ dB Low Loss $\leq 0.35$ dB
Return Loss	APC ≧ 55dB	
Operating Temp. (°C)	-40°C∼ +75°C	
Storage Temp. (°C)	-40° <b>C</b> ~ +85° <b>C</b>	

 $<sup>* \ \ \</sup>text{Performance is polish dependent}$ 

Part Number	Description
1F401C80015F1	Connector Kits 12F MPO(F) SM Green with Ferrule for 3.0mm Round Cable
1F393C8001EF1	Connector Kits 12F MPO(F) MM Aqua with Ferrule for 3.0mm Round Cable
1F401FS0015F1	Connector Kits 24F MPO(F) SM Green with Ferrule for 3.2mm Round Cable
1F393FS001EF1	Connector Kits 24F MPO(F) MM Aqua with Ferrule for 3.2mm Round Cable

Part Number	Description	
1F401BE001502	Connector Kits 12F MPO(F) SM Green with Ferrule for Oval Jacket Cable	
1F393BE001E02	Connector Kits 12F MPO(F) MM Aqua with Ferrule for Oval Jacket Cable	

Part Number	Description
1F401AF0015F1	Connector Kits 12F MPO(F) SM Green with Ferrule for Bare Ribbon Fiber
1F393AF001EF1	Connector Kits 12F MPO(F) MM Aqua with Ferrule for Bare Ribbon Fiber

 $<sup>\</sup>ast$  Please contact us for other configurations.

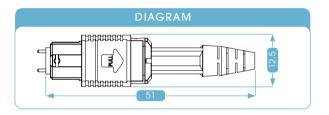
# Connector



- **★**PATENTED★ \* MTX Connector is an unique design by GET; Its POLARITY can be changed without opening the housing or using any special tool
- \* RoHS and Reach Compliant
- \* IEC 61754-7 and TIA/EIA 604-5 Compliant for MPO/MTP®
- \* Telcordia GR-1435-Core Compliant

#### MTX Connector





#### MTX Connector with Push-Pull Tab



#### MTX tool (changer)

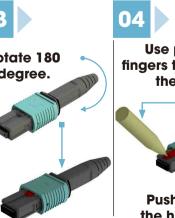


#### Step chart













# PO S Connector

GET's Micro MPO Connector is a unique design for ribbons and high density applications. It's the Shortest MPO Connector in the market, its length only 18.1mm. Its Polarity can be changed without opening the housing or using any special tool. GET's Micro MPO Connector is fully compliant with IEC Standard 61754-7 and TIA 604-5 – Type MPO.

unit: mm



- \* Patent No.: Taiwan: M569855/ China: 201821562148.4/ US: US 10,782,486 B2
- \* Micro MPO push-pull tab patent: Taiwan Patent No.: M539725 / China Patent NO.: 201720104614.3
- \* Total length 18.1mm for Bare Ribbon Fiber.
- \* Diversity Green, Beige, Aqua, Yellow. Black and Magenta are available upon request. \* Push-pull Tab available.
- \* IEC 61754-7 and TIA/EIA 604-5 Compliant for MPO/MTP® interfaces.
- \* Telcordia GR-1435-Core Compliant.
- \* RoHS and Reach Compliant.

#### Applications

- \* Optical Switching Interframe connections
- \* High Density Rack applications
- \* Data Center applications

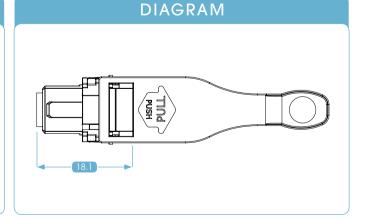
#### **Micro MPO Connector**



# Micro MPO Connector with Push-Pull Tab

unit: mm

DIAGRAM



4 | MTX Connector Specifications are subject to change without prior notice: Micro MPO Connector | 5



- \* Short at 27mm long for 3.0mm round cable.
- \* Polarity changeable.
- \* Various boot dimension.
- \* Standard MPO function and performance.

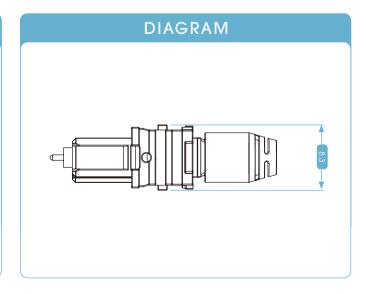
unit: mm

#### Nano MPO Connector





# DIAGRAM



# MPO Loopback

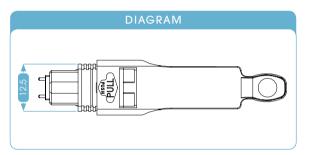


- \* Small, compact housing design
- \* Streamlined, Ruggedized housing design for excellent stability and reliability
- \* Available for 4, 8, 12, 16,24 and 32F
- \* Standard and QSFP application

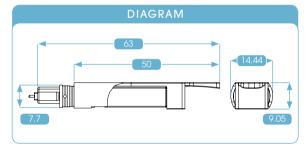
unit: mm

#### MPO Loopback









#### Specifications

#### Insertion Loss: $\leq$ 1dB for MM at 850nm, $\leq$ 1dB for SM at 1310/1550nm

Part Number	Description
1E401000H2	MPO/APC Loopback 12F SM 0dB(STD 1-12)
1E39J000H2	MPO/PC Loopback 12F OM3 0dB(STD 1-12)
1E401000K2	MPO/APC Loopback 24F SM 0dB(STD2 1-13)
1E39J000K2	MPO/PC Loopback 24F OM3 0dB(STD2 1-13)

<sup>\*</sup> Please contact us for other configurations.

6 | Nano MPO Connector

Specifications are subject to change without prior notice.

MPO Loopback | 7

Specifications are subject to change without prior notice.

# MPO Adapter



- \* Internal shutter available for dust protection and eye safety
- \* Keyway available for key up or key down
- \* IEC 61754-7 and TIA/EIA 604-5 Compliant for MPO/MTP®
- \* Telcordia GR-1435-Core Compliant

unit: mm

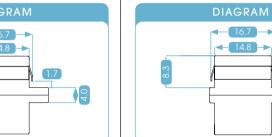
#### Plastic MPO Adapter with Flange





Plastic MPO Adapter without Flange







#### **Features**

\* Metal die-cast housing resists EMI

Metal MPO Adapter without Flange

#### **Specifications**

Housing	UL-Rated Plastic or Die Cast
Clip & Shutter	Stainless Steel
Durability	< 0.3dB change, 50 mating cycles
Operating Temperature	-40°C∼ +70°C
Storage Temperature	-40°C~ +85°C

Part Number	Description
13712180A21210201	Plastic MPO Adapter with Flange Key Up to Down
13712180A21240201	Plastic MPO Adapter with Flange Key Up to Down, Internal Shutter
13700110010210201	Metal MPO Adapter with Flange Key Up to Down
13700110010240201	Metal MPO Adapter with Flange Key Up to Down, Internal Shutter

<sup>\*</sup> Please contact us for other configurations.

# MT-MPO Adapter

GET manufactures durable MT-MPO Adapter that provides the function of easy connection and disconnection for MT Ferrule and MPO Connector. Disconnecting operation is provided by pressing and holding Cam to release MT Ferrule. GET's MT-MPO Adapter is fully compliant with IEC Standard 61754-7 and TIA 604-5 - Type MPO.

unit: mm

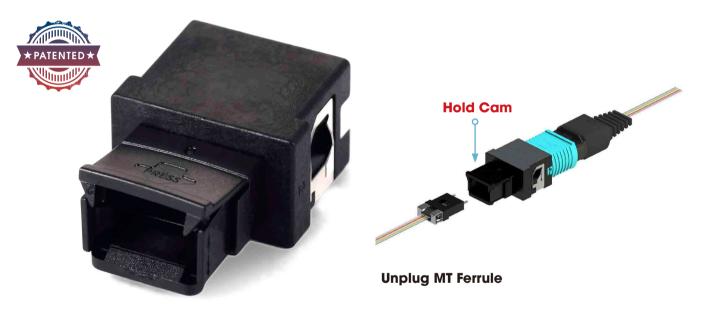
#### **Features**

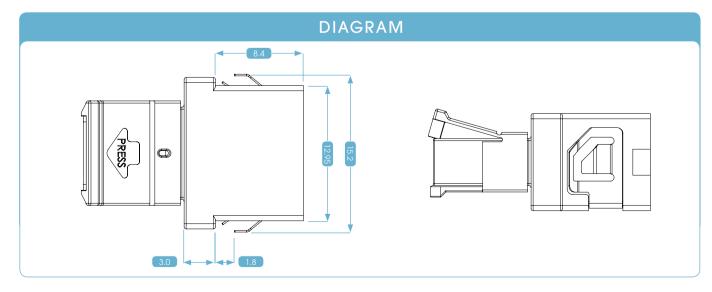
- \* Patent No.: Taiwan: 563094/ China: 201820521832.1/ US: US 10,133,009 B1
- \* Optimized for multi-fiber connector applications.
- \* Easy connection and disconnection.
- \* All adapters compatible with MPO/MTP® connectors and standard MT Ferrules.
- \* Supplied with two non-debris generating dust plugs, one for MT Ferrule, one for MPO.

#### **Applications**

- \* Optical Switching Interframe connections
- \* High Density Rack applications
- \* Data Center applications

#### **MT-MPO Adapter**





8 | MPO Adapter Specifications are subject to change without prior notice. Specifications are subject to change without prior notice.

## MTRJ **Reversible Connector**



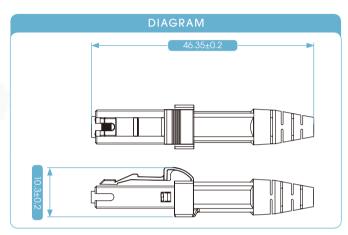


- \* Gloriole's MTRJ Connector meet industrial standard
- \* Available in Round cable, Bare Ribbon and Oval Jacket
- \* Also reversible function available.

unit: mm

#### **MTRJ Reversible Connector**





# MTRJ **Reversible Adapter**

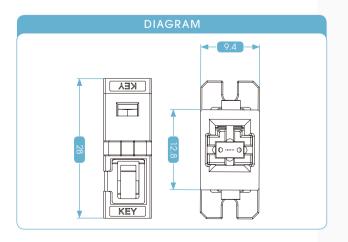




\* Gloriole's MTRJ Adapter meet industrial standard, also available in variety colors with easy reversible function.

unit: mm

#### MTRJ Reversible Adapter



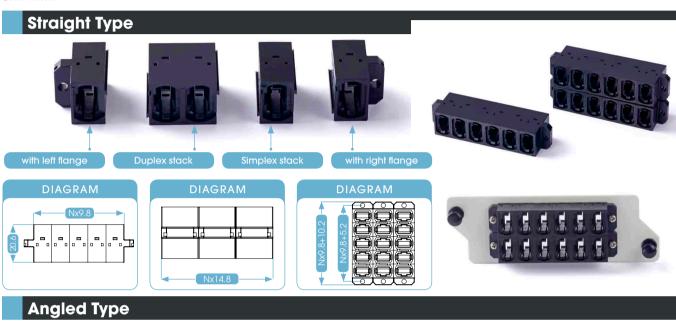


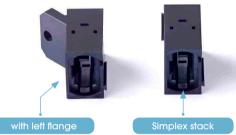
**Stackable Adapter** 



- \* Internal shutter available for dust protection and eye safety
- \* High density application
- \* Keyway available for key up or key down
- \* Durability < 0.3dB change, 50 mating cycles
- \* IEC 61754-7 and TIA/EIA 604-5 Compliant for MPO/MTP®
- \* Telcordia GR-1435-Core Compliant

unit: mm

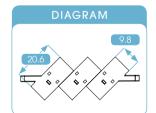


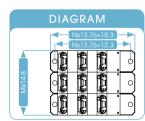






with right flange







Part Number	Description	
Straight Type		
	aa : Total ports ex.1x4=04, 2x6=12, 3x8=24	
1N1aabccx1A1001	b : Row, ex.1=1 row, 2=2 rows	
INTOODCCXTATOOT	cc : Ports per row, ex.4=04, 12=12	
	x : 1=Key Up to Key Down, 2=Key Up to Key Up	
ex: 1x6 MPO Stackable Adapter, Straight Type = 1N10610611A1001		
45° Type		
	aa : Total ports ex.1x4=04, 2x6=12, 3x8=24	
1N2ggbccx1A1001	b : Row, ex.1=1 row, 2=2 rows	
INZUGDECXIATOOT	cc : Ports per row, ex.4=04, 12=12	
	x : 1=Key Up to Key Down, 2=Key Up to Key Up	
ex: 1y4 MPO Stackable Adapter 45° Type = 1N20410421 A1001		

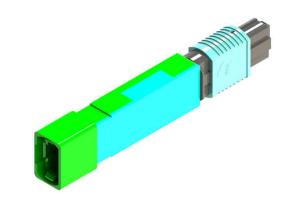
ex: 1x4 MPO Stackable Adapter, 45° Type = 1N20410421A1001

\* Please contact us for other configurations.

# MPO **Related Products**

unit: mm

MPO Attenuator



**MT - Fiber Array Assembly** 







- \* Easy to convert individual fibers into ribbon fibers
- \* Reusable



**MPO Ribbonizer** 



Part Number	Description
1H02001	MPO Ribbonizer

# Optical Fiber Flex Circuit

Optical Fiber Flex circuit is designed to optimize complex optical fiber routing with high fiber count, providing system designers real solutions to solve the growing fiber management problems.

**Benefits** 

- Simplifies intra-rack fiber management and cabling
- Reduces installation time and costs

design

- \* Saves valuable space Offers flexibility in systems
- or MM Application \* Flame resistant substrate

on PCB

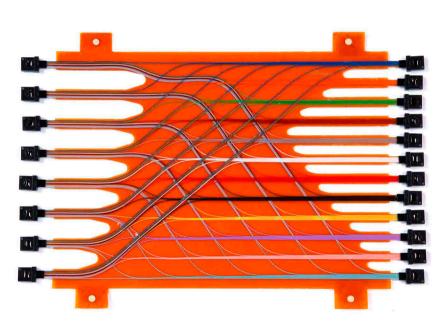
(94V-0 rated)

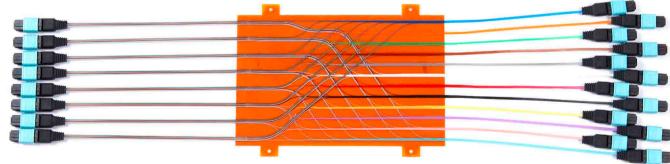
**Features** 

unit: mm

#### **Optical Fiber Flex Circuit**







#### **Performance**

Optical Fiber Nominal OD	250µm
Max. Circuit Dimensions	500mm x 500mm
Max. IL (W/out Connector)	< 0.1dB
Minimum Bend Radius	25mm
Operating Temperature	−25°C ~ +85°C

12 | MPO Related Products & Ribbonizer Specifications are subject to change without prior notice. Specifications are subject to change without prior notice.



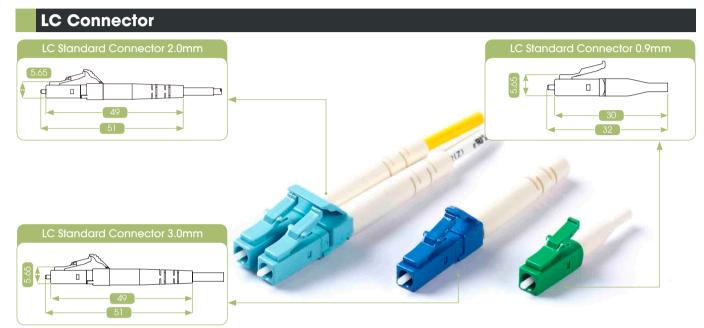


- \* Small Form Factor (SFF) connector
- \* Simplex and Duplex for option
- \* SM/PC, SM/APC and MM/PC versions
- \* 900 $\mu$ m, 2.0mm and 3.0mm versions
- \* Multiple boot color for option
- \* Available for 45-degree, 90-degree and flexible boot

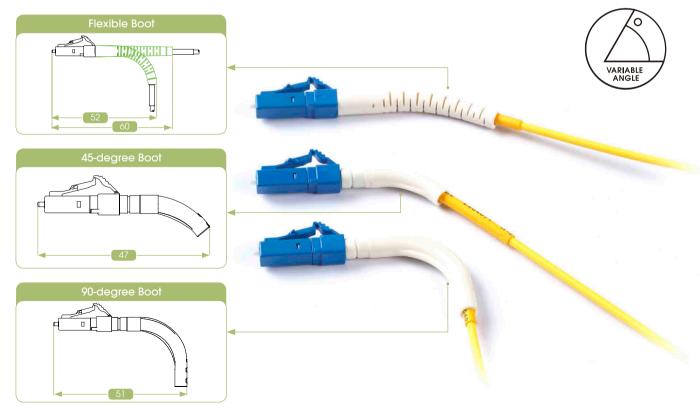
**★PATENTED** 

\* Telcordia GR-326, IEC and TIA/EIA compliant

unit: mm



#### LC Connector with Angled Boot



14 | LC Connector

#### Specifications

Characteristics	Single	Mode	Multi N	Mode
Insertion Loss	Premier Grade A Grade		Premier Grade	A Grade
Insertion Loss	≦ 0.15dB	≦ 0.30dB	≦ 0.15dB	≦ 0.30dB
	PC ≧ 50dB			
Return Loss	UPC ≥ 55dB		-	
	APC ≧ 65dB			
Operating Temperature	-40°C∼ +75°C			
Storage Temperature		-40° <b>C</b> ~	+85° <b>C</b>	

<sup>\*</sup> Performance is polish dependent

Part Number	Description
	y: 5=PC, 6=APC
1F1ya>c001x01	a: 1=SM, 2=MM, 3=OM3, 4=OM4
	b: 1=Simplex, 2=Duplex
	c: 2=900µm, 6=2.0mm, 8=3.0mm
	x: 3=Blue, 5=Green, E=Aqua, G=Beige, N=Magenta
	(0) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1

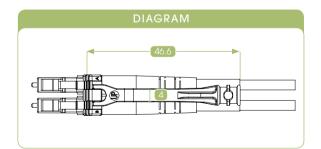
ex: Connector Kits LC/PC 2.0mm SM(Blue) Simplex with Ferrule = 1F15116001301

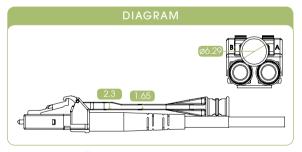
#### **LC Connector with Push-Pull Tab**





- \* Available for Duplex Standard Connector and Unibody Connector
- \* Data Center Application
- \* High Density Application





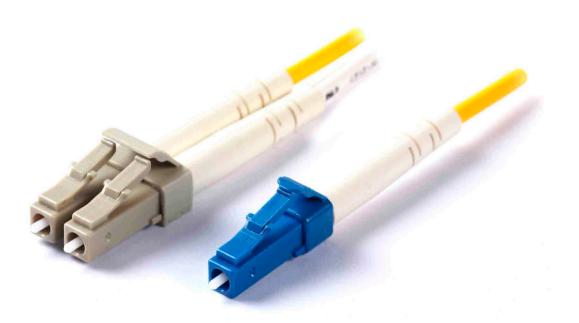


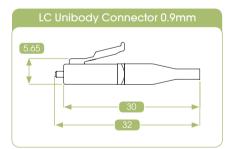
<sup>\*</sup> Please contact us for other configurations.

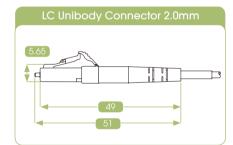
unit: mm

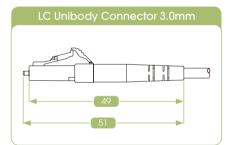
- **E** Features
- \* Unique one-piece design
- \* Low Insertion Loss: 6 direction tuning feature to improve random mating IL
- \* Small Form Factor (SFF) connector
- \* Anti-snag latch for jumper
- \* Available for 0.9mm, 2.0mm, 3.0mm, simplex and duplex
- \* Angled boots available for 45 degree, 90 degree and flexible boot
- \* LC patchcord can be plugged in and removed easily from LC adapter by using push-pull tab
- \* Telcordia GR-326, IEC and TIA/EIA compliant

#### LC Unibody Connector









Part Number	Description
	y: 0=PC, 1=APC
	a : 1=SM, 2=MM, 3=OM3, 4=OM4
1F3yabc001x01	b: 1=Simplex, 2=Duplex
	c : 2=900µm, 6=2.0mm, 8=3.0mm
	x : 3=Blue, 5=Green, E=Aqua, G=Beige, N=Magenta
ex : Connector kits LC/PC Unibody 2.0mm SM(Blue) Duplex with Ferrule =1F30126001301	

\* Please contact us for other configurations.



**Features** 

- \* Easy to change connector polarity without any tool
- \* Versatility: pitch change between 6.25mm and 5.25mm
- \* Easy to un-plug from adapter on high dense board with push-pull tab
- \* Uniboot design to decrease cable 50% volume, suitable for data centers application
- \* Telcordia GR-326, IEC and TIA/EIA compliant

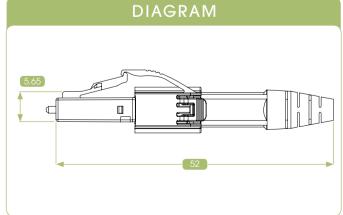
ınıt: mm

#### LCX Connector





# DIAGRAM 6.25





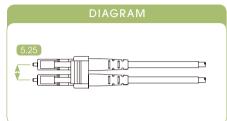


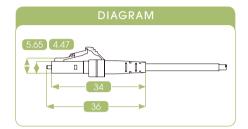
- \* Mini LC Connector Pitch at 5.25mm(Duplex Only)
- \* This connector design is compatible with mini SFP + transceivers
- \* Increases the density
- \* 36mm in length from ferrule tip to boot end
- \* Provides space saving in the network and FTTH application

unit: mm

#### Mini LC Connector







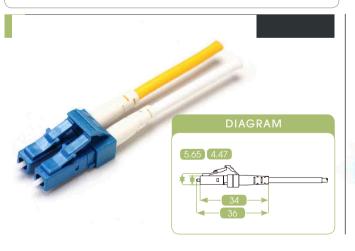
Part Number	Description
1F24126133301	Connector Kits Mini LC/PC 2.0mm SM(Blue) Duplex with Ferrule
1F24226001G02	Connector Kits Mini LC/PC 2.0mm MM(Beige) Duplex with Ferrule

\* Please contact us for other configurations.

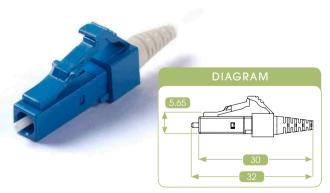
# 2 <u>S</u> Connector



- \* Micro LC Connector Pitch at 6.25mm (Available in Simplex and Duplex)
- \* 36mm in length from ferrule tip to boot end
- \* Provides space saving in the network and FITH application



#### Micro LC Connector 0.9mm



Specifications are subject to change without prior notice.

Part Number	Description
1F27116003301	Connector Kits Micro LC/PC 2.0mm SM(Blue) with Ferrule

\* Please contact us for other configurations.

18 | Mini LC Connector & Micro LC Connector





- \* Unique one-piece design
- \* Low insertion loss
- \* Easy installation
- \* Diversity Blue, Green, Beige, Aqua. Black and Magenta are available under request
- \* Internal and external shutter available for dust protection and eye safety
- \* Telcordia GR-326, IEC and TIA/EIA compliant

unit: mm

#### LC Adapter



#### LC Adapter with Shutter



#### Specifications

Mode Type	APC	Single Mode	Multi Mode
Housing Color	Green	Blue	Beige/Aqua/Magenta
Main Body Material	UL-Rated Plastic		
Sleeve	Zirconia or Phosphor Bronze		
Typical Insertion Loss, dB	Zirconia $\leq 0.15$ dB , Phosphor Bronze $\leq 0.25$ dB		
Durability	< 0.2dB change, 500mating		
Operating Temperature	-40° <b>C</b> ∼ +75° <b>C</b>		
Storage Temperature	-40° <b>C</b> ~ +85° <b>C</b>		
Storage Temperature	10.00		

\* Performance is polish dependent

I dil Halliboi	Beschphon	
LC Adapter Simplex Zirconia Sleeve		
135ab121c20112502	a: 1=PC, 2=APC	
	b: 2=SM, 4=MM	
	c : 3=Blue, 5=Green, G=Beige	
ex : LC/PC Adapter SM(blue) Simplex =	= 13512121320112502	
	LC Adapter Duplex Lucent Type Zirconia Sleeve(one-piece)	
136ab261c20112901	a: 1=PC, 2=APC	
	b : 2=SM, 4=MM	
	c : 3=Blue, 5=Green, G=Beige	
ex: LC/APC Adapter SM(green) Duplex Lucent Type = 13622261521112901		
LC Adapter with SC Footprint Plastic Clip 25.4mm Zirconia Sleeve(one-piece)		
	a: 1=PC, 2=APC	
	b : 2=SM, 4=MM	
136abxy1c20112L11	x : 2=Duplex, 3=Quad	
	y: 9=with flange, A=without flange	
	c : 3=Blue, 5=Green, G=Beige, E=Aqua	
ex : LC/PC Adapter SM(Blue) Duplex with Flange SC Footprint Type = 13612291320112L11		

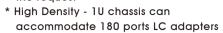
\* Please contact us for other configurations.

LC Adapter | 19

# LC Stackable Adapter

**E** Features

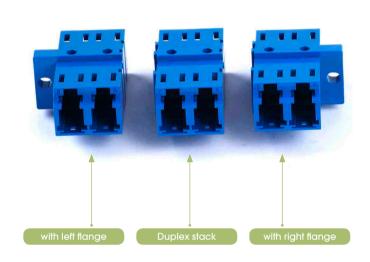
\* Ultra Flexible - Can stack multiple rows \* PATENTED \* and columns and completely fulfill the request

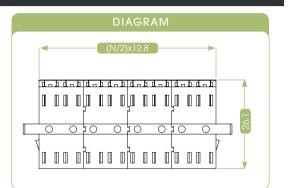


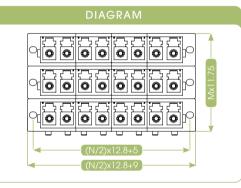
- \* Diversity Blue, Green, Beige, Aqua. Black and Magenta are available under request
- \* RoHS and Reach Compliant
- \* Telcordia GR-326, IEC and TIA/EIA compliant

unit: mm

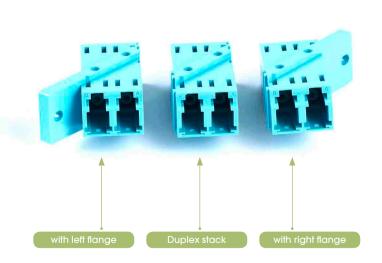
#### Straight Type







#### **Angled Type**



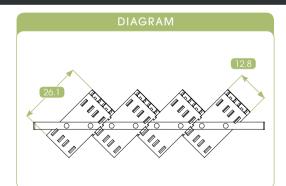
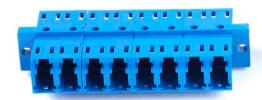


DIAGRAM
20.38 20.38 (V/2)-1)X18.13+20.4+12.8
((N/2)-1)X18.13+20.4+18.1

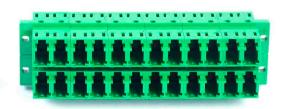
#### Specifications are subject to change without prior notice.

#### Straight Type

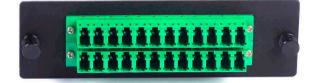




**Angled Type** 

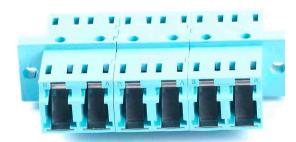








#### **LC Stackable Adapter with Shutter**





T GITT T GITTING OT	Decemplish.		
Straight Type Zirconia Sleeve			
	aa : Total ports ex.1x4=04, 2x6=12, 3x8=24		
1N1aabcc01y2001	b : Row, ex.1=1 row, 2=2 rows		
TIVI CODECCOTY 2001	cc : Ports per row ex.4=04, 12=12		
	y : 3=Blue, 5=Green, E=Aqua, G=Beige		
ex: 1x6 LC Stackable Adapter SM(Blue), Straight Type = 1N1061060132001			
	450 5 50 100		
	45° Type Zirconia Sleeve		
	aa : Total ports ex.1x4=04, 2x6=12, 3x8=24		
1N2aabcc01y2001	b : Row, ex.1=1 row, 2=2 rows		
	c: Ports per row, ex.4=04, 12=12		
	y : 3=Blue, 5=Green, E=Aqua, G=Beige		
ex: 1x6 LC Stackable Adapter MM(Aqua), 45° Type = 1N20610601E2001			

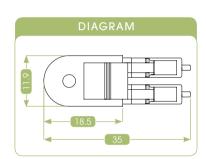
\* Please contact us for other configurations.

- **Features**
- \* Precise attenuation value
- \* Excellent reflectance
- \* Flawless end face
- \* Compact design

LC Loopback







#### **Specifications**

Specifications		Value		
Item		Single Mode	Multi Mode	
Wavelength		1310nm and 1550nm	850nm for 1~6dB	
		1310nm or 1550nm	850nm/1300nm for 0dB	
Attenuation Range		0dB ~ 25dB	0dB ~ 6dB	
	0 dB	≦ 1dB	≦ 1dB	
Attenuation Variation	1~10dB	±1dB	≤ 6dB ±1dB	
	11~25dB	±15%	-	
	PC	≥ 45dB		
Reflectance	UPC	≥ 50dB	-	
	APC	Super $\ge$ 60dB; Ultra $\ge$ 65dB		
Operation Temperature		-40° <b>C</b> ∼ 75° <b>C</b>	-40° <b>C</b> ∼ 75° <b>C</b>	
Storage Temperature		-40°C~ 85°C	-40°C~ 85°C	

<sup>\*</sup> Performance is polish dependent

Part Number	Description
1E15100041	LC/PC Loopback SM 0dB
1E15J00041	LC/PC Loopback OM3 0dB

<sup>\*</sup> Please contact us for other configurations.

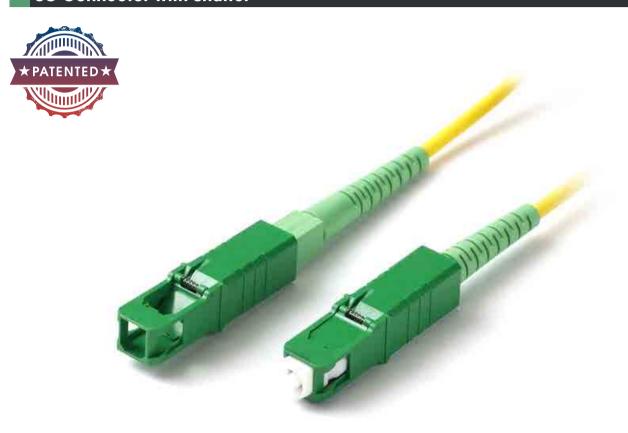


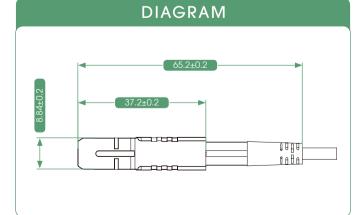
Features

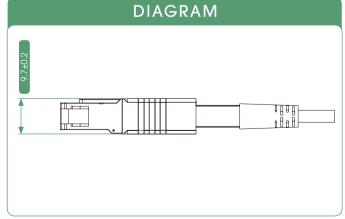
- \* Ideal for the FTTH application
- \* Shield laser and dust for protection
- \* Availble in 0.9mm, 2.0mm and 3.0mm
- \* Highly Reliable and Stable

unit: mm

#### **SC Connector with Shutter**









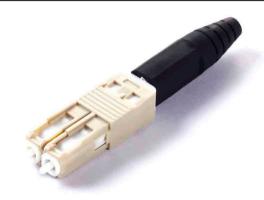
- \* High precision alignment
- \* Low Insertion Loss and High Return Loss
- \* Easy installation
- \* Compack design and High-density package
- \* Uniboot design to decrease cable 50% volume, suitable for data centers application

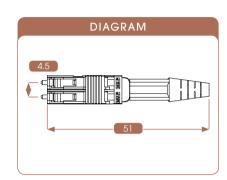
**★PATENTED**★

- \* Telcordia GR-326, NTT & JIS compliant
- \* SM/PC, SM/APC and MM/PC versions

unit: mm

#### **MU Uniboot Connector**



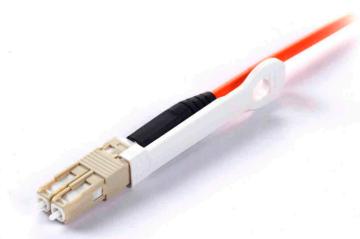


Part Number	Description	
1F81 <b>a</b> 28001x01	a : 1=SM, 2=MM	
	x : 3=Blue, 6=Brown, G=Beige	
Construction (All MIMINIO OF A Construction of A March 1997) And A State of A		

ex : Connector Kits MU(UNIBOOT) 3.0mm SM(Brown) Duplex with Ferrule = 1F81128001601

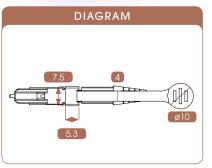
st Please contact us for other configurations.

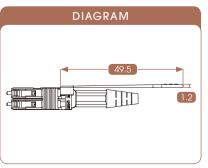
#### **MU Uniboot Connector with Push-Pull Tab**





- \* Can be un-plugged from adapter with push-pull tab
- \* Data Center Applications
- \* High Density Applications









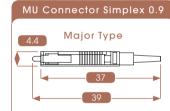


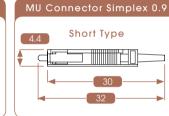
- \* Small form factor
- \* High precision alignment
- \* Low Insertion Loss and High Return Loss
- \* Easy installation
- \* Compact design and High-density package
- \* 900 $\mu$ m, 2.0mm and 3.0mm versions
- \* Simplex and Duplex connector housing available
- \* Telcordia GR-326, NTT & JIS compliant

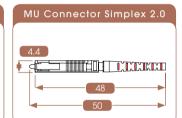
unit: mm

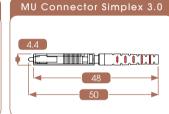
#### MU Connector











#### Specifications

Characteristics	Single	Mode	Multi Mode	
Insertion Loss	Premier Grade A Grade		Premier Grade	A Grade
Il ise filori Loss	$\leq 0.15$ dB $\leq 0.30$ dB		≦ 0.15dB	≦ 0.30dB
	PC ≥ 50dB			
Return Loss	UPC ≥ 55dB		-	
	APC ≧	€ 65dB		
Operating Temperature	-40° <b>C</b> ~ +75° <b>C</b>			
Storage Temperature	-40° <b>C</b> ∼ +85° <b>C</b>			

\* Performance is polish dependent

Part Number	Description	
	y: 8=PC, 9=APC	
	a: 1=SM, 2=MM	
1F4yabc001x01	b: 1=Simplex, 2=Duplex	
	c : 2=900µm, 6=2.0mm, 8=3.0mm	
	x : 3=Blue, 5=Green, 6=Brown, G=Beige	
ex : Connector Kits MU/PC 900µm SM(Brown) Simplex with Ferrule = 1F48112001601		

\* Please contact us for other configurations.





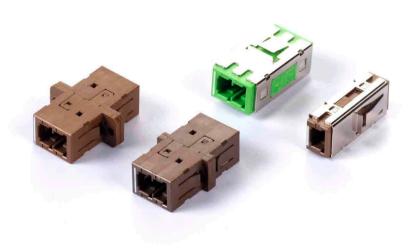


- \* High precision alignment
- \* Easy installation
- \* Simplex and Duplex versions for your option
- \* Duplex with internal shutter for SC footprint application
- \* RoHS and Reach Compliant
- \* Telcordia GR-326, NTT & JIS compliant

unit: mm

#### **MU Adapter**

MU Adapter with Shutter





Part Number	Description		
MU Adapter Standard Type Zirconia Sleeve			
	a : 1=PC, 2=APC		
139abx21c20210C01	b: 2=SM, 4=MM		
	x : 1=Simplex, 2=Duplex		
	c: 5=Green, 6=Brown		
ex : MU/PC Adapter SM(Brown) Simplex = 13912121620210C01			

MU Adapter Duplex with SC Footprint Zirconia Sleeve			
139 <mark>a</mark> b2y1c20110C01	a: 1=PC, 2=APC		
	b : 2=SM, 4=MM		
	y: 9=with flange, A=without flange		
	c : Green, 6=Brown		
ov - MC/DC Adapter (M/Brough) Duploy with Flance (C Footoriet Type 12012001400110001			

ex : MC/PC Adapter SM(Brown) Duplex with Flange SC Footprint Type = 13912291620110C01

\* Please contact us for other configurations.





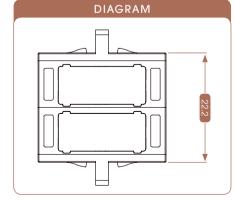


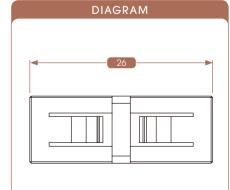
- \* Ultra Flexible
- \* Stackable multiple rows and columns
- \* High Density
- \* Variety Colors
- \* New One Piece Design, stronger and stable

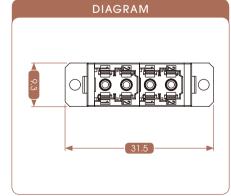
unit: mm

#### MU One-Piece Stackable









26 | MU Adapter

# **H Connector Series**

# HOptic

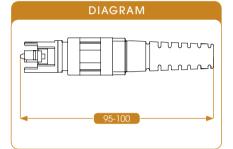


- \* Unique Product USA Patent no. US 9,016,954 B2 & European Patent no. 2592452
- \* Design and Test meets Telcordia GR-3120 -Core Requirements
- \* Complies with GR-326-Core and RoHS
- \* Meets IP 68 dust and water protection (3 meters/7 days) Ratings
- \* 500 minimum mating cycles
- \* Suitable for Outdoor and Indoor Applications

unit: mm

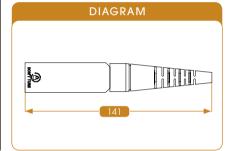
#### **HOptic Connector Plug Type**









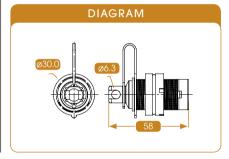




# unit: mm

#### **HOptic Receptacle**





#### **HOptic Connector Plug Type + HOptic Receptacle**



#### HOptic Connector In-line Receptacle Type + HOptic Connector Plug Type

To eliminate indoor/outdoor transition boxes when connecting to indoor ONTs.







#### **Specifications**

Parameters	Specifications	
Connector Types	SC, LC Duplex MT	
Insertion Loss	≤ 0.30dB	≤ 0.75dB
Return Loss	$\geq$ 50dB (PC), 55dB (UPC), 60dB (APC) $\geq$ 50dB (APC)	
Operation Temperature	-40 °C to 70 °C	
Storage Temperature	-40 °C to 85 °C	

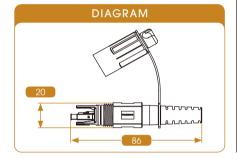
# **H** Connector Series



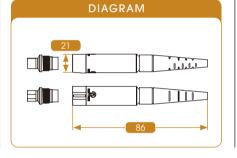
- \* Unique Product USA Patent no. US 10,908,365 B2; US 11,125,952 B2
- \* Design and Test meets Telcordia GR-3120 -Core Requirements
- \* Complies with GR-326-Core and RoHS
- \* Meets IP 68 dust and water protection (3 meters/7 days) Ratings
- \* 500 minimum mating cycles
- \* Suitable for Outdoor and Indoor Applications

#### **LC-H Connector Plug Type**





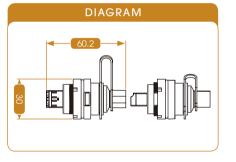
# LC-H In-line Receptacle Type



#### LC-H Bulkhead Receptacle Type

**★PATENTED**★





#### LC-H Connector Plug Type + LC-H Bulkhead Receptacle Type









#### LC-H Connector Plug Type + LC-H In-line Receptacle Type

To eliminate indoor/outdoor transition boxes when connecting to indoor ONTs.









#### **Specifications**

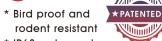
Specifications are subject to change without prior notice.

Parameters	Specifications Specification Specification Specification Specification Specification Specification Specificatio	
Connector Types	SC, LC Duplex	MT
Insertion Loss	≦ 0.30dB	≤ 0.75dB
Return Loss	$\geq$ 50dB (PC), 55dB (UPC), 60dB (APC) $\geq$ 50dB (APC)	
Operation Temperature	-40 °C to 70 °C	
Storage Temperature	-40 °C to 85 °C	

Gloriole's LC-IP Connector is designed to provide an outdoor LC-based sealed connection to a board mounted SFP within a sealed enclosure.

unit: mm





- \* IP68 water and dust protection
- \* Available with singlemode or multimode fiber
- \* 500 minimum mating cycles
- \* Operating temperature: -40° to 85°C
- \* RoHS compliant
- \* Bayonet mating style

#### **Benefits**

- Blind mate and scoop proof interface
- Mates to standard LC simplex or duplex assemblies
- Easily installs without special tooling
- No internal jumper needed

LC-IP Bulkhead Receptacle Type

Direct connect to active device (SFP, SFP+, RJ)

unit: mm

# **IP Connector Series**

Gloriole's MT-IP series product are designed to provide outdoor sealed connection in multi-fibers to mate sealed enclosure.

Features \_\_\_\_\_



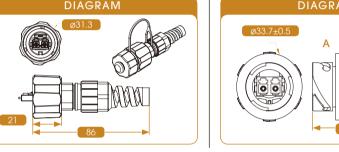
- \* Minimum 500 cycles mating
- durability \* IEC 61076-3-106 interface
- \* RoHS REACH compliant
- Applications
- \* RRU/BTS/NodeB/eNodeB
- \* CTJ Box in FTTA
- \* Macro/Micro Cell and BSS in 4G LTE-A & 5G
- \* Industrial Control/ Automation for industry

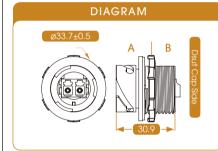
**LC-IP Connector Plug Type** 











#### LC-IP Connector Plug Type + LC-IP Bulkhead Receptacle Type









#### LC-IP Connector Plug Type + LC-IP In-line Receptacle Type

To eliminate indoor/outdoor transition boxes when connecting to indoor ONTs.









#### **Specifications**

The system is designed to provide IP67 dust and water protection when connector and receptacle are mated or with dust caps installed.
Plug cap includes integrated pulling eye for easy installation. Gloriole's LC-IP assemblies are exceptionally suited for WiMax, LTE, wireless, wireless backhaul and base station applications.

ITEM	LC-IP Connector Plug Type	
Mode Type	Single Type	Multi Type
Insertion Loss	P Grade ≤ 0.15dB, A Grade ≤ 0.3dB	
Return Loss	≥ 50dB(°C), 55dB(UPC), 60dB(APC)	X
Durability	< 0.2dB change, 500 mating	
IP Rating	IP68	
Operation Temp.(°C)	-40°C~ +85°C	

**MT-IP Connector Plug Type** 



MT-IP In-line Receptacle Type

MT-IP Bulkhead Receptacle Type







#### MT-IP Connector Plug Type + MT-IP Bulkhead Receptacle Type







#### MT-IP Connector Plug Type + MT-IP In-line Receptacle Type

To eliminate ind









#### **Specificanions**

The series product provides IP68 grade dust and water proof requirement; resistant to chemical and gasses corrosion in harsh environments.

With ODVA compatible design, MT-IP series product widely used in many industrial applications: LTE, industrial automation and outdoor distributed antenna system.

ITEM	MT-IP Connector Plug Type	
Mode Type	Single Type	Multi Type
Insertion Loss	Standard $\leq$ 0.15dB, Low loss $\leq$ 0.35dB	≦ 0.6dB
Return Loss	≥ 55dB( <b>APC</b> )	X
Durability	< 0.3dB change, 500 mating	
IP Rating	IP68	
Operation Temp.(°C)	-40°C~ +75°C	
Storage Temp.(°C)	-40°C~ +85°C	

#### **IP Connector Series**

Gloriole's SC-IP Connector is designed to provide an outdoor SC-based sealed connection to a board mounted SFP within a sealed enclosure.

unit: mm

#### **E** Features

- \* Field
- Installable \*\*\*PATENTED\*\* \* Meet IP68
- ratings \* IEC60603-7 Standard
- \* Harsh Environment Application
- \* Simple Connection

#### **Benefits**

- \* Blind mate and scoop proof interface
- \* Mates to standard SC simplex or duplex assemblies
- \* Easily installs without special tooling
- \* No internal jumper needed
- \* Direct connect to active device (SFP, SFP+, RJ)

unit: mm





- \* Removable Cover from 1U
- \* Easy Installation and adjustment in the rack
- \* High density Flexibility
- \* Quick and easy polarity management
- \* Easier access to module and panels
- \* Reduce congestion in high Density environment.

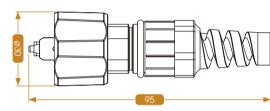
**SC-IP** in-line Receptacle











SC-IP Connector Plug Type + I C-IP Bulkhead Peceptacle Type









#### SC-IP Connector Plug Type + LC-IP In-line Receptacle Type

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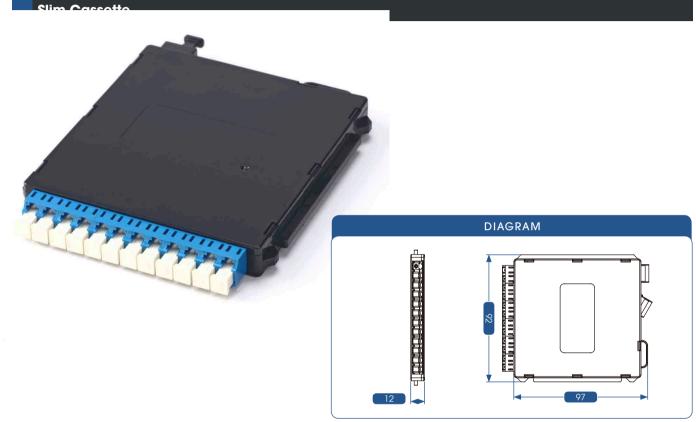


Specific

The system is designed to provide IP68 dust and water protection when connector and receptacle are mated or with dust caps installed.
Plug cap includes integrated pulling eye for easy installation. Gloriole's SC-IP assemblies are exceptionally suited for WiMax, LTE, wireless, wireless backhaul and base station applications.

ITEM	SC-IP Connector Plug Type	
Mode Type	Single Type	Multi Type
Insertion Loss	P Grade ≤ 0.15dB, A Grade ≤ 0.3dB	
Return Loss	$\geq$ 50dB(PC), 55dB(UPC), 60dB(APC)	X
Durability	< 0.2dB change, 500 mating	
IP Rating	IP68	
Operation Temp.(°C)	-40°C~ +85°C	

Allegro



#### Allegro 1U





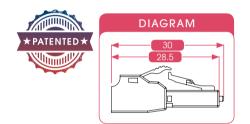
## **Build-out** Attenuator

(BOA) Plug-in type

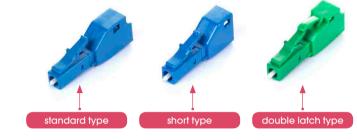
- **E** Features
- \* Easy installation compact design fits into existing connectors or patch panels
- \* Consistent performance precise attenuation value and hiah return loss
- \* Diversity various connectors for option
- \* High Stability and High Reliability
- \* Flawless end face
- \* Telcordia GR-910-core and RoHS Compliant

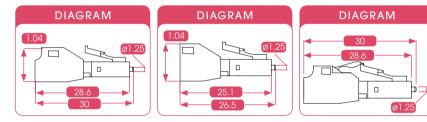




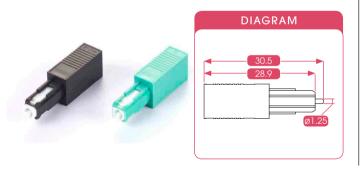


#### LC BOA

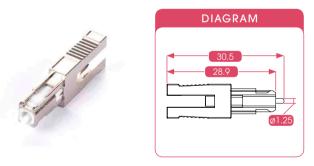


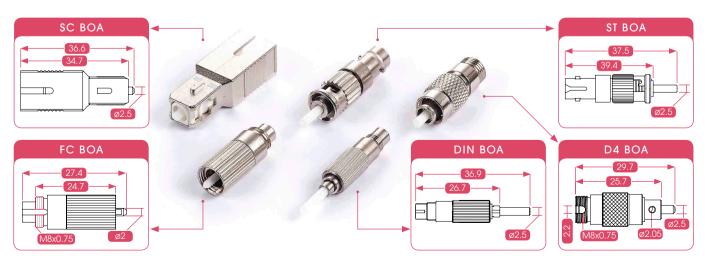


#### MU BOA (plastic housing, 6.6mm pitch)



#### MU BOA (metal housing, 4.5mm pitch)

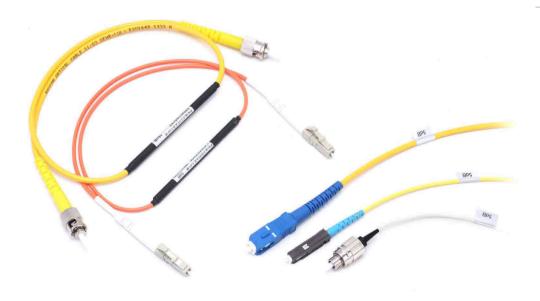




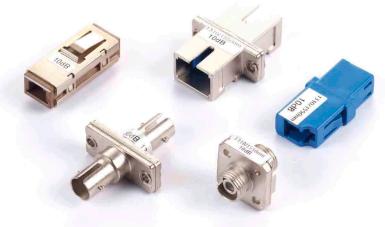
#### **Specifications**

Specifications		Value	
Item		Single Mode	Multi Mode
Wavelength		1310nm and 1550nm	850nm
wavelengin		1310nm or 1550nm	65011111
Attenuation Range		1dB ~ 25dB	1dB ~ 6dB
	0dB	Super $\leq$ 0.5dB; Ultra $\leq$ 0.3dB	≦ 0.5dB
Attenuation Variation	< 6dB	Supe ±0.75dB, Ultra ±0.5dB	≤ 6dB +1dB
	≥ 6dB	Super ±15%, Ultra ±10%	= OOD ± IOD
	PC	≧ 45dB	
Reflectance	UPC	≥ 50dB	-
	APC	Super ≥ 60dB ; Ultra ≥ 65dB	
Operation Temperature		-40° <b>C</b> ∼ 75° <b>C</b>	-40° <b>C</b> ∼ 75° <b>C</b>
Storage Temperature		-40° <b>C</b> ~ 85° <b>C</b>	-40°C~ 85°C

### **In-line Attenuator**



## **Bulkhead Attenuator**



# **Variable** Optical Attenuator

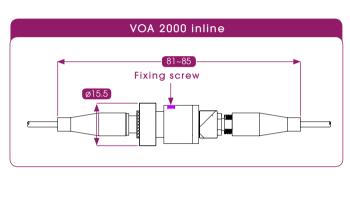


- \* Environmentally stable
- \* Easy installation
- \* Wide attenuation Range
- \* High performance Low excess loss, High return loss

unit: mm

#### **Variable Optical Attenuator**





#### **Variable Optical Attenuator Module**



#### **Hybrid Variable Optical Attenuator**



#### **Specifications**

		VOA	VOA Module
Operation Wavelength		1310nm or/and 1550nm for SM 850nm or 1300nm for MM	
Variable Range		1dB ~ 35dB for SM 1dB ~ 20dB for MM	
Reso	lution	0.20	dB
Reflectance	PC	≥ 45dB for SM	
Reflectatice	APC	≥ 50dB for SM	
			By Screw Driver
Adjust Method		Twist by hand	3 4
Operation Temperature		-40° <b>C</b> ~	75° <b>C</b>
Storage Temperature		-40°C~ 85°C	

Part Number	Description	
1824151516201010	VOA 1~35dB SM LC/PC-LC/PC Simplex 2.0mm 1M	
1A145421211	VOA Module 4Channels 1~35dB SM SC/UPC, 205x101x37mm	

<sup>\*</sup> Please contact us for other configurations.

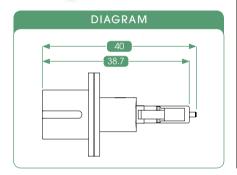
## Hybrid Adapter & Attenuator

#### **E** Features

- \* Easy installation compact design fits into existing connectors or patch panels
- \* Consistent performance precise attenuation value and high return loss
- \* Diversity various connectors for option
- \* High Stability and High Reliability
- \* Flawless end face
- \* Telcordia GR-910-core and RoHS Compliant

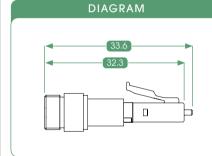
unit: mm

# LC(Male)-SC(Female) Hybrid

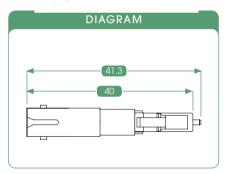






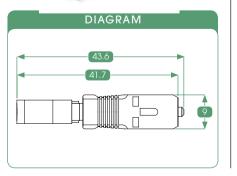






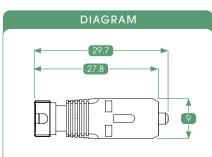
# SC(Male)-LC(Female) Hybrid





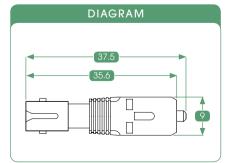
#### SC(Male)-FC(Female) Hybrid





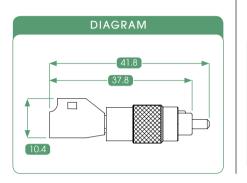
#### SC(Male)-ST(Female) Hybrid





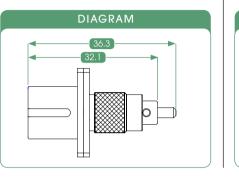
#### FC(Male)-LC(Female) Hybrid





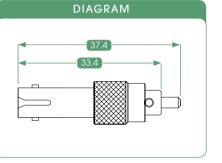
#### FC(Male)-SC(Female) Hybrid





#### FC(Male)-ST(Female) Hybrid





#### Specifications

Specifications		Value		
Item		Single Mode	Multi Mode	
Wavelength		1310nm and 1550nm	850nm and 1310nm	
		1310nm or 1550nm	850nm or 1310nm	
Attenuation Range		0dB ~ 30dB	0dB ~ 20dB	
Insertion Loss (0 dB)		≦ 0.5dB ≤ 0.5dB		
Precision	< 10dB	Super ±0.5dB, Ultra ±0.75dB	±1dB	
	≥ 10dB	Super±10%, Ultra ±15%	±15%	
Reflectance	PC	≥ 45dB		
	UPC	≥ 50dB		
Operation Temperature		-40° <b>C</b> ~ 75° <b>C</b>	-40° <b>C</b> ∼ 75° <b>C</b>	
Storage Temperature		-40° <b>C</b> ~ 85° <b>C</b>	-40° <b>C</b> ∼ 85° <b>C</b>	

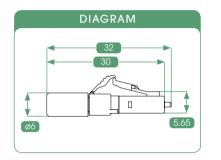
## **Terminator**

- **E** Features
- \* High power endurance
- \* Low backreflection
- \* High reliability
- \* Flawless end face

#### unit: mm

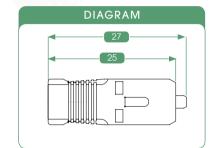
#### **LC Terminator**





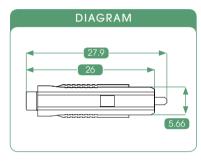
#### **SC Terminator**



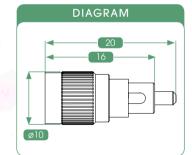


#### **MU Terminator**



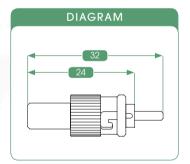


#### **FC Terminator**



#### **ST Terminator**





#### **Specifications**

Performan	се	Value
Wavelength(Single	e Mode)	1310nm and 1550nm
Plug Type		SC, FC, LC, MU, ST
Reflectance (dB)	PC	≥ 50dB
	UPC	≥ 55dB
	APC	≥ 65dB

Part Number	Description
1D15201	Terminator LC/PC
1D54201	Terminator SC/PC
1D48201	Terminator MU/PC
1D11201	Terminator FC/PC
1D60201	Terminator ST/PC

Specifications are subject to change without prior notice.

# Switch

With superb optomechanical integrated design and advanced assembly skill, GET's fiber 1xN optical switch provide excellent optical performance and reliable long-term operation.

It is suitable for laboratory, measurement, light path switching, and fiber monitoring in fiber optics communication and fiber sensing field.

unit: mm

#### **E** Features

- \* Wide Operation Wavelength Ranae.
- \* Multiple control methods.
- \* Fast channel switching.
- \* Low insertion loss & crosstalk.
- \* GR-1073 & GR-1221 Compliant.

- Applications
- \* RFTS
- \* Fiber sensing
- \* Fiber network monitorina
- \* Fiber Optical Protection
- \* Measurement automation

#### 1xN optic switch (mount)



#### s1xN optic switch (black)



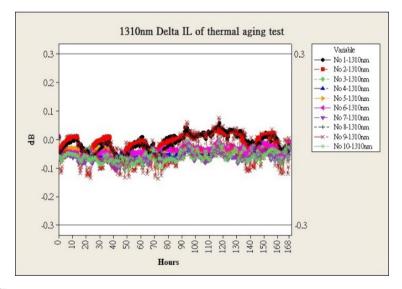
#### **Specifications**

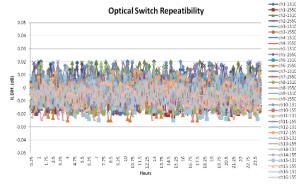
Most important characteristic of optical switch is channel repeatability.

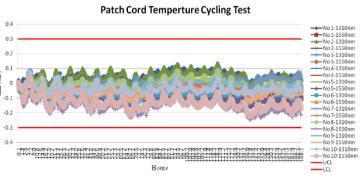
It will affect the accuracy of optical device performance test during long term measurement.

Within  $\pm 0.03$  dB of channel repeatability (Fig. 1), GET's 1xN optical switch series is suitable for fiber optics component testing in lab and manufacturing.

Figures 2 and 3 are part of GR-326-CORE environmental testing for product verification.







<sup>\*</sup> Please contact us for other configurations.

# **MEMO**