



Fiber Rotary Joint

I&Optics' fiber rotary joint can keep the communication between two rotary elements and make the telecom uninterrupted. It features low insertion loss, low loss variation, high RPM and long life cycle due to our unique technology. It can be used in robots, LiDARs, telecom, sensors, instruments, testing systems and R&D.

Specification

Parameter	Test Condition	Unit	Value	
Port Configuration	-	-	1x1	2x2
Nominal Center Wavelength	-	nm	850, 1064, 1310, 1550 or Specify	
Wavelength Range	-	nm	±20	
Max. Insertion Loss	-	dB	2.0, Typ. 0.7	3.5, Typ. 1.5
Max. Insertion Loss Variation	-	dB	0.25, Typ. 0.15	0.5, Typ. 0.3
Max. Speed	-	rpm	1000	
Estimated Life Cycle	-	r	2*10 ⁸	
Min. Return Loss	at Center Wavelength	dB	50	
Max. Power Handling Rate	Continuous Wave, Total Power	mW	300 or Specify	
Fiber Type	-	-	Single Mode or Specify	
Max. Fiber Tensile Load	-	N	10	
Operating Temperature	-	°C	-5 to 50	
Storage Temperature	-	°C	-40 to 85	

Above values are for device without connectors. For device with connectors, IL will be 0.3dB higher (0.5dB for 850nm or below), and return loss will 5dB lower.

Package Dimensions

Detailed Informations And Dimensions Please Contact Us. Customized Design Is Available Upon Request.

Ordering Informations

FRJ-①-②-③-④-⑤-⑥

① - Center Wavelength

85 - 850nm

06 - 1064nm

31 - 1310nm

55 - 1550nm

SS - Specify

③ - Fiber Type

1 - HI 780 Fiber

3 - HI 1060 Fiber

5 - SMF-28e Fiber

7 - GI MMF 50/125, NA 0.22

8 - GI MMF 62.5/125, NA 0.27

④ - Connector Type on port 1/2/3/4

1 - FC/UPC

2 - FC/APC

3 - SC/UPC

4 - SC/APC

⑤ - Fiber Jacket on Port 1/2/3/4

L - 900um Loose Tube

② - Port Configuration

1 - 1x2

2 - 2x2

⑥ - Fiber Length

0.8 - 0.8m