

1053nm Inline Faraday Rotator with Phase Bias for Pulse Power

FEATURES

- High Isolation
- Low Insertion Loss
- Epoxy-Free Optical Path

APPLICATIONS

- Fiber Optic Amplifiers
- Sensing Systems
- Telecommunication Networks

SPECIFICATIONS

| Parameter | Unit | Value | |
|---|----------------------------|--------------------------------------|--|
| Center Wavelength (CW) | nm | 1053 | |
| Bandwidth | nm | +/-5 | |
| Insertion Loss | dB | ≤2.2 (Type B), ≤4.0 (Type A) | |
| Rotate Angle | A: FR+WP+FR | deg | 90 (Backward Signal to Slow axis of Input Fiber) |
| (Single Transmission) | B: WP+FR | deg | 45 (Backward Signal to Fast axis of Input Fiber) |
| Rotation Angle Tolerance (CW, 23°C) | Deg | ≤+/-4 | |
| Phase Bias between Forward and Backward | - | π , $\pi/2$, $\pi/4$ or specify | |
| Return Loss | dB | ≥50 | |
| PDL (for SM Fiber Type) | dB | ≤0.2 | |
| Extinction Ratio | Standard | dB | ≥18 |
| (for PM Fiber Type) | High ER Type | dB | ≥20 (Can only work in Slow Axis) |
| Fiber Type | SM Fiber Type | - | HI1060 Fiber or 10/125um SC Fiber (E) 10/125um DC Fiber (O), 15/130um DC Fiber (W) 20/130um DC Fiber (Q) or 25/250um DC Fiber (R) |
| | PM Fiber Type | - | PM980 Fiber, PM1060L Fiber (E) or PM1060L-FA Fiber (L) 10/125um PMDC Fiber (O), 15/130um PMDC Fiber (W) 20/130um PMDC Fiber (Q) or 25/250um PMDC Fiber (R) |
| Fiber Tensile Load | N | 5 | |
| Max. Average Power (Forward+Backward) | mW | 200 | |
| Max. Peak Power for pulse | kW | 0.1, 1, 2, 3, 5, 10, 15, 20 | |
| Operating Temperature | °C | 0~50 | |
| Storage Temperature | °C | -40~85 | |
| Package Dimension | Stainless Steel Tube (SST) | mm | (Ø)5.5x35 |
| | Metal Box | mm | (L)120x(W)12x(H)10 |

- Note:**
1. Specifications are for device without connectors; Specifications may change without notice.
 2. To add connectors, IL is 0.5dB higher, RL is 5dB lower, ER is 2dB Lower, Connector key is aligned to slow axis.
 3. Only guarantee 1W continuous wave (CW) power thru testing for connectors added.
 4. Forward/backward signals transmit through fast axis/slow axis of a waveplate induces the phase bias.
 5. Devices for higher optical power or with other type fiber or consigned fiber are also available; Devices can only work in the core of Double Cladding (DC) Fiber, Cladding Power must be stripped before connecting the device.

ORDERING INFORMATION (PN)

FRPB-NNNN - C N (C) C C-H02PNN -(C) (C) C NN -CC/CCC

| Center Wavelength | Rotate Angle | Phase Bias | Type | Input Fiber | Output Fiber | Peak Power | Package | Fiber Type | Fiber Sleeve | Fiber Length | Connector Type |
|-------------------|--------------|-------------|-----------|-------------|--------------|------------|---------------|---------------------------------|---------------|--------------|-------------------------|
| 1053=1053nm | A=90 | 1= π | R=High ER | S=SM Fiber | S=SM Fiber | 01=100W | M=Metal Box | E=10/125 SC or PM1060L Fiber | B= Bare Fiber | 05=0.5m | N=Without Connector |
| | B=45 | 2= $2\pi/2$ | Blank for | P= PM Fiber | P= PM Fiber | 1= 1kW | Blank for SST | Q=20/130 DC or PMDC Fiber | L= Loose Tube | 10=1.0m | FC/APC=FC/APC Connector |
| | | 4= $\pi/4$ | Standard | | | 5= 5kW | | R=25/250 DC or PMDC Fiber | 2= 2mm Cable | 15=1.5m | LC/PC=LC/PC Connector |
| | | | | | | 10=10kW | | Blank for HI1060 or PM980 Fiber | 3= 3mm Cable | 20=2.0m | SC/UFC=SC/UFC Connector |