

# PM FIBER-Q®

## Polarization Maintaining 1550 nm Fiber Coupled Acousto-Optic Modulator

T-M040-0.5C8J-3-F2P

The T-M040-0.5C8J-3-F2P Acousto-Optic Modulator is designed for use as a 40MHz frequency shifter for heterodyne interferometry or as an intensity modulator

Gooch & Housego specialize in providing optical components for high power fiber laser and amplifier systems. In-house control of critical manufacturing processes; from crystalline material selection and orientation, cutting, polishing and anti-reflection coating through to fiber coupling, ensure our components are of the highest optical quality.

In addition to the standard product shown, custom configurations are available for specialized applications.



### Key Features

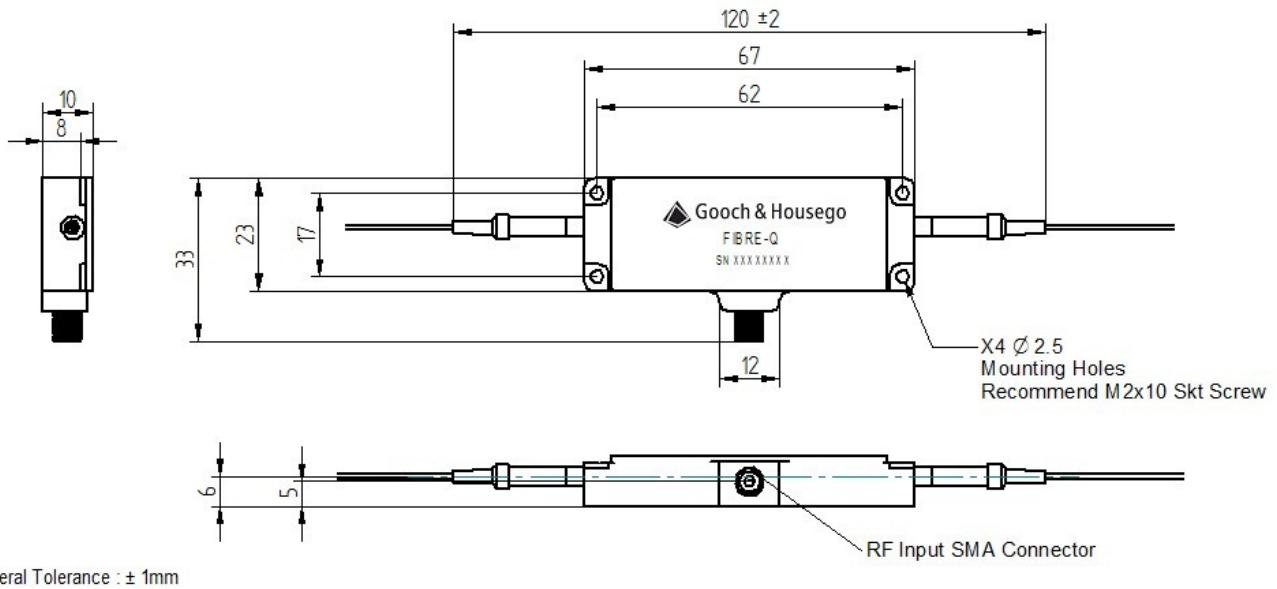
- Low insertion loss
- Compact low profile package
- Rugged hermetic design
- Stable performance
- Low power consumption
- Custom configurations available

### Applications

- Sensing (heterodyne interferometry)
- Intensity Modulation

## General Specifications

| Parameter                        | Min     | Max     | Typical     | Comments                                     |
|----------------------------------|---------|---------|-------------|--|
| Interaction material             | -       | -       | -           | Amtir  |
| Wavelength                       | 1530 nm | 1565 nm | 1550 nm     | Other wavelengths available on request       |
| Average optical power handling   | -       | 1 W     | -           |  |
| Peak optical power handling      | -       | 1 kW    | -           | Dependent on pulse width                     |
| Insertion loss                   | -       | 2.5 dB  | -           |  |
| Polarization extinction ratio    | 18 dB   | -       | 20 dB       |  |
| Extinction ratio                 | 50 dB   | -       | -           |  |
| Return loss (RF ON/RF OFF)       | 40 dB   | -       | -           |  |
| Rise-time/fall-time: (10% - 90%) | -       | 100 ns  | 70 ns       |  |
| Frequency                        | -       | -       | 40 MHz      |  |
| VSWR                             | -       | 1.5:1   | -           |  |
| Input impedance                  | -       | -       | 50 $\Omega$ |  |
| RF power                         | -       | 0.4 W   | 0.25 W      |  |
| Frequency shift                  | -       | -       | 40 MHz      | Upshift                                      |
| Fiber type                       | -       | -       | -           | Fujikura PM1550 (SM15-PS-U25A) or equivalent |
| Fiber length                     | 1.5 m   | -       | -           | 900 $\mu$ m PVDF sleeving                    |
| Fiber termination                | -       | -       | -           | Bare fiber                                   |



### Other products which may be of interest

- HI REL couplers
- High power multimode combiners
- Combiners with all types of signal feedthrough fiber
- Ultra-low ratio tap couplers
- WDMs for combining signals with red pointer lasers
- OCT wideband couplers

#### Ordering Information:



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Email orders to: [sales@xsoptix.com](mailto:sales@xsoptix.com)  
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POLARIZATION MAINTAINING 1550 NM FIBER COUPLED ACOUSTO-OPTIC MODULATOR