

## 1100 – 2200nm Quasi-Collinear Acousto-Optic Tunable Filter

TF1650-1100-2-3-GH40

AO Tunable Filters for specialist spectroscopic applications.

Gooch & Housego's AOTF capability is extensive. By combining our scientific knowledge, modelling capability and engineering expertise with our renowned manufacturing skill and high quality, our products are aimed at the most discerning customers, in the most demanding applications.

Quasi-collinear design offers narrow wavelength resolution with excellent out of band wavelength rejection and exceptionally low drive power requirements.

In addition to the standard product shown, custom configurations are available for specialised applications. These include alternative mechanical design, wavelength range, aperture & resolution. We also offer temperature stabilisation or compensation options.

Please contact the sales team for further information.

### Key Features:

- Wavelength 1100 to 2200nm
- Narrow resolution
- High speed, random access
- Excellent out of band rejection
- Solid state technology
- Custom configurations available

### Application examples:

- Laser tuning
- Ultra-fast laser systems
- Fibre systems

## General Specifications

Interaction material:	Tellurium Dioxide (Anisotropic)
Mode:	Quasi-Collinear Slow-Shear AO Interaction
Wavelength range:	1100 - 2200nm
Frequency range:	26 – 54MHz
Resolution (FWHM):	< 2nm at 1650nm
Active aperture:	3mm
Recommended Beam Diameter	2.6mm (diffraction-limited)
Polarisation:	Polarisation sensitive
Incident polarisation:	Linear, vertical with respect to base
Polarisation of diffracted order:	Linear, orthogonal to input (90° rotated)
Pointing stability of diffracted order:	< ± 0.01 ° typical
Beam separation:	> 2°
RF input impedance:	50Ω
Transmission:	> 95%
Diffraction efficiency:	> 75%*
RF drive power:	~ 60mW @ 1100nm, ~ 100mW @ 1550nm, ~250mW @ 2200nm
Maximum RF Power:	3W
Cooling:	Conduction through base

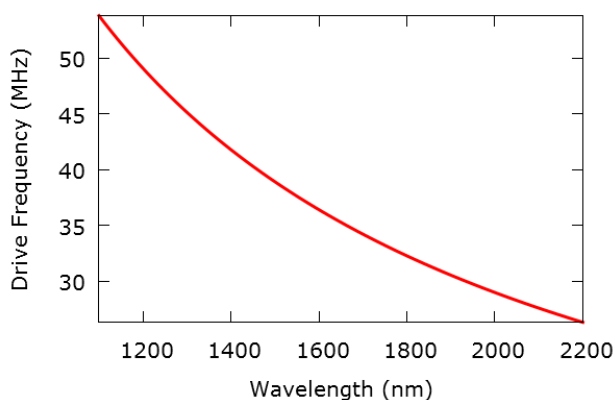
**\*Alignment must use recommended beam diameter with a single mode collimated beam**

## Ordering Code

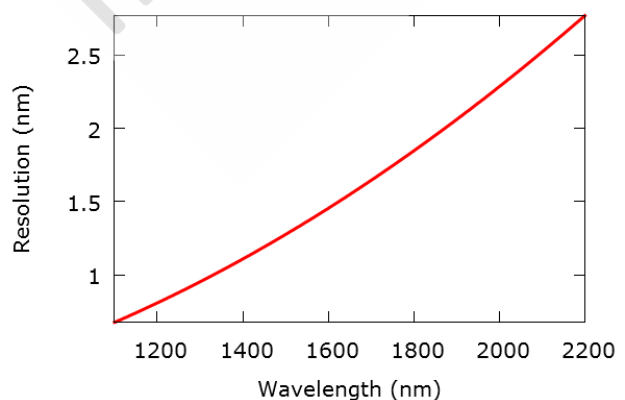
**Explanation:** TF1650-1100-2-3-GH40 (AO Tunable Filter, centre wavelength 1650nm, 1100nm operating range, 2nm resolution, 3.0mm active aperture, GH40 housing).

**T F 1 6 5 0 - 1 1 0 0 - 2 - 3 - G H 4 0**

**Tuning Relation**



**Line Width**



### Mechanical Data

