



# Gooch & Housego



## AO Frequency Shifter / Modulator

I-FS080-2S2G-3-LV1

*Former model number: M080-2G-LV1*

The LV1 is ideally suited for frequency shifting or slow modulation of linearly polarised Nd:YAG or Nd:YVO<sub>4</sub> lasers.

Rise-times down to 10µs are achievable, together with excellent diffraction efficiency at extremely low RF drive power, typically >95% at 0.5W RF.

The slow shear interaction also results in a very user friendly diffraction angle of 6.45deg.

In addition to the specifications indicated, we also offer alternative wavelengths, frequency shift, active aperture & integrated driver versions.

### Key Features:

- High efficiency
- Low drive power
- 1064nm
- 80MHz
- Custom configurations available

### Applications:

#### Industrial:

- Vibrometry
- Process control
- Pulse picking or power control

#### Scientific:

- Interferometry

## General Specifications

Interaction material:	Tellurium Dioxide (TeO <sub>2</sub> )
Acoustic mode:	Anisotropic, slow shear
Wavelength:	1064nm
AR coating reflectivity:	< 0.2% per surface
Transmission:	> 99.5%
Frequency shift:	80MHz
VSWR:	< 1.2:1
Active aperture:	2mm
Clear aperture:	4mm
Recommended beam diameter:	1mm
Input polarisation:	Linear, vertical with respect to housing base
Polarisation alignment:	± 5°
Output polarisation (1 <sup>st</sup> order diffracted):	Linear, horizontal (rotated by 90° to input)
Angle between zero and 1 <sup>st</sup> order beams:	6.45°
Diffraction efficiency:	> 90% (typically > 95%)
RF power:	0.5W

## Ordering Code

**Explanation: I-FS080-2S2G-3-LV1** (Frequency shifter, 80MHz, 2.0mm active aperture, shear mode, tellurium dioxide, 1064nm, SMA female bulk head RF connector, LV1 housing).

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