



40MHz, 630 – 690nm AO Frequency Shifter with integrated RF driver

I-FS040-2S2E-1-GH66

A compact Acousto-Optic Frequency Shifter with integral RF driver & reference frequency output.

Featuring a generous active aperture, low power 15V DC supply requirement and high diffraction efficiency, this device is ideal for use in heterodyne interferometric systems, particularly laser Doppler velocimetry and has been designed to facilitate double pass configuration.

In addition to the specifications indicated, we also offer alternative wavelengths, RF frequencies, active apertures & a wide range of custom housing configurations. We also offer full custom design & manufacturing, enabling our customers to achieve the perfect solution.

Our scientists and engineers are available to assist in selecting the most appropriate Acousto-Optic device and RF driver for your application.

Please contact our sales team for further information.

Key Features:

40MHz
630 – 690nm
Compact integrated design
High efficiency
40MHz reference frequency output
Tellurium Dioxide

Applications:

Industrial:

- Laser Doppler Vibrometry
- Laser Doppler Velocimetry
- 3D laser scanning



General Specifications

Model No:I-FS040-2S2E-1-GH66Device:AO Frequency ShifterInteraction material:Tellurium DioxideWavelength:630 – 690nm

AR coating reflectivity: < 0.2% per surface

 $\begin{array}{ll} \mbox{Transmission:} & > 95\% \\ \mbox{Frequency:} & 40\mbox{MHz} \\ \mbox{Frequency drift / °C:} & < \pm 10\mbox{ppm} \\ \mbox{Active aperture:} & 2.0\mbox{mm} \end{array}$

Polarisation state of input beam:

Polarisation state of 1st order beam:

Linear, horizontal to base
Linear, vertical to base
Linear, horizontal to base
Linear, horizontal to base

Supply voltage: $15V dc (\pm 10\%)$

Power consumption: <1.5W

Power supply connection: lead-through filter

RF reference output: 40MHz sine-wave voltage of 0.5 – 1.0V p-p

RF reference output connector: SMB male Harmonic distortion: < 40dB @40MHz

Zero to 1st order polarisation extinction ratio: > 100:1 Separation angle between zero and 1st order beams: 2.4° at 655nm

Diffraction Efficiency: > 90%

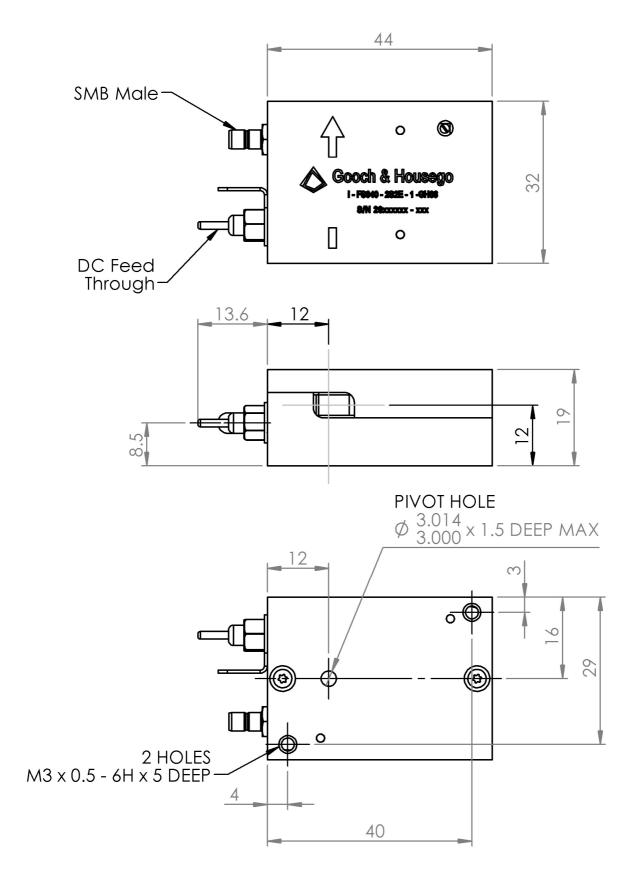
Cooling: Conduction through base

Ordering Code

Explanation: I-FS040-2S2E-1-GH66 (Frequency Shifter, 40MHz, 2.0mm active aperture, shear mode, Tellurium Dioxide, 630 - 690nm, SMB male for reference output, GH66 housing).

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