Sintec Optronics

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.

Key Features:

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

Applications:

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

Specification:

Model No:	I-FS040-2S2E-1-GH66
Device:	AO Frequency Shifter
Interaction material:	Tellurium Dioxide
Wavelength:	630 – 690nm
AR coating reflectivity:	< 0·2% per surface
Transmission:	> 95%
Frequency:	40MHz
Frequency drift / ^{o}C:	< ±10ppm
Active aperture:	2.0mm
Polarisation state of input beam:	Linear, horizontal to base
Polarisation state of 1st order beam:	Linear, vertical to base
Polarisation state of zero order beam:	Linear, horizontal to base
Supply voltage:	15V dc (±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^{o} 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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