

## Acousto-optical Frequency Shifter

I-FS080-3S2E-1-

**GH39**

**I-FS080-3S2E-1-GH39**

Device:	AO Frequency shifter
Interaction material:	Tellurium Dioxide
Frequency-Shift:	80MHz (up-shift)
Operational wavelength:	633nm
Reflectivity per surface:	< 0.2%
Minimum optical aperture:	4 x 3.0 mm (horizontal and vertical)
Active aperture:	3.0mm (vertical)
Transmission:	> 95% @ 633nm
Maximum diffraction efficiency:	> 90% @ 633nm
Minimum diffraction efficiency:	< 20% @ 633nm
Supply voltage:	15V dc ( $\pm 10\%$ )
Power consumption:	< 1.5W
Power supply connection:	Lead-through filter
RF output connector:	SMB Bulkhead Jack
RF output:	80MHz sine-wave voltage of 0.5 - 1V p-p as a reference signal
Zero to 1st order polarisation extinction ratio:	> 100:1
Polarisation state of input beam:	Linear and horizontal with respect housing
Polarisation state of diffracted order:	Linear and orthogonal to input and zero beams
Output Beam Compensation - Diffracted beam angle wrt input:	$0^\circ \pm 0.5^\circ$
Vertical angle of deflection:	< 2 mrad with respect to straight through direction

