The FS1300 series are specifically designed for operation as high efficiency acousto-optic frequency-shifters and/or low speed amplitude modulators in the NIR wavelength range.

**SPECIFICATIONS**

- **Standard Operating Wavelength:** 1550nm (Others available)
- **Interaction Material:** Tellurium Dioxide (TeO₂)
- **Active Aperture:** 2mm
- **Acoustic Velocity:** 0.615mm/us
- **Centre Frequency (f₀):** 150MHz
- **RF Bandwidth (∆f):** ~ 1.5 MHz
- **Input Impedance:** 50Ω (Nominal)
- **VSWR:** < 1.5 :1 at f_c
- **Optical Power:** < 5W
- **Optical rise time:** 1.1usec per mm beam diameter
- **Input Laser Polarization:** Linear, either
- **Output Polarization:** Rotated 90deg relative to input

**ORIENTATION**

- **RF Input**
- **Laser input (Vertical Polarization)**
- **Laser input (Horizontal Polarization)**

**PERFORMANCE**

- **Model:** FS1303A
- **Wavelength:** 1550 nm
- **RF Drive Power:** < 1.6 W
- **Bragg Angle (@ 150MHz):** 16.7 degrees (nominal), vertical input pol.
- **Beam Separation (@ 150 MHz):** 5.0 degrees (nominal), horizontal input pol.
- **Diffraction Efficiency:** ≥85% min, >90% typical
- **Static Insertion loss:** <3% max, < 2% typical
- **Response time:** > 650KHz, for 0.5mm beam diameter
FS1303A-T150S-1
AO Frequency Shifter
(PRELIMINARY)

OUTLINE DRAWING
Case material: Aluminium

Active aperture C/L
50.76
17.77
6.98
11.42
26.65
11.17

Aperture

M3 x 4mm dp
(2 places)

RF Input (SMA)

Bragg pivot Hole
3mm dia. x 4mm dp
Optical centre of AO cell
Coincides to C/L within 0.76mm

Dimensions: mm

Dimm: mm
(1" = 25.4mm)

DRIVER OPTIONS

Fixed Frequency, 12-15V, 24V
Digital Modulation: 524C-L, 524C-2
Analog Modulation: 534C-L-B, 534C-2-B
(-B = with Bias)

Programmable Frequency, Synthesizer with amplitude control
24V

iSPA-SF series

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
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Quality Assured.
In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding