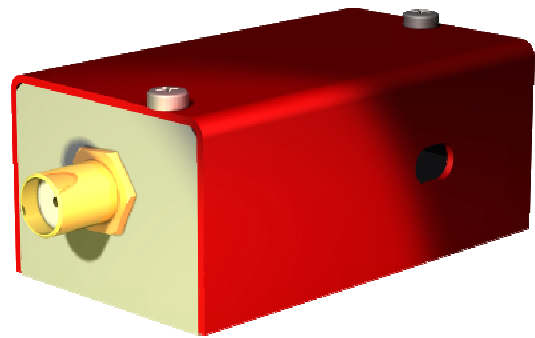


High resolution deflector from 350 to 1600 nm lasers

- Circular aperture • Linear polar
- Large scan angle

These deflectors offer a typical resolution of 250 to 400 dots with a round input laser beam from 4.2 up to 6.7 mm ($1/e^2$). Main advantage is the large scan angle which can reach up to 3 degrees in the visible range.

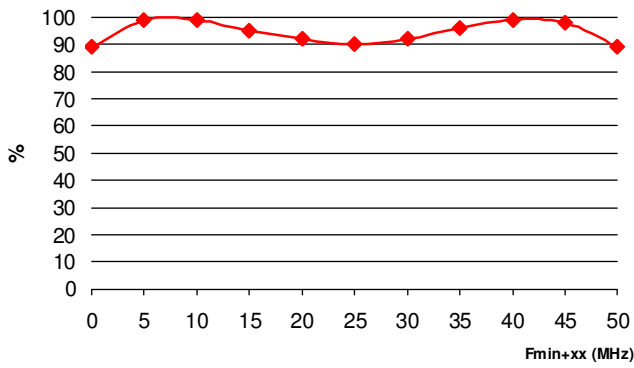
With an adapted frequency driver, user will be able to operate this device as a variable frequency shifter.



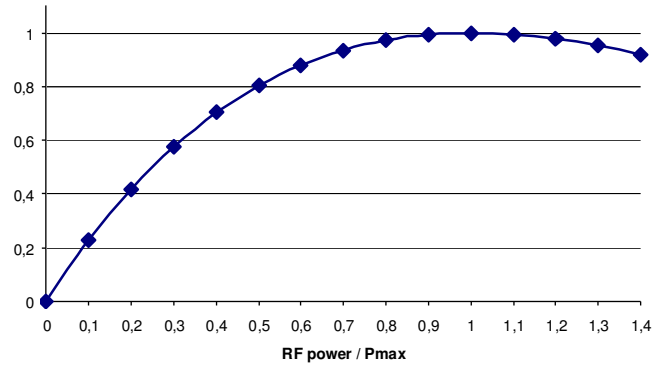
Specifications

	DTSX-250	DTSX-400
Material-Acoustic mode	TeO ₂ [S]	
Acoustic Velocity	Nom V=650 m/s	
Optical Wavelength range	Designed for a single wavelength on request in [350-1600 nm] Standard : 442, 458, 478, 488, 532, 633, 670, 780, 820, 1064 nm	
Transmission	> 95 % (broadband coating)	
Optical Input / Output polarizations	Linear // - 1 st order flipped	
Aperture	4.5 x 4.5 mm ² (Beam diameter 4.2 mm)	7.5 x 7.5 mm ² (Beam diameter 6.7 mm)
Carrier frequency / Frequency shift	Wavelength dependent	
Frequency range	50 MHz @VIS 30 MHz @1064 nm	
Scan angle	41 mrd @532 nm 49 mrd @1064 nm	
Diffraction efficiency (with TEM ₀₀ beam, M ² ≤ 1.1)	> 70 % across frequency range	
Access time	6.5 μs (beam dia 4.2 mm)	10.3 μs (beam dia 6.7 mm)
Resolution (N)	250 @532 nm, 150 @1064 nm	400 @532 nm, 240 @1064 nm
Static extinction ratio	> 2000/1	
Max optical power density	Nom 5 W / mm ² @532 nm	
Input impedance	Nom 50 Ω	
V.S.W.R.	Nom < 2/1	
RF Power	≤ 1 Watt @532 nm, ≤ 2 Watts @1064 nm	
Connector	SMA	
Size / Weight	(LxIhx) 48.5 x 27.6 x 20.8 mm ³ / 60 g	
Operating Temperature	10 to 40 °C	

Relative efficiency behaviour versus scan angle



Relative Diffraction Efficiency vs RF Power



→ Separation angle ($\Delta\theta$) is wavelength (λ) sensitive:

$$\Delta\theta = \frac{\lambda F}{V}$$

→ RF power (P) is wavelength (λ) sensitive:

$$\frac{P_1}{P_2} = \frac{\lambda_1^2}{\lambda_2^2}$$

DTSX-250-1064

250 : Aperture/resolution (250 or 400)

1064 = Wavelength (nm)

Outline Drawing

sizes in mm

