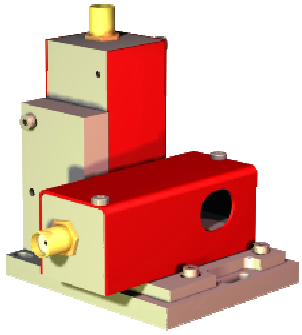
DTSXY AO 2 axis DEFLECTOR

High resolution deflector from 350 to 1600 nm lasers



• Circular aperture • Linear polar • Large scan angle

These deflectors offer a typical total resolution of 160 000 dots (2 axis) with a round input laser beam up to 6.7 mm (1/e²). Main advantage is the large scan angle which can reach up to 3 x 3 degrees in the visible range.
With an adapted frequency driver, user will be able to operate this device as a one axis deflector with frequency shift cancellation.

Specifications

	DTSXY-250	DTSXY-400
Material-Acoustic mode	TeO2 [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 % per axis (broadband coating)	
Optical Input / Output polarizations	Linear ⊥ - 1st working order Linear ⊥	
Aperture	4.5 x 4.5 mm² (Beam diameter 4.2 mm)	7.5 x 7.5 mm² (Beam diameter 6.7 mm)
Carrier frequency / Frequency shift	Wavelength dependent	
Frequency range	50 MHz @VIS 30 MHz @1064 nm	
Scan angle	41x41 mrd² @532 nm 49x49 mrd² @1064 nm	
Diffraction efficiency (with TEM00 beam, M² ≤ 1.1)	> 50 % across frequency range (2 axis)	
Access time	6.5 µs (beam dia 4.2 mm)	10.3 µs (beam dia 6.7 mm)
Resolution (N)	250x250 @532 nm 150x150 @1064 nm	400x400 @532 nm 240x240 @1064 nm
Static extinction ratio	> 2000/1	
Max optical power density	Nom 5 W / mm² @532 nm	
Input impedance	Nom 50 Ω	
V.S.W.R.	Nom < 2/1	
RF Power	≤ 1 Watt @532 nm, ≤ 2 Watts @1064 nm (per axis)	
Connector	SMA	
Size / Weight	(Lxlxh)	
Operating Temperature	10 to 40 °C	

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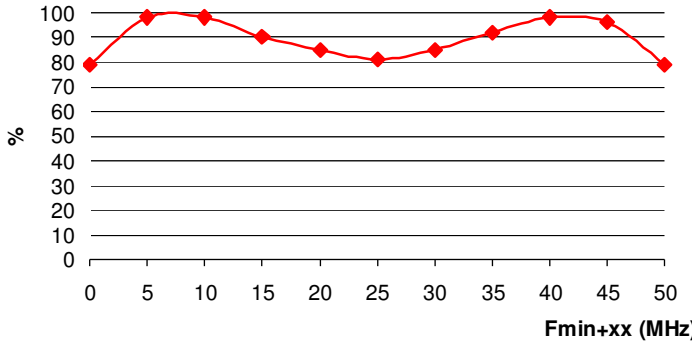
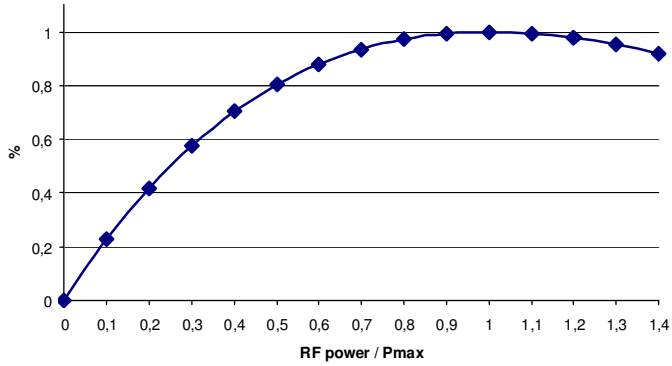
Relative efficiency behaviour versus scan angle



Relative Diffraction Efficiency vs RF Power



→ Separation angle (Δθ) is wavelength (λ) sensitive:

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

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

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

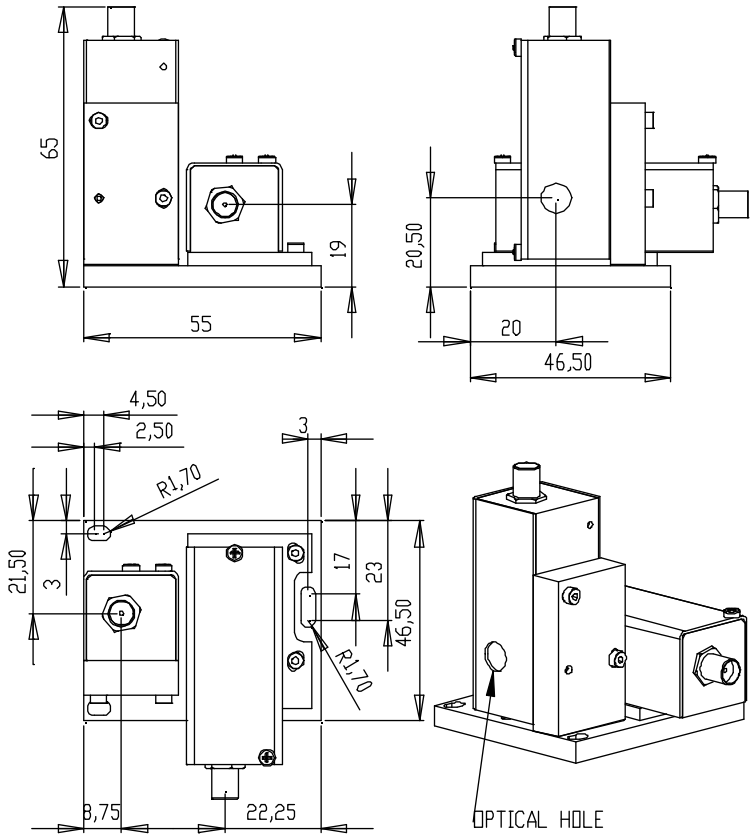
DTSXY-250-1064

250 : Aperture/resolution (250 or 400)

1064 = Wavelength (nm)

Outline Drawing

sizes in mm



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