

# DT230

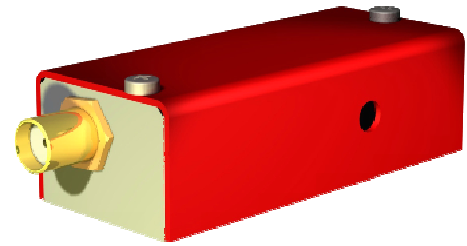
# AO Deflector/Shifter

## TeO2 fast deflector

- High speed
- Linear or random Polar
- Printing

These deflectors can also be used as fixed frequency shifters @230 MHz, as well as variable frequency shifters with a frequency range up to 230 +/- 60 MHz.

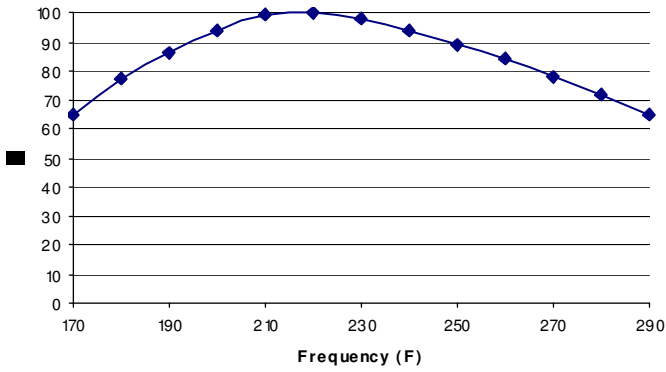
With an adapted frequency range, user will be able to operate this device as a high speed low resolution deflector.



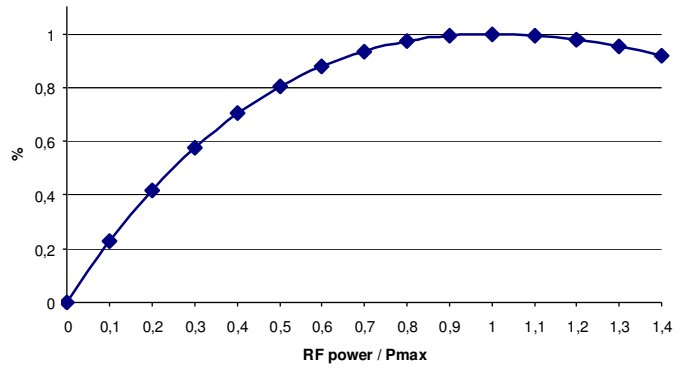
### Specifications

	DT230-B120A0,5-VIS	DT230-B120A1-400.450
Material-Acoustic mode		TeO2 [L]
Acoustic Velocity		V=4200 m/s
Optical Wavelength range	450-670 nm	400-450 nm
Transmission		> 95 %
Optical Input / Output polarizations		Linear
Aperture	0.5 x 17.5 mm <sup>2</sup>	1 x 17.5 mm <sup>2</sup>
Carrier frequency / Frequency shift		230 MHz
Frequency range		120 MHz
Separation angle	> 21.5 mrd @532 nm	> 16 mrd @400 nm
Scan angle	15.2 mrd @532 nm	> 11.4 mrd @400 nm
Diffraction efficiency (with TEM00 beam, M <sup>2</sup> ≤ 1.1)	> 50 % across frequency range and full aperture	
Access time	4.2 μs (beam 17.5 mm)	
Time bandwidth product (resolution)	500	
Static extinction ratio	> 2000/1	
Max optical power density	5 W / mm <sup>2</sup> @532 nm	0.5 W / mm <sup>2</sup>
Input impedance	Nom 50 Ω	
V.S.W.R.	Nom < 2/1	
RF Power	≤ 2 Watts	
Connector	SMA	
Size / Weight	(LxHx) 57x 47 x 17.7 mm <sup>3</sup> / 60 g	
Operating Temperature	10 to 40 °C	

Relative efficiency versus scan angle



Relative Diffraction Efficiency vs RF Power



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

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

→ RF power (P) is wavelength ( $\lambda$ ) sensitive:

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

Outline Drawing

sizes in mm

