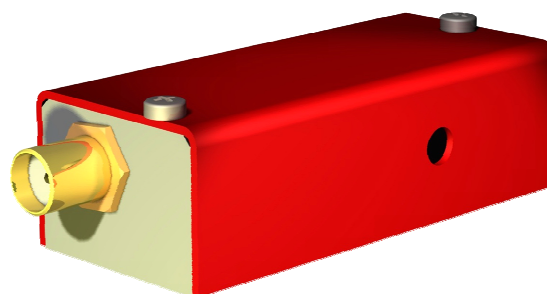


• High speed • High power • Linear Polar

These modulators have been specially designed for high speed high power modulation, where TeO2 cannot be used.

They can also be used as fixed frequency shifters @240 MHz, as well as variable frequency shifters or deflectors with a frequency range up to 240 +/- 40 MHz.



Specifications

Material-Acoustic mode	Fused silica
Acoustic Velocity	V=5960 m/s
Optical Wavelength range	UV : 325-425 nm
Transmission	> 95 %
Optical Input / Output polarizations	Linear $\perp$
Aperture	0.2 x 1 mm ²
Carrier frequency / Frequency shift	240 MHz
Separation angle	> 13 mrd
Diffraction efficiency (with TEM00 beam, $M^2 \leq 1.1$)	UV : ≥ 80 %
1st order ellipticity	Nom 85 % @90 μ m beam dia
Rise time	110 ns /mm (min 10 ns)
Amplitude modulation bandwidth	48 MHz (-3 dB, @90 μ m)
Static extinction ratio	> 2000/1
Max optical power density	> 10 W / mm ²
Input impedance	Nom 50 Ω
V.S.W.R.	Nom < 1.5/1
RF Power	UV : ≤ 2 Watts
Connector	SMA
Size / Weight	(Lxlxh) 50.9 x 22.4 x 15.8 mm ³ / 50 g
Operating Temperature	10 to 40 $^{\circ}$ C

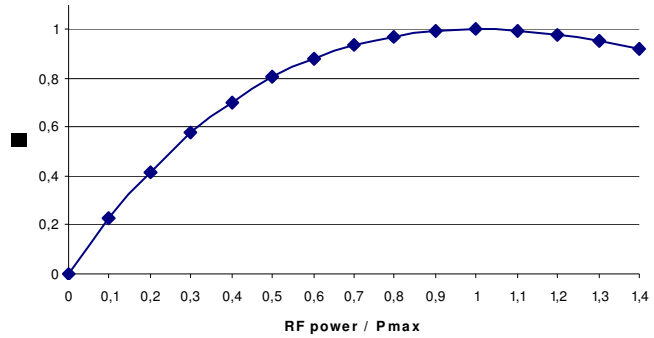
Relative Diffraction Efficiency vs RF Power

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

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

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

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



OPTION

Frequency range 240+/-40MHz

Nominal efficiency over 240+/-40MHz > 60%

Outline Drawing

sizes in mm

