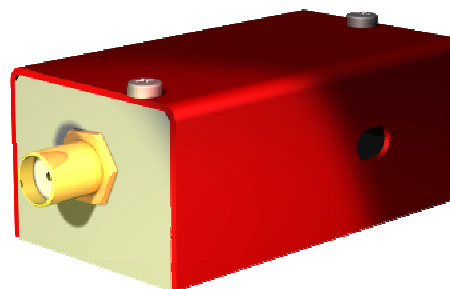


MTS80

AO Modulator/Shifter

TeO₂-S modulator for 1064 nm lasers



- Large aperture • Linear Polar • High efficiency • Colinear

These modulators have been specially designed for large beam diameters without additional optics. Their high efficiency and low drive power will suit most of the low speed applications.

They can also be used as fixed frequency shifters @80 MHz, as well as variable frequency shifters with a frequency range up to 80 +/- 2 MHz.

Specifications

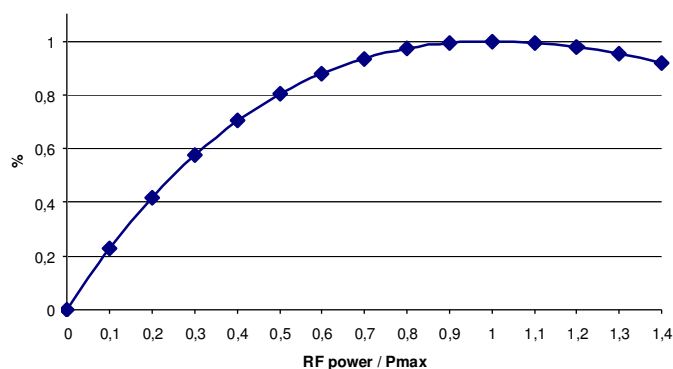
Material-Acoustic mode	TeO ₂ [S]
Acoustic Velocity	Nom V=650 m/s
Optical Wavelength range	1030-1080 nm
Transmission	> 95 %, nom 98 %
Optical Input / Output polarizations	Linear / Not specified
Aperture	3 x 3 mm ²
Carrier frequency / Frequency shift	80 MHz
Separation angle	130 mrd @1064 nm
Angular colinearity	Input beam / First order beams
Diffraction efficiency (with TEM₀₀ beam, M² ≤ 1.1)	> 85 %, nom 90 %
Rise time	1 μs / mm
Amplitude modulation bandwidth	> 400 KHz (-3 dB, @ 1 mm)
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	≤ 1 Watt
Connector	SMA
Size / Weight	(LxHxh) 50.9 x 22.4 x 15.8 mm ³ / 50 g
Operating Temperature	10 to 40 °C

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

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

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

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



MTS80-A3-1064Ac

Outline Drawing

sizes in mm

