

# MCQ110 VIS

# AO Modulator/Shifter

## High power 532 nm modulator, air cooling

### • High power • Linear Polar • Large aperture

These modulators have been specially designed for applications for which TeO<sub>2</sub> cannot be used. Their large aperture allows user to combine the laser beam without additional optics. They cover the VIS range up to 650 nm. Suitable for DPSS 532 nm or AR+ lasers.

They can also be used as fixed frequency shifters @110 MHz, as well as variable frequency shifters or deflectors with a frequency range up to 110 +/- 15 MHz.

### Specifications

### MCQ110-A2-VIS

<b>Material-Acoustic mode</b>	Quartz
<b>Acoustic Velocity</b>	V=5740 m/s
<b>Optical Wavelength range</b>	458-650 nm
<b>Transmission</b>	> 95 %
<b>Optical Input / Output polarizations</b>	Linear ⊥
<b>Aperture</b>	2 x 2 mm <sup>2</sup>
<b>Carrier frequency / Frequency shift</b>	110 MHz
<b>Separation angle</b>	10.2 mrd @532nm ( <i>Scan angle over 30 MHz: 2.8 mrd @532nm</i> )
<b>Diffraction efficiency (with TEM<sub>00</sub> beam, M<sup>2</sup> ≤ 1.1)</b>	> 85 % @532 nm, @1.5 mm beam dia (≥ 70% over 30 MHz)
<b>Rise time</b>	115 ns /mm (min 50 ns – min beam diameter 0.5 mm)
<b>Amplitude modulation bandwidth</b>	> 8 MHz (-3 dB)
<b>Static extinction ratio</b>	> 1000/1
<b>Max optical power density</b>	> 100 W / mm <sup>2</sup>
<b>Input impedance</b>	Nom 50 Ω
<b>V.S.W.R.</b>	Nom < 1.5/1
<b>RF Power</b>	Typ 5 Watts
<b>Connector</b>	SMA
<b>Heat Exchange</b>	Conduction through baseplate
<b>Size / Weight</b>	(Lxlxh)
<b>Operating Temperature</b>	10 to 40 °C

