

Acousto-Optic Beam Deflector for UV Systems 2690 | 3246 | 3283

Acousto-optic (AO) beam deflectors induce an angular shift of the diffracted first order proportional to the applied RF frequency carrier signal. Current devices will handle UV wavelengths down to 266 nm. Aperture heights of up to 7 mm are offered as well as aperture widths over 60 mm. Beam deflectors offer scan angles up to 5 mrad. These AO devices offer accurate, agile control of the beam position for linear scanning or random frequency hopping.

A variety of designs using optimized optical materials are available. Devices range from conduction cooled to high power water cooled designs. Our expert design staff can tailor deflector performance to meet your specific needs.

Our UV deflectors are ideal for applications such as micro machining, inspection systems, via drilling and graphic imaging. Two dimensional scanning can be achieved by cascading two deflectors in series. As with all of our acousto-optic devices, the deflector line utilizes our high quality crystals and AR coatings housed in a rugged and reliable package. The solid state design offers unsurpassed reliability and consistency.

Key Features

- Solid state design
- Accurate position control
- Fast scan speeds
- Good temperature stability
- Repeatable performance
- Variety of offerings

Key Benefits

- Proven reliability
- Consistent performance
- Technical support
- Test documentation
- One year limited warranty

Applications

- Micro machining
- Inspection
- Via drilling
- Graphic imaging



Part number	AOBD2690	AOBD 3246	AOBD 3283
AO medium	Sapphire	Crystal quartz	Crystal quartz
Acoustic mode	Longitudinal	Longitudinal	Longitudinal
Wavelength	266	355	355
Insertion loss	10%	1%	1%
Center frequency	330 MHz	170 MHz	110 MHz
RF bandwidth	202 MHz	80 MHz	20 MHz
RF power	22 W	20 W	12 W
Active aperture	0.8 x 67 mm	7 mm Ø	6 mm Ø
Diffraction efficiency	78%	85%	85%
Flatness across bandwidth	<35%	NA	< 10%
Scan angle	NA	4.9 mrad	1.2 mrad

