Acousto-Optic Tunable Filters (AOTF)

AO Tunable Filters select specific wavelengths from broadband or multi-line light sources. Crystal Technology owns a portfolio of 20 patents on AOTF design that allow us to offer a wide range of products custom tailored for a multitude of applications.

Applications

- Spectroscopy
- Fluorescence
- Microscopy
- Flow Cytometry
- Laser Projection/Light Show
- Supercontinuous Laser Wavelength Selection

Part #	Wavelength (µm)	Polarization	RF Tuning (MHz)	Aperture h x l (mm)	Resolution (nm)	Acceptance Cone (degrees)	Diff. Eff.	RF Power (Watts)
97-01776-01	0.405 - 0.7	Linear/ Random	106 - 225	5 x 5	1.15 @ 0.4 µm 7.0 @ 0.7 µm	± 2.5	85%	0.40 - 1.2
97-02405-01	1.4 - 2.45	Linear/ Random	52.5 - 95	3 x 5.5	3.5 @ 1.4 µm 10.0 @ 2.45 µm	± 3.0	80% @ 1.4 µm 45% @ 2.45 µm	3.0

High Precision and Low Power AOTF

Crystal Technology also offers high resolution AOTF devices. Our technology incorporates a reflected acoustic wave that allows for collinear acoustic interaction with the incident optical beam. This patented approach allows for long interactions lengths giving high selectivity at low RF power.

Part #	Wavelength (µm)	Polarization	RF Tuning (MHz)	Aperture h x l (mm)	Resolution (nm)	Acceptance Cone (degrees)	Diff. Eff.	RF Power (Watts)
PCAOM								
97-02837-01	0.35 - 0.43	Linear/Vertical	92 - 132	2.5 x 2.5	1.0 @ 0.39 µm	± 0.1	90%	0.04
97-03075-01	0.40 - 0.65	Linear/Vertical	80 - 152	2.5 x 2.5	2.0 @ 0.48 µm	± 0.1	90%	0.12
97-03075-04	0.40 - 0.65	Linear/Vertical	80 - 152	2.5 x 2.5	4.0 @ 0.48 µm	± 0.1	90%	0.20
97-02838-01	0.45 - 0.67	Linear/Vertical	80 - 152	2.5 x 2.5	1.3 @ 0.48 µm	± 0.1	90%	0.12
97-02885-02	0.45 - 0.67	Linear/Vertical	80 - 152	2.5 x 2.5	2.0 @ 0.48 µm	± 0.1	90%	0.20
97-02885-04	0.45 - 0.67	Linear/Vertical	80 - 152	2.5 x 2.5	4.0 @ 0.48 µm	± 0.1	90%	0.40
97-02986-01	0.64 - 1.10	Linear/Vertical	46 - 86	2.5 x 2.5	5.3 @ 1.06 µm	± 0.1	90%	1.00
97-02986-03	0.80 - 1.40	Linear/Vertical	38 - 70	2.5 x 2.5	5.3 @ 1.06 µm	± 0.1	90%	1.00
97-02996-01	1.10 - 2.00	Linear/Vertical	25 - 50	2.5 x 2.5	12.2 @ 1.55 µm	± 0.1	90%	1.00
CBAOTF								
97-02768-01	430 - 690	Linear/Vertical	60 - 115	4 x 4	< 0.60	collimated	90%	15mW
97-02703-04	1530 - 1560	Linear/Horizontal	46 - 47	3 x 3	< 0.70	collimated	90%	50mW

US PATENT #4582397 · US PATENT #4720177 · US PATENT #5329397 · US PATENT #5909304 · US PATENT #6016216 · US PATENT #6424451

RoHS Compliant — RoHS versions available, call to place RoHS order.