

Acousto-optic deflector

Overview

Acousto-optic deflector (AODF) can realize laser beam scanning by changing the RF drive frequency. The scanning position can realize random position, continuous line scanning and sequential point deflection. According to the crystal, wavelength and beam size, the scanning rate of more than 200MHz and the precise position control of nRad can be achieved. AODF can be designed for 1D or 2D scan.

Product Introduction



The optimal efficiency of AODF usually requires that the input laser beam be set at the Bragg angle. When scanning the laser beam, the Bragg angle will mismatch, because AODF can only perform optical alignment at one driving frequency. In general, this will lead to reduced efficiency.

Goptica team has a wealth of design experience and can skillfully solve problems, such as using longitudinal mode and phased array piezoelectric units in the transducer to design and produce a large bandwidth AODF with high resolution. With the specially developed RF driver can realize frequency sweep, chirp and other control methods, convenient for customers to quickly realize a variety of functions.



Application

Laser direct writing, precision circuitboard drilling, semiconductor testing, laser roller manufacturing, laser printing, cell sorting, holographic imaging, fast zoom system.

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Product specifications

Product Code	Working wavelength (nm)	Active Aperture (mm)	Center frequency (MHz)	Bandwidth (MHz)	Scan Angle (mrad)	Optical Material
2DF1005-TS148_050-070-375	375	7	147.5	50	14	Tellurium dioxide
2DF1007-TS080_040-015-532	532	1.5	80	40	31.9	Tellurium dioxide
2DF1010-QL110_040-035-850	850	3.5	110	40	5.9	Crystalline quartz
2DF1012-TS080_030-050-515	515	5	80	30	24.2	Tellurium dioxide
2DF1014-TS100_015-080-850	850	8	100	15	20	Tellurium dioxide
2DF1015-TS070_006-050-650	650	5	70	6	5.9	Tellurium dioxide
2DF1016-TS080_030-030-840	840	3	80	30	38	Tellurium dioxide
DF1003-QL230_110-020-266	266	2	230	110	4.6	Crystalline quartz
DF1004-QL230_110-020-266	266	2	230	20	4.6	Crystalline quartz
DF1006-FL110_020-015-532	532	1.5	110	50	4.6	Fused quartz
DF1010-GL041_010-080-10600	10600	8	40.68	10	19.27	Germanium
DF1012-TL080_040-020-780	780	2	80	40	7.4	Tellurium dioxide
DF1013-TS052_020-035-919	919	3.5	52	20	28	Tellurium dioxide
DF1014-QL110_020-060-355	355	6	110	20	1.2	Crystalline quartz
DF1015-TL085_040-030-1064	1064	3	85	40	10	Tellurium dioxide

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DF1017-TS040_020-070-1550	1550	7	40	20	45	Tellurium dioxide
DF1019-TS075_030-040-920	920	4	75	30	40.52	Tellurium dioxide
DF1020-TL080_020-020-626	626	2	80	20	3	Tellurium dioxide
DF1021-TS080_040-015-580	580	1.5	80	40	35.6	Tellurium dioxide
DF1022-TS200_040-005-580	580	0.5	200	40	34.4	Tellurium dioxide
DF1023-TS100_050-030-488	488	3	100	50	37.4	Tellurium dioxide
DF2001-QL170_070-070-355	355	7	170	70	4.3	Crystalline quartz
DF2002-QL170_035-070-355	355	7	170	35	2.1	Crystalline quartz
DF2005-QL200_100-020-266	266	2	200	100	4.6	Crystalline quartz
DF2006-TS100_050-035-364	364	3.5	100	50	29.6	Tellurium dioxide
DF2007-TS100_050-080-364	364	8	100	50	29.6	Tellurium dioxide
DF2008-QL200_100-040-266	266	4	200	100	4.6	Crystalline quartz
DF2009-QL100_030-040-405	405	4	100	30	2.1	Crystalline quartz
DF2010-QL170_080-070-355	355	7	170	80	4.95	Crystalline quartz
DF2013-QL170_060-070-411	411	7	170	60	6.1	Crystalline quartz

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DF2015-GL041_020-080-9600	9600	8	40.68	20	35	Germanium
DF2016-QL170_060-070-355	355	7	170	60	4.95	Crystalline quartz
DF2019-QL080_015-040-1064	1064	4	80	15	2.7	Crystalline quartz
DF2020-QL080_027-040-1064	1064	4	80	27	5	Crystalline quartz
DF2021-QL170_035-070-355	355	7	170	35	2.2	Crystalline quartz
DF2022-TS080_040-010-633	633	1	80	40	41	Tellurium dioxide