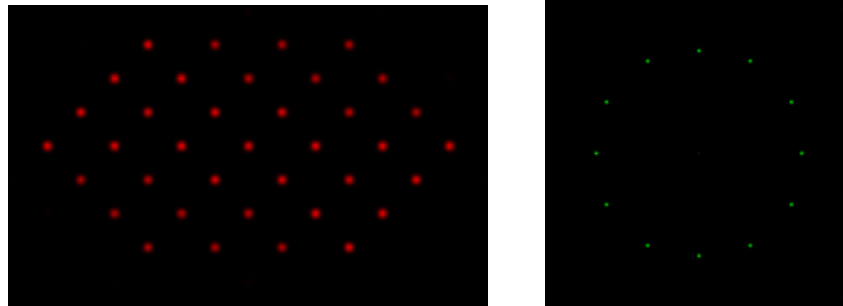# Custom Beam Splitter

The **Diffractive Beam Splitter** is a diffractive optical element used to split a single laser beam into several beams, each with the characteristics of the original beam (except for its power and angle of propagation).

A diffractive beam splitter can generate either a 1-dimensional beam array (1xN) or a 2-dimensional beam matrix (MxN), depending on the diffractive pattern on the element. The diffractive beam splitter is used with monochromatic light such as a laser beam, and is designed for a specific wavelength and angle of separation between its output beams.

In this section, we present our standard list of custom shape beam splitter.

HOLO/OR offers, in addition to standard diffractive beam splitters, the possibility to choose the number of spots and their locations, as a part of its custom design and manufacturing capability.

PN	Number Spots	λ[nm]	θs [deg]	Element Size [mm]	Remarks
MS-231-I-Y-A	7	1064	0.13	25.4	hexagonal
MS-231-I-Y-X	7	1064	0.13	25.4	hexagonal
MS-250-I-Y-X	37	1064	0.092	25.4	hexagonal
MS-292-I-Y-X	9x9	1064	0.061x0.061***	27.94	Frame
MS-620-I-Y-X	37	1064	0.57	25.4	hexagonal
MS-337-I-Y-X	77	1064	5.73x5.73***	11	MS X-Men
MS-339-I-Y-X	3	1064	0.35x0.47	25.4	Triangle MS (not equal power)
MS-356-I-Y-X	12	1064	9.15x9.15***	25.4	MS Circle
MS-363-I-Y-X	101x101	1064	40.66x40.66***	10x10	random MS
MS-383-I-Y-X	76	1064	0.5	25.4	Hexagonal Lattice
MS-386-I-Y-X	5	1064	13.58x13.58	25.4	MS Dice
MS-388-I-Y-X	76	1064	0.5	11	Hexagonal Lattice
MS-395-I-Y-X	37	1064	0.33	15	hexagonal (head 120deg)
MS-404-I-Y-X	81x81	1064	18.37x18.37***	2.5x2.5	random MS
MS-405-I-Y-X	119x119	1064	18.37x18.37***	2.5x2.5	random MS
MS-416-I-Y-X	3	1064	0.90x1.04	11	Triangle MS (hxbangle)
MS-422-I-Y-X	21x21	1064	18.38x18.38***	2.45x2.45	random MS
MS-423-I-Y-X	41x41	1064	18.41x18.41***	2.45x2.45	random MS
MS-424-I-Y-X	61x61	1064	18.37x18.37***	2.45x2.45	random MS
MS-434-I-Y-X	5	1064	1.00x1.00	25.4	MS Dice
MS-621-I-Y-X	37	1064	1.43	25.4	hexagonal

MS-465-I-Y-X	25x25	1064	0.016x0.016	14.1x14.1	MS round
MS-471-I-Y-X	3	1064	2.60x3.00	20	Triangle MS (hxbangle)
MS-480-I-Y-X	3	1064	0.18x0.21	25.4	Triangle MS (hxbangle)
MS-503-I-Y-A	2x2	1064	8.72x8.72	20x20	Intensity 100/50
MS-514-I-Y-X	31x31	1064	0.17x0.17	11	MS round
MS-515-I-Y-X	32	1064	5.00x5.00***	11	MS Circle
MS-619-I-Y-X	19	1064	1.43	25.4	hexagonal
MS-573-I-Y-X	29x29	1064	0.0075x0.0075	25.4	MS round
MS-587-I-Y-X	7	1064	0.26	20	hexagonal
MS-599-I-Y-X	7	1064	0.031	11	hexagonal
MS-607-I-Y-X	7	1064	0.29	25.4	hexagonal
MS-608-I-Y-X	7	1064	0.57	25.4	hexagonal
MS-609-I-Y-X	7	1064	1.43	25.4	hexagonal
MS-611-I-Y-X	7	1064	5.74	25.4	hexagonal
MS-614-I-Y-X	7	1064	5.97	25.4	hexagonal
MS-618-I-Y-X	19	1064	0.57	25.4	hexagonal
MS-558-I-Y-A	2x2	1064	28.52x28.52	20x20	MS Dice
MS-328-I-Y-X	19x13	1064	0.85x0.95	9.8x9.8	Cross MS
MS-464-I-Y-X	13x13	1064	0.015x0.015	14.1x14.1	MS round