

Beam Beam Shaper

Holo/Or has vast variety of solutions for beam shaping:

The beam shapers are diffractive optical elements (DOEs) used to transform a near-gaussian incident laser beam into a uniform-intensity (flat) spot of either round, rectangular, square, line or other shape with sharp edges in a specific work plane.

A uniform spot achieved by the beam shaper enables equal treatment to a surface, preventing over or under-exposure of specific areas. In addition, the spot is characterized by a sharp transition region that creates a clear border between the treated and untreated area.

In this section, we present our beam shaper DOEs which give a flat uniform intensity distribution at infinity or focal length of an aberration free customer's lens.

Features:

- Very good uniformity
- High efficiency
- Sharp beam edge
- High power threshold
- Optional Ar/Ar coating
- Any output beam profile
- Wavelengths from UV to IR

Applications:

- Laser materials processing: perforation, welding, cutting, scribing, ablation and drilling
- Biomedical applications
- Laser displays

- Marking and printing

General Specifications

Materials:	Fused Silica, ZnSe, Plastic
Wavelength range:	193nm to 10.6um
DOE design:	2-level (binary) to 16-level
Minimum Full angle:	very small (about 1.5 times Diffraction Limit)
Diffraction efficiency:	86% - 98%
Element size:	Few mm to 100mm
Coating (optional):	AR/AR Coating
Custom Design:	Almost any arbitrary shape

Beam Shaper products

1) 1064nm, f=100mm

型号	激光波长 [nm]	光束直径 [mm]	角度 [mrad]	激光光斑尺寸 [mm]	透镜尺寸 [mm]	光斑形状
ST-237-I-Y-A	1064	9	0.23	23	25.4	Round
PT-001-I-N-A	1064	6	0.56	56	30	Square
TH-258-I-Y-A	1064	10	0.48	48	25.4	Square
PT-005-I-N-A	1064	5	3.29	329	25.4	Round
ST-293-I-Y-A	1064	3	0.68	68	11	Square
ST-206-I-Y-A	1064	10	2.7	270	25.4	Line
ST-286-I-Y-A	1064	12	0.35x2.70	35.0x270.0	25.4	Rectangular
ST-212-I-Y-A	1064	7	1	100	20	Square
ST-219-I-Y-A	1064	4	0.52	52	11	Round
ST-283-I-Y-A	1064	12	0.36x1.80	36.0x180.0	25.4	Rectangular
ST-222-I-Y-A	1064	5	0.41	41	25.4	Round
ST-277-I-Y-A	1064	7	0.3	30	25.4	Line
ST-230-I-Y-A	1064	7	0.29	29	20	Round
ST-234-I-Y-A	1064	7	0.3	30	25.4	Square
TH-013-I-Y-A	1064	7	17.5	1750	25.4	Square
ST-239-I-Y-A	1064	6	0.35	35	25.4	Round

ST-241-I-Y-A	1064	10	0.2	20	25.4	Round
TH-238-I-Y-A	1064	3	6	600	11	Round
TH-227-I-Y-A	1064	3	13.3	1330	11	Round
TH-215-I-Y-A	1064	6	1	100	25.4	Round
TH-015-I-Y-A	1064	5.1	14.5	1450	25.4	Line
ST-303-I-Y-A	1064	7.5	0.28	28	25.4	Round
PT-002-I-Y-A	1064	7.5	45.18x2.64	4518.8x264.0	40x40	Rectangular
ST-225-I-Y-A	1064	4.5	0.47	47	25.4	Square
PT-001-I-Y-A	1064	6	0.56	56	30	Square
ST-220-I-Y-A	1064	4	0.53	53	11	Square
TH-246-I-Y-A	1064	6	4.2	420	25.4	Round
PT-005-I-Y-A	1064	5	3.29	329	25.4	Round
ST-240-I-Y-A	1064	8	0.26	26	25.4	Round
ST-227-I-Y-A	1064	4	2	200	11	Frame
ST-228-I-Y-A	1064	4	24	2400.1	11	Frame
ST-259-I-Y-A	1064	2	1.04	104	11	Round
ST-260-I-Y-A	1064	3	0.69	69	11	Round
ST-229-I-Y-A	1064	4	12	1200	11	Square
TH-221-I-Y-A	1064	2.2	3.2	320	11	Square
TH-220-I-Y-A	1064	1.125	6.2	620	11	Square
ST-221-I-Y-A	1064	4.7	0.44	44	25.4	Round
ST-231-I-Y-A	1064	3	8.7	870	11	Line
ST-232-I-Y-A	1064	3	17.67	1767	11	Line
ST-267-I-Y-A	1064	2	1.04	104	11	Line
ST-268-I-Y-A	1064	3	0.69	69	11	Line
ST-269-I-Y-A	1064	4	0.52	52	11	Line
ST-270-I-Y-A	1064	5	0.43	43	11	Line
ST-271-I-Y-A	1064	2	1.3	130	11	Round
ST-272-I-Y-A	1064	3	0.87	87	11	Round
ST-273-I-Y-A	1064	5	0.52	52	25.4	Round
ST-275-I-Y-A	1064	8	0.26	26	25.4	Line
ST-276-I-Y-A	1064	10	0.21	21	25.4	Line
TH-249-I-Y-A	1064	3.2	0.74	74	12.5	Line
ST-278-I-Y-A	1064	9	0.23	23	25.4	Line
ST-315-I-Y-A	1064	1.5	1.39	139	11	Square
ST-314-I-Y-A	1064	1.5	1.39	139	11	Round
ST-281-I-Y-A	1064	6	0.34	34	25.4	Line
ST-235-I-Y-A	1064	8	0.26	26	25.4	Square
ST-236-I-Y-A	1064	9	0.23	23	25.4	Square

ST-313-I-Y-A	1064	1.5	1.39	139	11	Line
ST-312-I-Y-A	1064	1	2.08	208	11	Line
TH-239-I-Y-A	1064	4.7	0.51	51	12.5	Line
ST-308-I-Y-A	1064	1	2.08	208	11	Square
ST-307-I-Y-A	1064	1	2.08	208	11	Round
ST-289-I-Y-A	1064	3.5	0.6	60	11	Round
ST-290-I-Y-A	1064	3.5	0.6	60	11	Square
ST-291-I-Y-A	1064	2	1.02	102	11	Square
ST-292-I-Y-A	1064	2.5	0.81	81	11	Square
ST-238-I-Y-A	1064	10	0.2	20	25.4	Square
ST-294-I-Y-A	1064	2.5	0.83	83	11	Line
ST-295-I-Y-A	1064	3.5	0.59	59	11	Line
ST-296-I-Y-A	1064	4.5	0.46	46	11	Line
ST-297-I-Y-A	1064	2.5	0.84	84	11	Round
ST-298-I-Y-A	1064	4.5	0.47	47	11	Round
ST-299-I-Y-A	1064	5.7	0.4	40	11	Round
ST-300-I-Y-A	1064	5.7	0.49	49	11	Round
ST-301-I-Y-A	1064	5.7	0.37	37	12.5	Round
ST-302-I-Y-A	1064	5.7	0.48	48	12.5	Round
ST-282-I-Y-A	1064	6	0.34	34	25.4	Square
TH-236-I-Y-A	1064	6	7.2	720	25.4	Grid 10x10 cells
ST-288-I-Y-A	1064	12	0.36x3.30	36.0x330.0	25.4	Rectangular
ST-285-I-Y-A	1064	12	0.36x2.40	36.0x240.0	25.4	Rectangular
ST-284-I-Y-A	1064	12	0.36x2.10	36.0x210.0	25.4	Rectangular
ST-280-I-Y-A	1064	12	0.36x3.30	36.5x330.0	25.4	Rectangular
ST-279-I-Y-A	1064	12	0.36x3.00	36.0x300.0	25.4	Rectangular
TH-002-I-Y-A	1064	12	2.4	240	27.94	Square
ST-266-I-Y-A	1064	12	0.37x2.40	36.9x239.5	25.4	Rectangular
ST-265-I-Y-A	1064	12	0.37x2.09	37.2x209.1	25.4	Rectangular
TH-105-I-Y-A	1064	7.5	0.54	54	25.4	Round
ST-264-I-Y-A	1064	12	0.36x2.69	36.5x269.0	25.4	Rectangular
ST-263-I-Y-A	1064	12	0.36x2.39	36.0x239.0	25.4	Rectangular
ST-262-I-Y-A	1064	12	0.36x2.10	36.0x210.0	25.4	Rectangular
TH-225-I-Y-A	1064	1.2	23.7	2370.1	11	Dollar
ST-261-I-Y-A	1064	12	0.36x1.78	35.8x178.0	25.4	Rectangular
TH-228-I-Y-A	1064	3	10	1000	11	Round
ST-287-I-Y-A	1064	12	0.35x2.99	35.5x299.0	25.4	Rectangular
TH-237-I-Y-A	1064	6	7.2	720	25.4	11 lines

ST-258-I-Y-A	1064	10	3.9	390	25.4	Line
ST-223-I-Y-A	1064	6	3	300	25.4	Line
ST-207-I-Y-A	1064	10	0.6	60	25.4	Round
TH-248-I-Y-A	1064	5	5.60x0.94	560.0x94.0	25.4	Rectangular
PT-006-I-Y-A	1064	2	40.30x57.10	4030.5x5711.6	12.7	Elliptical
TH-252-I-Y-A	1064	6	20	2000.1	25.4	Round
TH-253-I-Y-A	1064	12	0.65x2.97	65.0x297.0	25.4	Rectangular
TH-254-I-Y-A	1064	12	0.81x2.36	81.0x236.0	25.4	Rectangular
TH-255-I-Y-A	1064	12	1.10x1.77	110.0x177.0	25.4	Rectangular
TH-256-I-Y-A	1064	12	0.40x4.79	40.0x479.0	25.4	Rectangular
TH-257-I-Y-A	1064	12	0.36x5.39	36.0x539.0	25.4	Rectangular
PT-003-I-Y-A	1064	3.2	22.77	2277.1	12.7x12.7	Line
TH-259-I-Y-A	1064	6	3.19	319	25.4	Square
TH-260-I-Y-A	1064	6	1.71	171	25.4	Square

2) 355nm,f=100mm

型号	激光波长 [nm]	光束直径 [mm]	角度 [mrad]	激光光斑尺寸 [um]	透镜尺寸 DOE [mm]	激光光斑形状
ST-241-U-Y-A	355	10	0.068	6.8	25.4	圆形
ST-238-U-Y-A	355	10	0.068	6.8	25.4	正方形
ST-276-U-Y-A	355	10	0.069	6.9	25.4	直线
ST-236-U-Y-A	355	9	0.076	7.6	25.4	正方形
ST-278-U-Y-A	355	9	0.077	7.7	25.4	直线
ST-237-U-Y-A	355	9	0.077	7.7	25.4	圆形
ST-240-U-Y-A	355	8	0.086	8.6	25.4	圆形
ST-275-U-Y-A	355	8	0.087	8.7	25.4	直线
ST-235-U-Y-A	355	8	0.087	8.7	25.4	正方形
ST-303-U-Y-A	355	7.5	0.093	9.3	25.4	圆形
ST-230-U-Y-A	355	7	0.097	9.7	20	圆形
ST-234-U-Y-A	355	7	0.099	9.9	25.4	正方形
ST-277-U-Y-A	355	7	0.099	9.9	25.4	直线
ST-282-U-Y-A	355	6	0.11	11	25.4	正方形
ST-281-U-Y-A	355	6	0.11	11	25.4	直线
TH-257-U-Y-A	355	12	0.12x1.80	12.0x179.8	25.4	长方形
ST-239-U-Y-A	355	6	0.12	12	25.4	圆形
ST-301-U-Y-A	355	5.7	0.12	12	12.5	圆形
ST-299-U-Y-A	355	5.7	0.13	13	11	圆形
TH-256-U-Y-A	355	12	0.13x1.60	13.3x159.8	25.4	长方形

ST-222-U-Y-A	355	5	0.14	14	25.4	圆形
ST-270-U-Y-A	355	5	0.14	14	11	直线
ST-221-U-Y-A	355	4.7	0.15	15	25.4	圆形
ST-296-U-Y-A	355	4.5	0.15	15	11	直线
ST-302-U-Y-A	355	5.7	0.16	16	12.5	圆形
ST-300-U-Y-A	355	5.7	0.16	16	11	圆形
ST-298-U-Y-A	355	4.5	0.16	16	11	圆形
ST-225-U-Y-A	355	4.5	0.16	16	25.4	正方形
TH-258-U-N-A	355	10	0.16	16	25.4	正方形
TH-258-U-Y-A	355	10	0.16	16	25.4	正方形
ST-273-U-Y-A	355	5	0.17	17	25.4	圆形
TH-239-U-Y-A	355	4.7	0.17	17	12.5	直线
ST-269-U-Y-A	355	4	0.17	17	11	直线
ST-219-U-Y-A	355	4	0.17	17	11	圆形
TH-105-U-Y-A	355	7.5	0.18	18	25.4	圆形
ST-220-U-Y-A	355	4	0.18	18	11	正方形
ST-207-U-Y-A	355	10	0.2	20	25.4	圆形
ST-289-U-Y-A	355	3.5	0.2	20	11	圆形
ST-290-U-Y-A	355	3.5	0.2	20	11	正方形
ST-295-U-Y-A	355	3.5	0.2	20	11	直线
TH-253-U-Y-A	355	12	0.22x0.99	21.7x99.1	25.4	长方形
ST-293-U-Y-A	355	3	0.23	23	11	正方形
ST-268-U-Y-A	355	3	0.23	23	11	直线
ST-260-U-Y-A	355	3	0.23	23	11	圆形
TH-249-U-Y-A	355	3.2	0.25	25	12.5	直线
ST-292-U-Y-A	355	2.5	0.27	27	11	正方形
TH-254-U-Y-A	355	12	0.27x0.79	27.0x78.7	25.4	长方形
ST-294-U-Y-A	355	2.5	0.28	28	11	直线
ST-297-U-Y-A	355	2.5	0.28	28	11	圆形
ST-272-U-Y-A	355	3	0.29	29	11	圆形
TH-215-U-Y-A	355	6	0.33	33	25.4	圆形
ST-212-U-Y-A	355	7	0.33	33	20	正方形
ST-291-U-Y-A	355	2	0.34	34	11	正方形
ST-267-U-Y-A	355	2	0.35	35	11	直线
ST-259-U-Y-A	355	2	0.35	35	11	圆形
TH-255-U-Y-A	355	12	0.37x0.59	36.7x59.1	25.4	长方形
ST-271-U-Y-A	355	2	0.44	44	11	圆形
ST-315-U-Y-A	355	1.5	0.46	46	11	正方形
ST-313-U-Y-A	355	1.5	0.46	46	11	直线

ST-314-U-Y-A	355	1.5	0.46	46	11	圆形
PT-001-U-Y-A	355	6	0.57	57	30	正方形
TH-260-U-Y-A	355	6	0.57	57	25.4	正方形
ST-307-U-Y-A	355	1	0.69	69	11	圆形
ST-312-U-Y-A	355	1	0.7	70	11	直线
ST-308-U-Y-A	355	1	0.7	70	11	正方形
TH-002-U-Y-A	355	12	0.8	80	27.94	正方形
ST-206-U-Y-A	355	10	0.9	90	25.4	直线
ST-223-U-Y-A	355	6	1	100	25.4	直线
TH-259-U-Y-A	355	6	1.07	107	25.4	正方形
TH-221-U-Y-A	355	2.2	1.07	107	11	正方形
ST-258-U-Y-A	355	10	1.3	130	25.4	直线
TH-246-U-Y-A	355	6	1.4	140	25.4	圆形
TH-248-U-Y-A	355	5	1.87x0.31	186.8x31.4	25.4	长方形
TH-238-U-Y-A	355	3	2	200	11	圆形
TH-220-U-Y-A	355	1.125	2.07	207	11	正方形
ST-231-U-Y-A	355	3	2.9	290	11	直线
TH-228-U-Y-A	355	3	3.34	334	11	圆形
PT-005-U-Y-A	355	5	3.35	335	25.4	圆形
ST-229-U-Y-A	355	4	4	400	11	正方形
TH-227-U-Y-A	355	3	4.44	444	11	圆形
TH-015-U-Y-A	355	5.1	4.84	484	25.4	直线
TH-261-U-Y-A	355	5.1	5.40x0.31	540.0x31.0	25.4	长方形
TH-013-U-Y-A	355	7	5.84	584	25.4	正方形
ST-232-U-Y-A	355	3	5.9	590	11	直线
TH-252-U-Y-A	355	6	6.67	667	25.4	圆形
PT-003-U-Y-A	355	3.2	23.19	2319.1	12.7x12.7	直线
PT-006-U-Y-A	355	2	41.04x58.14	4104.1x5815.8	12.7	椭圆形
PT-002-U-Y-A	355	7.5	46.00x2.69	4601.2x268.8	40x40	长方形