

π Shaper 6_6

Highly efficient Beam Shapers

transforming Gaussian to Flat-top profile

for all laser wavelengths: UV, visible, near- and mid-IR



With these unique devices it is possible to convert a TEM₀₀ or multimode laser beam into a collimated Flat-top beam with nearly 100% efficiency and conserving flatness of the wavefront.

π Shaper produces a collimated Flat-top beam over large working distance.

This enables manipulating and re-sizing the Flat-top output beam using conventional imaging optics.

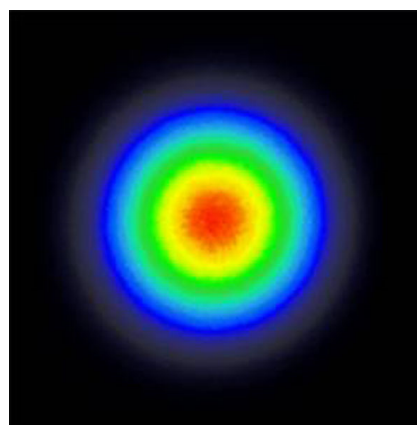
Almost the same effective sizes of input and output beams let it easy to integrate the π Shaper in your application.

Initially designed as an achromatic optical system the π Shaper can work simultaneously with several lasers of different wavelengths.

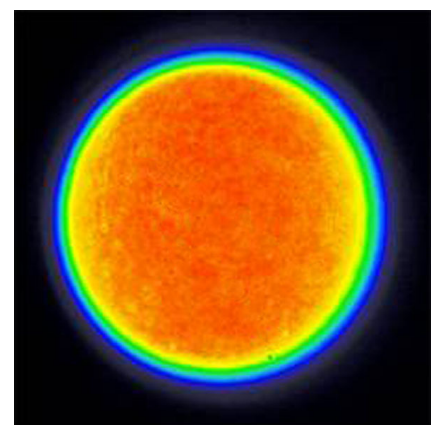
Applications:

- Microscopy
- Confocal microscopes
- Holography
- Interferometry
- MOPA lasers
- FEL lasers
- SLM illumination
- Micromachining
- Particle Image Velocimetry
- Laser ablation
- Welding
- Marking

Example of Beam Shaping



Input TEM₀₀



Output Flat-top

Beam Shaping never was so easy!

No more energy loss!

Specifications

Common for π Shaper 6_6 models	
Type	Field mapping beam shaper as a telescope of Galilean type, without internal focus
Input beam	<ul style="list-style-type: none"> - Collimated - TEM₀₀ or multimode with Gaussian or similar irradiance profile
Output beam	<ul style="list-style-type: none"> - Collimated - Flat-top, uniformity within 5% - High edge steepness
Other features	<ul style="list-style-type: none"> - Achromatic for design wavelengths - Compact design suitable for scientific and industrial applications - Conserving flatness of the beam wavefront - Long working distance
Overall dimensions	<ul style="list-style-type: none"> - Diameter <39 mm - Length <143 mm
Mounting	M27x1 thread, at entrance and exit
Weight	< 300 g

Features

Model	Input beam 1/e ² Dia, mm	Output beam FWHM Dia, mm	Optimum spectrum, nm	Design wavelengths, nm	Applications based on lasers
_NIR	5.9 – 6.0	6.0	1100 - 1700	1319, 1650	near-IR
_VIS	5.9 – 6.0	6.0	405 - 680	442, 632.8	He-Ne, He-Cd, lasers of visible band
_NUV	5.9 – 6.0	6.0	335 - 560	355, 532	2 nd , 3 rd Harmonics Nd:YAG, UV, violet
_1.9-2.8	6.1 – 6.2	6.4	1900 - 2800	2050	mid-IR
_2.05	6.4 – 6.5	6.4	1900 - 2160	2050	mid-IR
_1550	6.4 – 6.5	6.2	1500 - 1600	1550	near-IR
_1064	6.4 – 6.5	6.1	1020 - 1100	1064	Nd:YAG, Fiber, other near-IR
_TiS	6.4 – 6.5	6.0	700 - 900	800	Ti:sapphire, near-IR
_532	6.3 – 6.4	5.8	510 - 550	532	2 nd Harmonics Nd:YAG, similar lasers
_350	6.3 – 6.4	5.6	330 - 380	355	3 rd Harmonics Nd:YAG, similar lasers
_325	6.3 – 6.4	5.6	305 - 345	325	He-Cd, UV
_266	6.3 – 6.4	5.2	250 - 275	266	4 th Harmonics Nd:YAG, similar lasers

Specifications are subject to change without notice



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