

# $\pi$ Shaper 12\_12

**Series of high efficient Beam Shapers  
Converting Gaussian to Flattop profile  
Lasers of UV, Visual and NIR spectrum**



With these unique tools it is possible to convert a single mode or multimode laser beam of similar to Gaussian intensity profile into a collimated Flattop beam with nearly 100% efficiency.

**TELESCOPIC** and **COLLIMATING** versions of  $\pi$ Shaper are available.  
Collimator solves simultaneously two tasks: *collimating* and *shaping* the laser beam.

$\pi$ Shaper produces collimated Flattop beam (like Greek letter  $\pi$ ) over a large working distance. This enables to manipulate and re-size the beam with conventional imaging optics.

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

The  $\pi$ Shaper can work with various lasers of wide spectrum.

Applications:

- Free Electron Lasers
- Fluorescence Technologies
- Flying Plate Technique
- Display Making Technologies
- Mass-Spectrometry
- Ultrashort Pulse Laser Pumping
- MOPA Techniques
- Material Processing

**Beam Shaping never was so easy!**

# No more losing of energy!

## Technical Specifications

### Common for all $\pi$ Shaper 12\_12 models:

Input beam	TEM <sub>00</sub> or multimode with Gaussian or similar intensity profile	
Output beam	<ul style="list-style-type: none"> <li>- Collimated</li> <li>- Flat-top, uniformity within 5%</li> <li>- High edge steepness</li> </ul>	
Other features	<ul style="list-style-type: none"> <li>- Compact design suitable for scientific and industrial applications</li> <li>- Basic models suitable for high peak power pulse lasers</li> <li>- Long working distance</li> <li>- Water cooling, option for CW (or average) power &gt; 500 W</li> <li>- Protection windows, optional</li> </ul>	
Mounting	Input: Outer Thread M27x1 Inner Thread M23x0.75	Output: Outer Thread M33x1 Adaptor M33x1 -> M27x1 (Outer)

## Features

Model*	Input beam <i>all values at 1/e<sup>2</sup></i>	Output beam Diameter, mm <i>(FWHM)</i>	Spectral range, nm	Overall dimensions, mm		Weight, g	Applications based on
				Diameter	Length		
<b>_1064</b>	- collimated - Dia 12.8 – 13.0 mm	12.4	1020-1100	49	270	530	Nd:YAG, Fiber lasers, Other NIR Lasers
<b>_1064_C</b>	- divergent - 2 $\Theta$ = 58 mrad	12.0		42	285	480	
<b>_TiS</b>	- collimated - Dia 12.8 – 13.0 mm	12.3	700 - 900	49	270	530	Ti:Sapphire lasers, Other NIR Lasers
<b>_532</b>	- collimated - Dia 12.8 – 13.0 mm	12.0	520 - 550	49	270	530	2 <sup>nd</sup> Harmonic Nd:YAG, Lasers of Visual range
<b>_355</b>	- collimated - Dia 12.7 – 12.9 mm	11.4	330 - 380	49	270	530	3 <sup>rd</sup> Harmonic Nd:YAG, Lasers of UV-range
<b>_355_C</b>	- divergent - 2 $\Theta$ = 60 mrad	12.0		44	252	400	
<b>_266</b>	- collimated - Dia 12.6 – 12.8 mm	10.6	250 - 270	49	270	530	4 <sup>th</sup> Harmonic Nd:YAG, Lasers of UV-range
<b>_266_C</b>	- divergent - 2 $\Theta$ = 60 mrad	12.0		42	285	480	

\* - Basic models are Telescopes of Galilean type (without internal focus),  
Models with index \_C are Collimators without internal focus.

