

# $\pi$ Shaper 12\_12

**Series of high efficient Beam Shapers  
Converting Gaussian to Flat-top profile  
Lasers of UV, Visible 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 Flat-top beam with **nearly 100% efficiency**.

**Telescope** and **Collimator** versions

**Water cooled** for powerful kW lasers

**High resistant** for high peak power lasers

$\pi$ **Shaper** produces collimated Flat-top 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.

Applications:

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

**Beam Shaping never was so easy!**

# No more energy loss!

## 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>- High resistance for high peak power pulse lasers</li> <li>- Water cooling, option for CW (or average) power &gt; 500 W</li> <li>- Long working distance</li> <li>- Protection windows, optional</li> </ul>		
Mounting	Input: Outer Thread M27x1	Output:	Outer Thread M33x1 Adaptor M33x1 -> M27x1 (Outer)

## Features

Model*	Input beam all values at $1/e^2$	Output beam Diameter, mm (FWHM)	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_HP</b>	- collimated - Dia 12.0 – 12.1 mm	12.0		42	328	530	
<b>_1064_HP_W</b>	- collimated - Dia 12.0 – 12.1 mm	12.0		49	360	590	High-Power USP lasers Water cooled system
<b>_1064_C</b>	- divergent - $2\theta = 58$ mrad	12.0		42	285	480	Nd:YAG, Fiber lasers, Other NIR Lasers
<b>_TiS_HP</b>	- collimated - Dia 12.0 – 12.1 mm	12.0	700 - 900	42	328	530	Ti:Sapphire lasers, Other NIR Lasers
<b>_532</b>	- collimated - Dia 12.8 – 13.0 mm	11.8	515 - 550	49	270	530	2 <sup>nd</sup> Harmonic Nd:YAG, Visible Lasers
<b>_532_HP</b>	- collimated - Dia 12.0 – 12.1 mm	12.0		42	328	530	
<b>_355_HP</b>	- collimated - Dia 12.0 – 12.1 mm	11.3	330 - 380	42	328	530	3 <sup>rd</sup> Harmonic Nd:YAG, UV Lasers
<b>_266</b>	- collimated - Dia 12.6 – 12.8 mm	10.6	250 - 270	49	270	530	4 <sup>th</sup> Harmonic Nd:YAG, UV Lasers
<b>_266_HP</b>	- collimated - Dia 12.0 – 12.1 mm	10.6		42	328	530	
<b>_266_C</b>	- divergent - $2\theta = 60$ mrad	12.0		42	285	480	

\* - Basic models are Telescopes of Galileian type (without internal focus),  
models with index **\_HP** are versions for high peak power lasers,  
models with index **\_C** are Collimators without internal focus.

