

# $\pi$ Shaper 37\_34\_1064

## **Collimator - Beam Shaper**

**Converting Gaussian to Flattop profile**

**Nd:YAG, Fiber and other near-IR lasers**

### **Applications:**

- **Welding**
- **Brazing**
- **Hardening**
- **Cladding**
- **Annealing**
- **Display Making Technologies**
- **Technologies where uniform intensity required**



With these unique tools it is possible to convert Gaussian laser beam into collimated Flattop beam with nearly 100% efficiency.

This **COLLIMATOR** version of  $\pi$ Shaper lets it possible to solve simultaneously two tasks:

- collimating of laser beam,
- converting the beam intensity profile from Gaussian to Flattop (beam shaping).

$\pi$ 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.

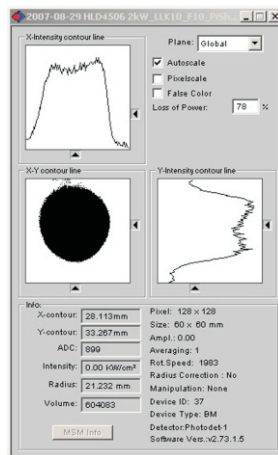
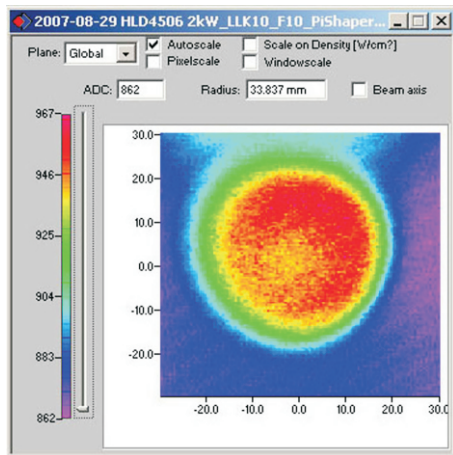
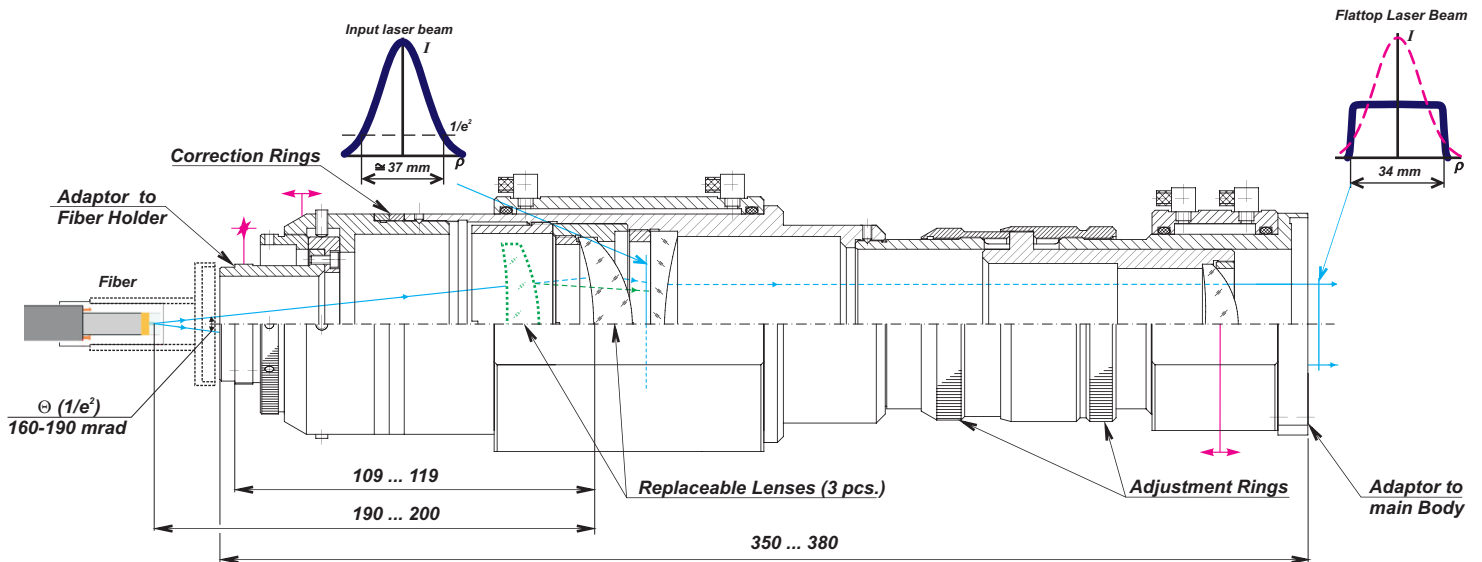
Almost the same effective sizes of input and output beams (diameter  $\sim 37$  mm) let it easy to integrate  $\pi$ Shaper in your application.

## **Beam Shaping never was so easy!**

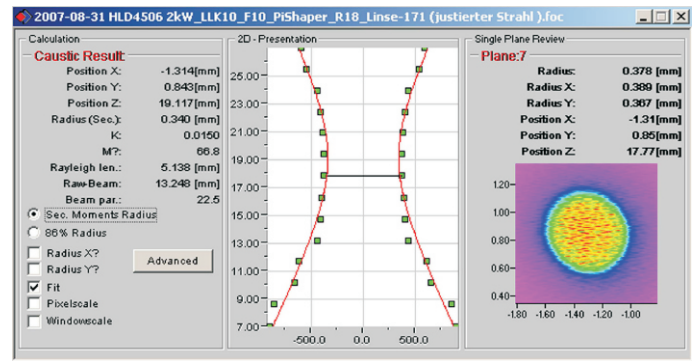
# No more losing of energy!

## Technical Specifications

Type	Collimator, without internal focus
Input beam	<ul style="list-style-type: none"> <li>- TEM<sub>00</sub> or multimode with Gaussian or similar intensity profile</li> <li>- Divergent</li> <li>- Divergence 160 - 190 mrad (1/e<sup>2</sup>)</li> <li>- Input Diameter 30 - 37 mm (1/e<sup>2</sup>)</li> </ul>
Output beam	<ul style="list-style-type: none"> <li>- Collimated</li> <li>- Flat-top, uniformity within 5%</li> <li>- Diameter 30 - 34 mm</li> </ul>
Operating wavelength range	1020-1100 nm
Other features	<ul style="list-style-type: none"> <li>- Compact design suitable for industrial applications of power up to 6 kW</li> <li>- Water cooling</li> <li>- Other wavelengths optional, for example 830, 980 nm, etc.</li> <li>- Long working distance</li> <li>- By focusing an extended depth of field provided</li> </ul>
Overall dimensions	<ul style="list-style-type: none"> <li>- Diameter 74 mm</li> <li>- Length 350 mm</li> </ul>
Weight	< 3 kg
Applications based on	High power TEM <sub>00</sub> or multimode fiber-coupled Solid-State or Diode lasers, Fiber lasers



Examples of beam profiles (Courtesy of Daimler AG)



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