

光束整形器 AdlOptica (Beam shaping systems)

厂家:德国 AdlOptica

一、 π Shaper : 对准直光斑的解决方案

使用该工具使高斯光束转换成准直平行光 (或平顶) 光束, 接近于 100% 的转换效率。
 π Shaper 可在一个大的工作距离产生一个准直平顶光斑。



应用 :

- 全息光学
- 信息处理
- 标记和雕刻
- 照明
- 粒子图像测速仪
- 颗粒尺寸分析
- 流式细胞仪
- 自由电子激光器
- 质谱法
- 激光退火
- 金属和塑料的焊接
- 焊接
- 激光清洗

参数列表

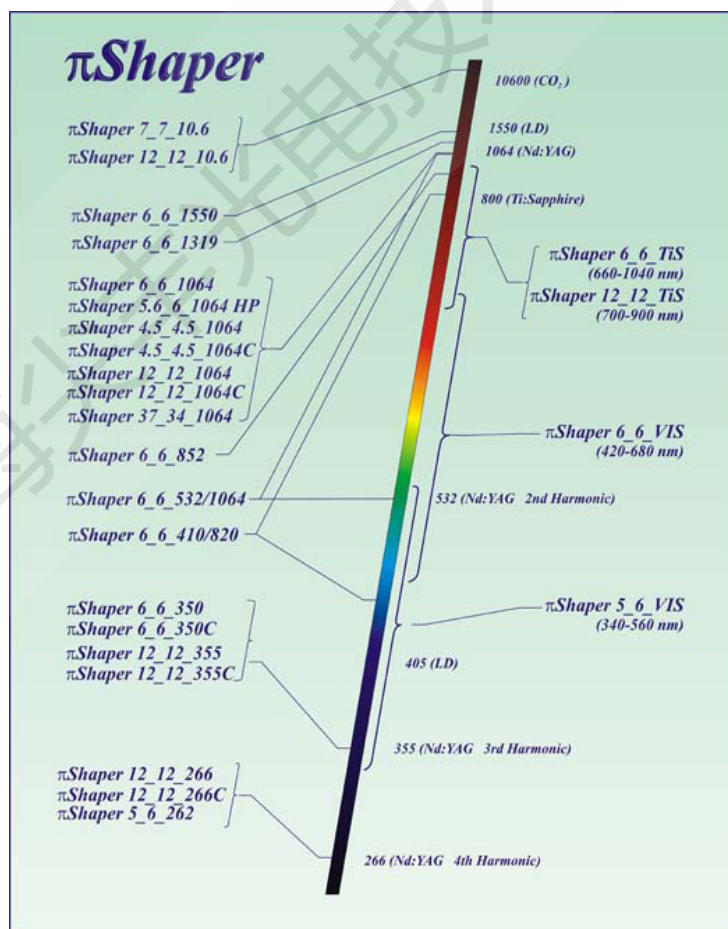
型号	类型	输入高斯光斑, $1/e^2$ level	输出平顶光斑	波长范围, nm	应用
<i>piShaper 6_6_Series</i>					
piShaper_6_6_1064	Telescope	6 mm collimated	6 mm collimated	1020-1100	Nd:YAG, Fiber and other near IR lasers
piShaper_6_6_VIS	Telescope	6 mm collimated	6 mm collimated	420-680	He-Ne, He-Cd and other lasers of visual range
piShaper_6_6_TiS	Telescope	6 mm collimated	6 mm collimated	660-1040	Ti:Sapphire laser and other near IR lasers
piShaper_6_6_852	Telescope	6 mm collimated	6 mm collimated	800-900	Ti:Sapphire laser and other near IR lasers
piShaper_6_6_1319	Telescope	6 mm collimated	6 mm collimated	1200-1400	near IR Laser Diode sources
piShaper_6_6_1550	Telescope	6 mm collimated	6 mm collimated	1500-1600	near IR Laser Diode sources
piShaper_6_6_350	Telescope	6 mm collimated	6 mm collimated	330-370	3rd (355 nm) Harmonic of Nd:YAG and similar lasers
piShaper_6_6_350_C	Collimator	75 mrad divergent	6 mm collimated	330-370	3rd (355 nm) Harmonic of Nd:YAG and similar lasers
piShaper_37_34_1064	Collimator	180 mrad divergent	34 mm collimated	1020-1100	High Power Fiber lasers Fiber-coupled Diode and DPSS lasers
<i>piShaper_4.5_4.5_Series</i>					
piShaper_4.5_4.5_1064	Telescope	4.5 mm collimated	4.5 mm collimated	1020-1100	Nd:YAG, Fiber and other near IR lasers
piShaper_4.5_4.5_1064C	Collimator	180 mrad divergent	4.5 mm collimated	1020-1100	Nd:YAG, Fiber and other near IR

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					lasers
<i>piShaper_12_12_Series</i>					
piShaper_12_12_1064	Telescope	12.1 - 12.2 mm collimated	12 mm collimated	1020-1100	Nd:YAG, Fiber and other near IR lasers
piShaper_12_12_1064_C	Collimator	58 mrad divergent	12 mm collimated	1020-1100	Nd:YAG, Fiber and other near IR lasers
piShaper_12_12_TiS	Telescope	11.9 - 12.0 mm collimated	12 mm collimated	700-900	Ti:Sapphire laser and other near IR lasers
piShaper_12_12_TiS_C	Collimator	60 mrad divergent	12 mm collimated	700-900	Ti:Sapphire laser and other near IR lasers
piShaper_12_12_355	Telescope	12.2 mm collimated	12 mm collimated	330-380	3rd (355 nm) Harmonic of Nd:YAG and similar lasers
piShaper_12_12_355C	Collimator	60.5 mrad divergent	12 mm collimated	330-380	3rd (355 nm) Harmonic of Nd:YAG and similar lasers
piShaper_12_12_266	Telescope	12.2 mm collimated	12 mm collimated	250-270	4th (266 nm) Harmonic of Nd:YAG and similar lasers
piShaper_12_12_266C	Collimator	60.5 mrad divergent	12 mm collimated	250-270	4th (266 nm) Harmonic of Nd:YAG and similar lasers
<i>CO₂ piShaper Series</i>					
piShaper_7_7_10.6	Telescope	7 mm collimated	7 mm collimated	9400-11000	CO ₂ lasers
piShaper_12_12_10.6	Telescope	12 mm collimated	12 mm collimated	9400-11000	CO ₂ lasers
<i>Accessories</i>					
piShaper Mount	4-axis Adjustment				
* - according to coatings applied					

基本操作原则:

- **piShaper's** 是一个望远镜或者准直光学系统使高斯强度分布激光光斑变成平顶光束
- 发展技术让他有可能实现其他的输出强度分布，光学功率，即目标或准直器类型的系统
- 消色差设计对于特定的波长范围提供这种变化
- Galilean 设计，因此不存在中间聚焦光束
- 改变输入光斑大小，输出光斑大小也会变化
- 当改变输入光斑的形状，可能会让 piShaper 改变平顶输出形状，这种改变是通过改变光斑直径实现的



二、Focus- π Shaper : 对聚焦光斑的解决方案

特点：高斯光束整形后聚焦，在焦面上形成平顶分布。可以大大的提高加工品质



应用：

- 印刷
- 标记和雕刻
- 刻线
- 切割
- 钻井
- 流式细胞仪
- 材料微加工
- 烧结
- 焊接
- 激光烧蚀

参数列表

Model	类型	输入高斯光束, 1/e ² level	输出平顶光斑	波长范围, nm	应用
Focal-piShaper 9_XXX_Series					
F-piShaper_9_1940	Telescope	4 - 8 mm collimated	< 16 mm	1800-2050	near IR lasers
F-piShaper_9_1064	Telescope	4 - 9 mm collimated	< 16 mm	1020-1100	Nd:YAG, Fiber and other near IR lasers
F-piShaper_9_TiS	Telescope	4 - 9 mm collimated	< 16 mm	750-850	Ti:Sapphire laser and other near IR lasers
F-piShaper_9_532	Telescope	4 - 9 mm collimated	< 16 mm	520-550	2nd (532) Harmonic of Nd:YAG, other similar lasers
F-piShaper_9_355	Telescope	4 - 7 mm collimated	< 16 mm	330-380	3rd (355) Harmonic of Nd:YAG, other similar lasers
Accessories					
piShaper Mount	4 轴调节架				
* - according to coatings applied					

操作基本原则:

- **F-piShaper's** 是一个操纵激光聚焦强度分布的望远镜光学系统
- 输出配置文件优化, 通过聚焦创建聚焦区的各种强度分布
- 创建平顶光、"Donut", "逆高斯", "Trident"或在一个近平面内其他的形状到聚焦透镜的聚焦平面上
- 伽利略设计, 因此不存在中间聚焦光束;

