

# Compact Beam Shaper

## IOS000324 - TopHat of 10.5 x 10.5 mm<sup>2</sup>



### Features and Advantages

This compact beam shaper is designed for a fiber coupled diode laser to generate a homogeneous field of 10.5 x 10.5 mm<sup>2</sup> in a working distance of approximately 300 mm.

### Product Specifications

Specification Data of the Laser Source (input)	Unit	Value
Wavelength	nm	790-990
Power	W	≤ 120
Fiber core diameter	µm	400
NA		0.22
Fiber connector		SMA905

Specification Data of the Beam Shaper Module <sup>(1)</sup>	Unit	Value
Transmission	%	> 95
Efficiency ( $I_{\text{field,hom}} / I_{\text{field,total}}$ ) <sup>(2)</sup>	%	> 60
Generated field size	mm <sup>2</sup>	10.5 x 10.5 ± 1 (top hat region)
Inhomogeneity ( $(I_{\text{max}} - I_{\text{min}}) / (I_{\text{max}} + I_{\text{min}})$ ) <sup>(3)</sup>	%	≤ 7.5 (integrated over the other axis)
Working distance WD <sup>(4)</sup>	mm	300 ± 10
Housing material		anodized aluminium
Dimensions of the housing	mm	see drawing

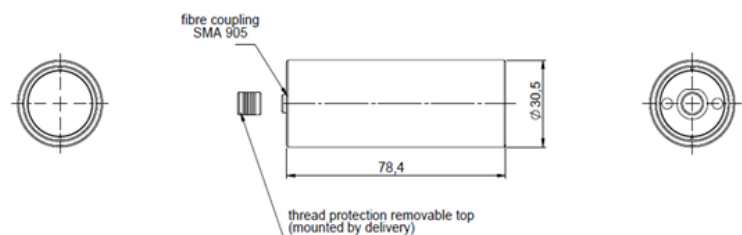
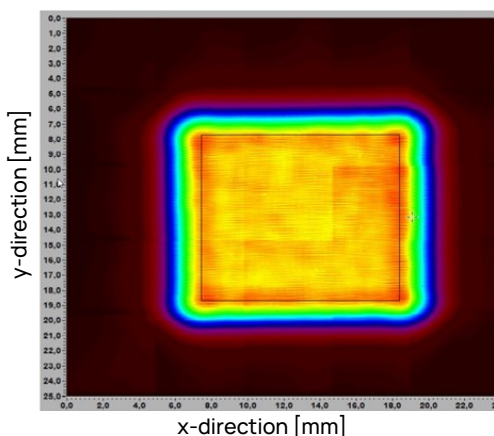
(1) Example for customization – customized field sizes and coatings on request

(2)  $I_{\text{field,hom}} / I_{\text{field,total}}$  denotes the ratio of the integrated power in the homogeneous field versus the total power at the field plane

(3)  $I_{\text{max}}$  and  $I_{\text{min}}$  denote the maximum and minimum intensity in the uniform field, respectively.

(4) Between last mechanical surface and focus

### Typical Measured Field and Product Drawing (mm)



Rev 02 | Updated June 8, 2021 | RoHS compliant 2011/65/EU and 2015/863/EU