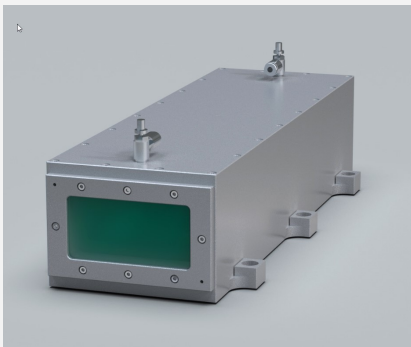


Beam Shaping Module

IOS000292 - TopHat of 180 x 180 mm²



Features and Advantages

The beam shaper can be easily plugged to an optical fiber. It generates a homogeneous field of $\geq 180 \times 180 \text{ mm}^2$ with a top-hat profile along both axes under a specified illumination angle.

Product Specifications

Specification Data of the Laser Source (input)	Unit	Value
Centre wavelength	nm	808
Power	W	≤ 200
Fiber core diameter	μm	400
NA		0.22
Fiber connector		SMA905

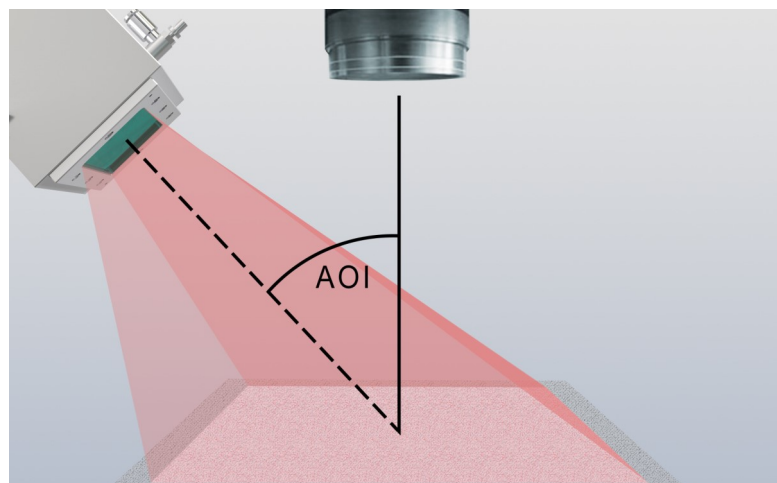
Specification Data of the Beam Shaper Module ⁽¹⁾	Unit	Value
Beam size at exit window FW 100% power content (h x v)	Mm	$18 \pm 2 \times 20 \pm 2$
Transmission	%	> 90
Efficiency ($I_{\text{field,hom}} / I_{\text{field,total}}$) ⁽²⁾	%	> 80 (typical 85)
Homogeneous field dimensions	mm ²	$> 180 \times 180$
Inhomogeneity $(I_{\text{max}} - I_{\text{min}}) / (I_{\text{max}} + I_{\text{min}})$ ⁽³⁾	%	≤ 7.5 (integrated over the other axis)
Working distance WD ⁽⁴⁾	mm	680 ± 25
Angle of incidence (AOI)	°	15 ± 3 (typical 15 ± 1.5)
Housing material		anodized aluminium
Dimensions of the housing (without connector)	mm ³	$352 \times 110 \times 80$

(1) Example for customization – customized design for different wavelengths, field sizes and angle of incidence on request

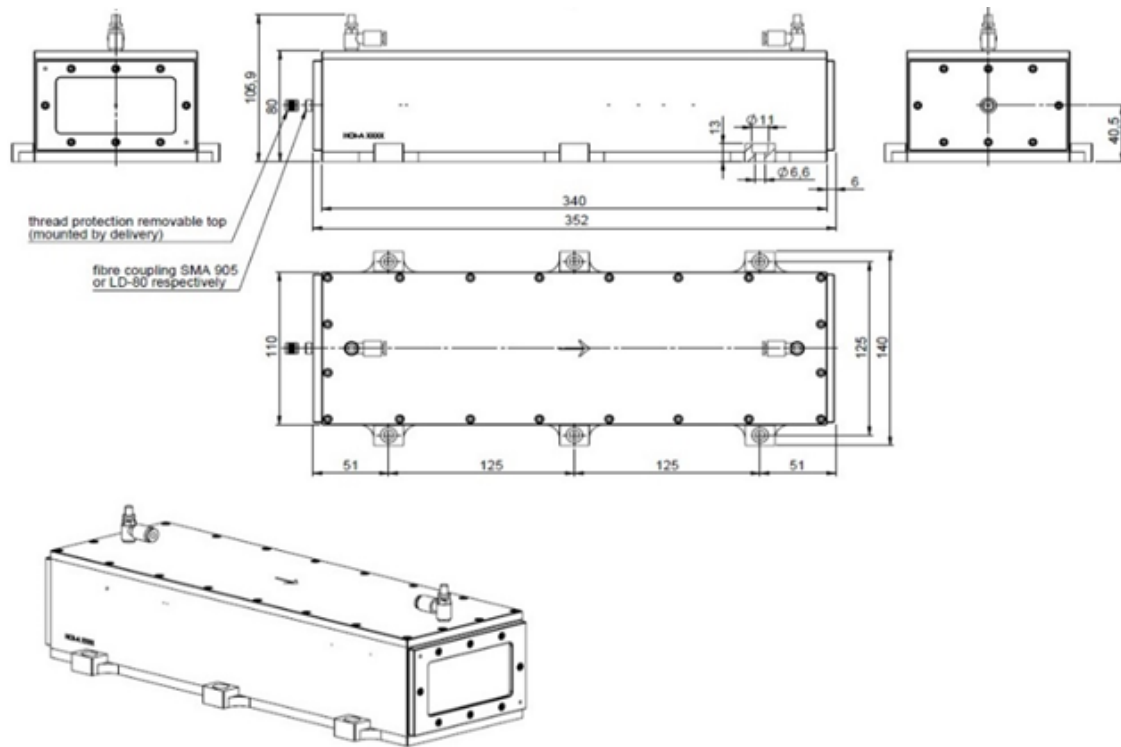
(2) $I_{\text{field,hom}} / I_{\text{field,total}}$ denotes the ratio of the integrated power in the homogeneous field versus the total power at the field plane

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

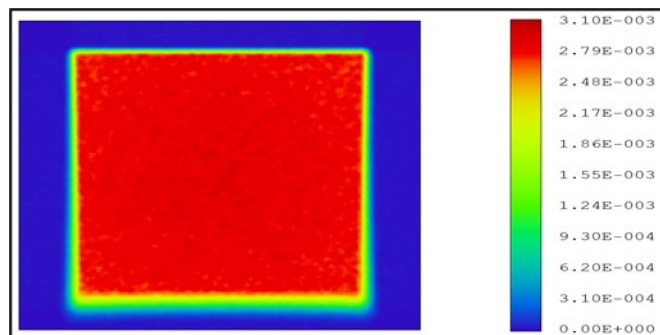
(4) Between last mechanical surface and focus



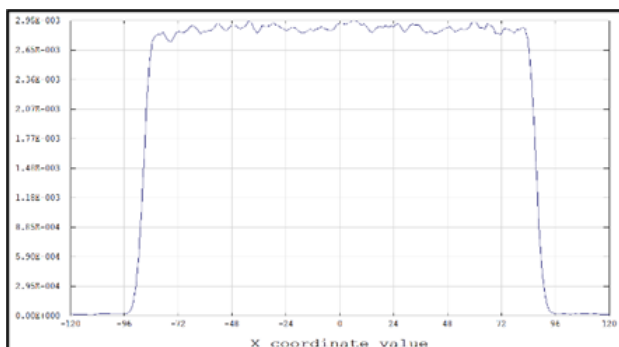
Product Drawing (mm)



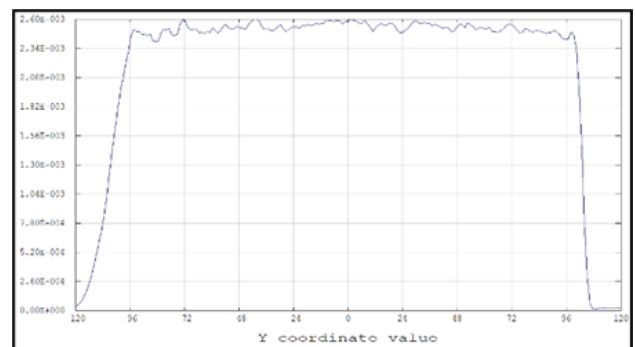
Beam Simulation Data



Intensity profile (typically)



Intensity cross section x-direction



Intensity cross section y-direction