

5AN-1.6-05

Anamorphic beam-shaping optics with form factor 0.63



FEATURES

Anamorphic optics transform a collimated laser beam with elliptical cross section into a circular beam or vice versa.

- Form factor 0.63
- Wavelength range: 600 - 1020 nm
- Integrated astigmatism correction
- No lateral beam shift or beam deviation as with anamorphic prism pairs
- Clear aperture: Ø6.5 mm
- Diffraction-limited optics pair
- Ø 19.5 mm system mount: Full integration with multicube™ system / 30 mm cage system, collimators and adapters

DESCRIPTION

A circular beam profile may be preferred over the elliptical profile usually provided by laser diodes or by tapered amplifiers. Anamorphic Beam-shaping Optics act one-dimensionally on the profile of the collimated beam. They can be used to

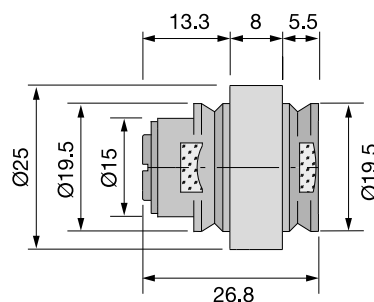
- Adjust the larger beam diameter to the dimension of the smaller one, producing a radially symmetric beam
- Adjust the smaller beam diameter to the dimension of the larger one, producing a radially symmetric beam
- Transform a circular beam into an elliptical beam
- Enlarge one elliptical axis to produce a beam with a higher axis ratio

The Anamorphic Beam-shaping Optics type 5AN are cylinder lens systems and, therefore, can be additionally used to correct the [astigmatic difference](#) ΔA s of the laser diode or tapered amplifier through a refocusing of the optical system. [Coupling efficiencies to single-mode fibers](#) of 80% or more are possible when using Anamorphic Beam-shaping Optics (depending on the beam characteristics of the laser diode or tapered amplifier).

Form Factor

The anamorphic effect is described by the form factor F , which indicates the relative diameter change of the parallel beam.

The target value is calculated from the ratio the beam diameters \varnothing_{\perp} and \varnothing_{\parallel} of the collimated beam.



TECHNICAL DATA

5AN-1.6-05

Series	5AN	
Order Code	5AN-1.6-05	
Form factor	0.63	
AR coating	05	
Wavelength range	600 - 1020 nm	
Clear aperture	Ø 6.5 mm	
Mount	System mount	System mount
	Ø 19.5 mm	Ø 19.5 mm

Outer diameter Ø 25 mm

Housing materialNickel silver / steel

Weight

TECHNOTES

- [Astigmatism Correction](#)
[Astigmatism Correction using anamorphic beam-shaping optics type 5AN](#)
- [Beam-shaping and fiber coupling](#)
[Using anamorphic optics to increase coupling efficiency](#)

ACCESSORIES

60EX-5	Eccentric key with a stroke of ± 1.0 mm.
9D-12	Screwdriver WS 1.2
19.5AM25-L	Adapter for 60SMS Laser Beam Couplers Outer diameter \varnothing 25/28 mm
48MC-MP-19.5	Mounting plate for the Schäfter+Kirchhoff multicube™ system

This is a printout of the page https://sukhamburg.com/products/details/5AN-1_6-05 from 4/29/2024

CONTACT

For more information please contact:

Schäfter + Kirchhoff GmbH

Kieler Str. 212

22525 Hamburg

Germany

Tel: +49 40 85 39 97-0

Fax: +49 40 85 39 97-79

info@sukhamburg.de

www.sukhamburg.com

LEGAL NOTICE

Copyright 2020 Schäfter+Kirchhoff GmbH. All rights reserved.

Text, image, graphic, sound, video and animation files and their arrangement on Schäfter+Kirchhoff GmbH webpages are protected by copyright and other protective laws. The content may not be copied for commercial use or reproduced, modified or used on other websites. [\[more\]](#)