

## 5AN-3-05

Anamorphic beam-shaping optics with form factor 0.33



### FEATURES

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

- Form factor 0.33
- Wavelength range: 600 - 1020 nm
- Integrated astigmatism correction
- No lateral beam shift or beam deviation as with anamorphic prism pairs
- Clear aperture: Ø 6.5 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

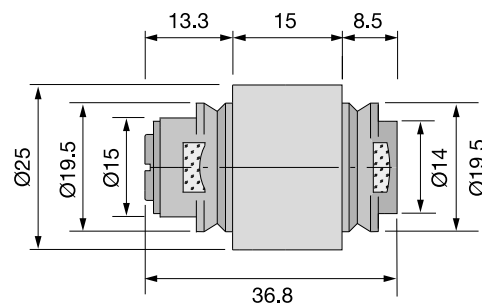
- Adjust the larger beam diameter to the dimension of the smaller one, producing a radially symmetric beam
- Adjust the smaller beam diameter to the dimension of the larger one, producing a radially symmetric beam
- Transform a circular beam into an elliptical beam
- Enlarge one elliptical axis to produce 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](#)  $\Delta A$ 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-3-05

Series	5AN	
Order Code	5AN-3-05	
Form factor	0.33	
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 material	Nickel silver / steel
Weight	78 g

## TECHNOTES

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

## DOWNLOADS



[930210390301.pdf \(Dimensional drawing\)](#)

## ACCESSORIES

60EX-5	Eccentric key with a stroke of $\pm 1.0$ 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-3-05> from 5/6/2024

## 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](mailto:info@sukhamburg.de)**

**[www.sukhamburg.com](http://www.sukhamburg.com)**

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