### **Laser Diode Collimator series 29CM**

Compact collimator with elliptical or circular Gaussian beam profile



#### **FEATURES**

Compact collimator with elliptical or circular Gaussian beam profile

- Collimated beam diameters (truncated below the 13.5%-level) max. 4.8 mm
- Wavelengths 405 852 nm
- Laser powers up to 93 mW

### **DESCRIPTION**

Laser diode collimators transform the divergent light of a laser diode into a collimated beam, while maintaining the Gaussian intensity distribution and the elliptical or circular intensity profile. The collimators series 29CM have a larger collimating focal length than the collimators series <u>25CM</u> and have a slightly longer housing.

The laser has integrated electronics for control of the laser output power. The output power can be controlled using modulation input ports (TTL and analog, in case of electronics type B, TTL only) or manually using the potentiometer.

The collimation can be adjusted by using an eccentric key. Please note that this affects beam parameters like collimated beam diameter and beam divergence.

### **TECHNOTES**

- <u>Electronic features (9)</u>
   <u>Detailed electronic features for all electronics types</u>
  - Overview Electronics Types
     Overview over all Electronics Types
  - <u>Electronics Type C</u>
     <u>Electronic features for electronics type C</u>

Electronics Type P

Electronic features for electronics type P

Electronics Type H

Electronic features for electronics type H

Electronics Type HP

Electronic features for electronics type HP

Electronics Type CS with RS232 interface
 Electronic features for electronics type CS

Electronics Type PS with RS232 interface
 Electronic features for electronics type PS

Electronics Type S

Electronic features for electronics type S

Electronics Type B

Electronic features for electronics type B

Laser Line Basics (7)

<u>Line geometry, intensity distribution, definition of line length and working distance, definition of line width and machine vision applications.</u>

Laser Line geometries

Fan angle vs. semi-telecentric.

Intensity distribution

Gaussian intensity distribution and uniform intensity distribution along the laser line

Laser Line length and working distance

Line length and working distance definition

Laser Line Width and Depth of Focus / Rayleigh Range

Line width definition

Laser Speckle

When do they appear and how to prevent them

Wavelengths of diode based lasers

What wavelengths are available for diode based laser modules?

Cable orientation

Straight and angled cable exit

Machine vision applications of Laser Lines (1)

<u>Laser triangulation</u>, <u>laser light sectioning</u>, <u>particle measurement etc.</u>

Laser Diffraction Measurements

### **ACCESSORIES**

SWITCHBOXES FOR LASER MODULES

# POWER SUPPLIES FOR LASER MODULES

**60EX-4** Eccentric key with a stroke of  $\pm$  0.5 mm.

**60EX-4-L** Alternative eccentric key with long handle with a

stroke of ± 0.5 mm.

**9D-12** Screwdriver WS 1.2

**9D-16** Screwdriver WS 1.6

### **RELATED PRODUCTS**

LASER DIODE • Compact Collimator

**COLLIMATOR SERIES** • Elliptical Gaussian beam profile

25CM

LASER DIODE ■ Collimator

**COLLIMATOR SERIES** • Elliptical Gaussian beam profile

55CM/55CR

LASER DIODE Collimator

COLLIMATOR SERIES

90CM/90CR

Large elliptical Gaussian beam profile

LASER DIODE 

Collimator

**COLLIMATOR SERIES** 

95CM/95CR

Large circular Gaussian beam profile

This is a printout of the page https://sukhamburg.com/products/lasermodules/series/29CM.html from 4/26/2024

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