

Machine Vision Collimator with elliptical Gaussian beam profile

Series 55CM/55CR, 90CM/90CR and 95CM/95CR with RS232 interface



FEATURES

Laser Diode Collimators with elliptical Gaussian beam profile with RS232 interface.

- Laser Diode Collimator [55CM/55CR](#)
- Collimated beam diameters (truncated below the 13.5%-level) max. 13 mm
- Angled version: 55CR
- Laser Diode Collimator [90CM/95CM](#)
- Large collimator
- Collimated beam diameters (truncated below the 13.5%-level) max. 17 mm
- Angled version: 90CR/95CR

- With RS232 interface



DESCRIPTION

Laser Diode Collimators transform the divergent light of a laser diode into a collimated beam, while maintaining the Gaussian intensity distribution and the intensity profile of the laser diode. They differ in max. diameter of the collimated beam.

55CM vs. 90CM and 95CM

The Laser Diode Collimators all have a Gaussian intensity profile. The 55CM/55CR and 90CM/90CR produce collimated beams with Gaussian beam profile while maintaining the intensity profile of the laser diode - in this case elliptical. The maximum beam diameter available is smallest for the series 55CM/55CR and largest for series 90CM/90CR.

Electronics

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

RS232 interface

The lasers are equipped with an [RS232 interface](#) for laser control and data read-out. It provides e.g. control of laser power or allows to switch the laser ON and OFF and it allows to read and store critical data, like the hours of operation or the laser current for maintenance planning purposes.

Adjustment of collimation settings

The collimation can be adjusted by using a hex key for series 55CM/55CR and an eccentric key for series 90CM/90CR and 95CM/95CR. Please note that this affects beam parameters like collimated beam diameter and beam divergence.

These high quality lasers can e.g. be used for machine vision applications.

TECHNOTES

- [Laser Modules with RS232 interface](#)
[Features of Laser Modules with RS232 interface](#)
- [Electronic features \(9\)](#)
[Detailed electronic features for all electronics types](#)
 - [Overview Electronics Types](#)
[Overview over all Electronics Types](#)
 - [Electronics Type C](#)
[Electronic features for electronics type C](#)
 - [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 \(7\)](#)

[Line geometry, intensity distribution, definition of line length and working distance, definition of line width and machine vision applications.](#)

▪ [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 \(1\)](#)

[Laser triangulation, laser light sectioning, particle measurement etc.](#)

▪ [Laser Diffraction Measurements](#)

▪ [Article - Laser Sources for Metrology and Machine Vision](#)

[Laser diode based laser sources for high precision measurement and inspection systems](#)

ACCESSORIES

SWITCHBOXES FOR
LASER MODULES

POWER SUPPLIES FOR
LASER MODULES

ADJUSTMENT TOOLS
LASER MODULES

RELATED PRODUCTS

**LASER DIODE
COLLIMATOR SERIES
25CM**

- **Compact** Collimator
- Elliptical Gaussian beam profile

**LASER DIODE
COLLIMATOR SERIES
55CM/55CR**

- Collimator
- Elliptical Gaussian beam profile

**LASER DIODE
COLLIMATOR SERIES
90CM/90CR**

- Collimator
- **Large elliptical** Gaussian beam profile

**LASER DIODE
COLLIMATOR SERIES
95CM/95CR**

- Collimator
- **Large circular** Gaussian beam profile

This is a printout of the page https://sukhamburg.com/products/laserm_modules/rs232/collimators/elliptical.html from 5/8/2024

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. [\[more\]](#)