

## Blue Machine Vision Collimator with elliptical Gaussian beam profile

Series 25CM/29CM and 55CM/55CR



### FEATURES

Blue Laser Diode Collimators with elliptical Gaussian beam profile

- Laser Diode Collimator [55CM/55CR](#)
- Collimated beam diameters (truncated below the 13.5%-level) max. 13 mm
- Angled version: 55CR
- Laser Diode Collimator [25CM/29CM](#)
- Compact collimator Ø 12 mm for smaller beam diameters
- Collimated beam diameters (truncated below the 13.5%-level) max. 4.8 mm
- Optional Low Noise Version:
- Series [LNC-56CM/LNC-56CR](#)

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- Blue Machine Vision Laser



## 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 and in their outer diameter (Ø 12 mm for series 25CM/29CM and Ø 25 mm for series 55CM/55CR).

### 25CM/29CM vs. 55CM

The Laser Diode Collimators all have a Gaussian intensity profile. The 25CM/29CM and 55CM/55CR 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 25CM and larger for series 55CM/55CR.

### 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. Optionally the lasers can be equipped with [RS232 serial interface](#) for laser control and data read-out. Please note that the electronic features are different for the compact series 25CM.

### Adjustment of collimation settings

The collimation can be adjusted by using a hex key for series 55CM/55CR and an eccentric key for series 25CM/29CM. Please note that this affects beam parameters like collimated beam diameter and beam divergence.

### Optional: Low Noise Version

The laser series 55CM/55CR are also available as a Low Noise version [LNC-56CM/LNC-56CR](#). These lasers are low noise (typ. < 0.15 % of  $P_o^*$  (RMS, Bandwidth < 1 MHz)) and operate mode-hopping free. Due to the reduced coherence length the speckle contrast is lowered. However this effect is smaller for smaller beam diameters. (\*  $P_o$  is the maximum specified output power.)

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

## TECHNOTES

- [Laser Modules with RS232 interface](#)  
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## 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  
29CM**

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

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

- Collimator
- Elliptical Gaussian beam profile

**LASER DIODE  
COLLIMATOR SERIES  
LNC-56CM/LNC-56CR**

- Collimator
- Elliptical Gaussian beam profile
- Low noise

This is a printout of the page [https://sukhamburg.com/products/laserm\\_modules/wavelength/blue/collimators.html](https://sukhamburg.com/products/laserm_modules/wavelength/blue/collimators.html) from 4/23/2024

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