

Low Noise Collimator with circular Gaussian beam profile

Machine Vision Collimator Series LNC-56CM/LNC-56CR, LNC-91CM/LNC-91CR and LNC-96CM/LNC-96CR



FEATURES

Laser Diode Collimators with circular Gaussian beam profile

- Low noise Laser Module (typ. < 0.15 % of P_0 (RMS, Bandwidth < 1 MHz))
- Laser Diode Collimator [LNC-56CM/LNC-56CR](#)
- Collimated beam diameters (truncated below the 13.5%-level) max. 13 mm
- Angled version: LNC-56CR
- Laser Diode Collimator [LNC-91CM/LNC-96CM](#)
- Large collimator
- Collimated beam diameters (truncated below the 13.5%-level) max. 17 mm
- Angled version: LNC-91CR/LNC-96CR
- Standard Version:
- Series [55CM/55CR](#)
- Series [90CM/90CR](#)
- Series [95CM/95CR](#)

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- Low noise, low coherence laser module (typ. < 0.15 % of P_0 (RMS, Bandwidth < 1 MHz))



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 maximum diameter of the collimated beam.

55CM vs. 90CM and 95CM

The Laser Diode Collimators all have a Gaussian intensity profile. The LNC-56CM/LNC-56CR and LNC-91CM/LNC-91CR produce collimated beams with Gaussian beam profile while maintaining the intensity profile of the laser diode - in this case circular. The maximum beam diameter available is smaller for the series LNC-56CM/LNC-56CR and largest for series LNC-91CM/LNC-91CR.

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.

Low noise

The lasers are [low noise](#) (typ. < 0.15 % of P_0 * (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 collimated beam diameters. (* P_0 is the maximum specified output power.)

Adjustment of collimation settings

The collimation can be adjusted by using a hex key for series LNC-56CM/LNC-56CR and an eccentric key for series LNC-91CM/LNC-91CR and LNC-96CM/LNC-96CR. Please note that this affects beam parameters like collimated beam diameter and beam divergence.

Standard Version

The laser series LNC-56CM/LNC-56CR, LNC-91CM/LNC-91CR as well as LNC-96CM/LNC-96CR are also available as a standard version [55CM/55CR](#), [90CM/90CR](#) and [95CM/95CR](#). Please note that these have a different electronics type, but are also available with [RS232 interface](#).

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](#)
- [LNC Laser Modules](#)
[Low noise Laser Modules vs. regular Laser Modules](#)
- [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
LNC-56CM/LNC-56CR

- Collimator
- Elliptical Gaussian beam profile
- Low noise

LASER DIODE
COLLIMATOR SERIES
LNC-91CM/LNC-91CR

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

LASER DIODE
COLLIMATOR SERIES
LNC-96CM/LNC-96CR

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

This is a printout of the page https://sukhamburg.com/products/laserm_modules/lnc/collimators/circular.html from 5/4/2024

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