

Fiber-coupled Lasers series 58FCM

with single-mode or polarization-maintaining fiber cable



FEATURES

Laser diode beam sources of type 58FCM are fiber-coupled laser sources with single-mode or polarization-maintaining fiber cable

- Various types from 405 nm to 1550 nm
- Laser output power up to 70 mW
- Single-mode fiber cable or polarization-maintaining fiber cable (polarization extinction ratio ≥ 23 dB)
- Beam profile is rotationally symmetric with Gaussian intensity distribution
- FC APC connector (8°-polish), optional DIN AVIO, ST or E-2000, end caps for wavelengths < 635 nm
- Modulation analog and TTL
- With interlock and key switch (conform to EN 60825-1)

Details about the low coherence fiber-coupled laser sources type 51nano without ([51nano](#)) or with Faraday Isolator ([51nanoFI](#)) can be found [here](#).

DESCRIPTION

Laser diode beam sources of type 58FCM are fiber-coupled laser sources with single-mode or polarization-maintaining fiber cables.

Electrical features

The output power is adjustable using a potentiometer or using the two modulation inputs for analog and TTL. The electrical cable is 1.5 m long. There are two possible supply voltages 5 V or 12 V. Other electrical cables and connectors on request.

More details on electronics type: [C](#), [P](#).

Electrical options:

- Two optional operation modes: constant power (standard) or constant current.
- Operation Mode "Constant power": An internal control loop maintains constant laser power. Advantage: compensates for temperature variations or ageing of laser diode.
- Operation Mode "Constant current": The internal control loop maintains constant laser current. The power output depends on temperature. Advantage: reduced laser noise.
- 5V or 12 V
- To fulfill lower laser safety requirements (e.g. laser class 2), the laser source can be delivered with reduced maximum output power
- Protective cap to prevent damage to the potentiometer
- Other electrical cables and connectors on request.

Fiber Cable

The source is fiber-coupled polarization-maintaining fiber cable (standard, polarization extinction ratio > 23 dB). As a result the beam profile is rotationally symmetric with Gaussian intensity distribution. The fiber cable is equipped with an FC APC connector (8°-polish). Fiber connectors with end caps are used for wavelengths <635 nm. The fiber cables have strain-relief and protective sleeving (Ø 3 mm). Standard cable length is 150 cm.

Fiber Options:

- Single-mode fibers with or without core-centred FC type connector
- Other connector types including DIN or AVIO,ST or E2000
- Other fiber lengths
- Incorporated vacuum feed-through

Laser Safety

The laser safety is conform to IEC 825 / EN 60825-1.

- Interlock chain for the remote deactivation of the laser
- Laser power-up is only possible using the key switch
- LED status indicator for "Laser ON"

TECHNICAL DATA

Fiber-coupled Lasers series 58FCM

Series	58FCM
Wavelength	405 - 1080 nm
Fiber cable	single-mode or polarization-maintaining
Fiber cable length	1.5 m (standard)
Fiber connector type	FC APC (standard)
Supply voltage	5 V or 12 V
Electr. cable length	1.5 m (standard)
Connector type (5V)	SV30 (Lumberg)
Connector type (12V)	SV40 (Lumberg)
Cable type	shielded 3 x 0.14 mm ²

Modulation	analog and TTL
Operating temperature	15-35°C ±0.5°C

ORDER OPTIONS

Order Code	Wavelength	Typ. Output Power	Supply Voltage	Fiber Type	End cap	Electronics Type
58FCM-405-51-M29-P-5-P-4-28-0-150	405 nm	51 mW	5 V	PM single-mode with FC APC	x	P
58FCM-405-51-M29-P-5-P-4-18-0-150	405 nm	51 mW	5 V	Single-mode with FC APC	x	P
58FCM-637-5-H10-P-5-C-2-28-0-150	637 nm	5 mW	5 V	PM single-mode with FC APC		C
58FCM-637-5-H10-P-5-C-2-18-0-150	637 nm	5 mW	5 V	Single-mode with FC APC		C
58FCM-640-25-H21-P-5-C-2-28-0-150	640 nm	25 mW	5 V	PM single-mode with FC APC		C
58FCM-640-25-H21-P-5-C-2-18-0-150	640 nm	25 mW	5 V	Single-mode with FC APC		C
58FCM-660-24-M26-P-5-C-2-28-0-150	660 nm	24 mW	5 V	PM single-mode with FC APC		C
58FCM-660-24-M26-P-5-C-2-18-0-150	660 nm	24 mW	5 V	Single-mode with FC APC		C
58FCM-660-70-M25-P-5-P-2-28-0-150	660 nm	70 mW	5 V	PM single-mode with FC APC		P
58FCM-660-70-M25-P-5-P-2-18-0-150	660 nm	70 mW	5 V	Single-mode with FC APC		P
58FCM-675-3-H03-P-5-C-2-28-0-150	675 nm	3 mW	5 V	PM single-mode with FC APC		C
58FCM-675-3-H03-P-5-C-2-18-0-150	675 nm	3 mW	5 V	Single-mode with FC APC		C
58FCM-685-24-H13-P-5-C-4-28-0-150	685 nm	24 mW	5 V	PM single-mode with FC APC		C
58FCM-685-24-H13-P-5-C-4-18-0-150	685 nm	24 mW	5 V	Single-mode with FC APC		C
58FCM-785-60-Q06-P-5-C-2-28-0-150	785 nm	60 mW	5 V	PM single-mode with FC APC		C
58FCM-785-60-Q06-P-5-C-2-18-0-150	785 nm	60 mW	5 V	Single-mode with FC APC		C
58FCM-830-18-H19-P-5-C-2-28-0-150	830 nm	18 mW	5 V	PM single-mode with FC APC		C
58FCM-830-18-H19-P-5-C-2-18-0-150	830 nm	18 mW	5 V	Single-mode with FC APC		C
58FCM-980-4-TH4-P-5-C-2-28-0-150	980 nm	4 mW	5 V	PM single-mode with FC APC		C

58FCM-980-4-TH4-P-5-C-2-18-0-150	980 nm	4 mW	5 V	Single-mode with FC APC PM single-	C
58FCM-1310-4-M14-P-5-C-2-28-0-150	1310 nm	4 mW	5 V	mode with FC APC	C
58FCM-1310-4-M14-P-5-C-2-18-0-150	1310 nm	4 mW	5 V	Single-mode with FC APC	C
58FCM-1550-15-Q04-P-5-C-2-28-0-150	1550 nm	15 mW	5 V	PM single- mode with FC APC	C
58FCM-1550-15-Q04-P-5-C-2-18-0-150	1550 nm	15 mW	5 V	Single-mode with FC APC	C
Other types e.g. with different supply voltage,wavelength or operation mode available.					

TECHNOTES

- [58FCM: Electronics Type C](#)
[Electronics details](#)
- [58FCM: Electronics type P](#)
[Electronics details](#)

DOWNLOADS



[000821380200.pdf \(Dimensional drawing\)](#)

This downloads section only includes general downloads for the complete series.

Please access the individual product pages (using the product configurator, the product list, order options or the search button if you have a complete order code). Here you will find specific downloads including technical drawings or stepfiles.

ACCESSORIES

PS120516E Power Supply 12 V

PS051003E Power Supply 5 V

RELATED PRODUCTS

**51NANO-S
(POLARIZATION-
MAINTAINING)** Fiber-coupled low coherence laser source with
polarization-maintaining fiber cable

**51NANOFI-S WITH
FARADAY ISOLATOR
(PM)** Fiber-coupled low coherence laser source with
polarization-maintaining fiber cable

**FIBER COLLIMATOR
SERIES 60FC** for collimating radiation exiting an optical fiber or as
an incoupler

**FIBER COLLIMATOR
SERIES 60FC-T** for collimating large beam diameters and with
additional TILT adjustment

This is a printout of the page <https://sukhamburg.com/products/fiberoptics/fcm/58fcm.html> from 5/4/2024

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