51nano-N-1064-10-Q05-P-5-2-18-0-150

Fiber-coupled low coherence laser source with single-mode fiber cable (OEM version)



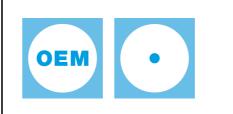
FEATURES

The Laser Diode Beam Source of type 51nano-N-1064-10-Q05-P-5-2-18-0-150 has a <u>reduced</u> <u>power noise, a reduced coherence length and a</u> <u>low speckle contrast</u>.

- Reduced power noise: typ. < 0.06 % of P₀ (RMS, Bandwidth < 1 MHz)
- Reduced coherence length: coherence length ≈ 300 µm
- Reduced speckle contrast
- Wavelength: 1064 nm
- Laser output power: 10 mW
- Single-mode fiber cable
- FC APC connector (8°-polish)
- Modulation analog and TTL
- OEM version w/o interlock and w/o key switch

Alternative: Laser Diode Beam Source <u>51nano-S</u> (with key switch and interlock) or with <u>polarization-</u> <u>maintaining</u> fiber cable

OEM Version



DESCRIPTION

The fiber-coupled Laser Diode Beam Source of type 51nano-N-1064-10-Q05-P-5-2-18-0-150 has a <u>reduced power noise (typ. < 0.06 % of P₀ (RMS, Bandwidth < 1 MHz)),</u> reduced coherence length (\approx 300 µm) and a lowered speckle contrast.



Electrical features

The output power is adjustable using a potentiometer or using the two modulation inputs for analog and TTL.

Fiber cable

The source is fiber-coupled to asingle-mode fiber cable. As a result the beam profile is rotationally symmetric with Gaussian intensity distribution. The fiber cable is equipped with an FC APC type connector (8°-polish). The fiber cable has a strain-relief and a protective sleeving (\emptyset 3 mm). Standard cable length is 150 cm.

Options:

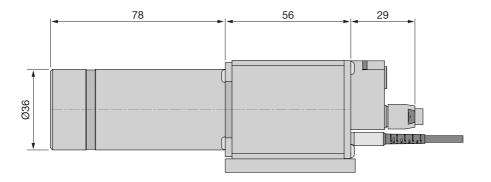
- Polarization-maintaining fiber
- Core-centered (single-mode only)
- Multiple fiber output cables (51nanoC, single-mode only)
- Other connector types including FC PC, DIN or AVIO, or E2000
- Other fiber cable lengths
- Incorporated vacuum feed-through

Laser safety

This OEM version has no key switch or interlock and is not conform to EN 60825-1. It can be operated conform to EN 60825-1 by using a <u>switchbox</u>.

As an alternative, a version with key switch and with interlock (conform to EN 60825-1) is available

as type <u>51nano-S</u>.



TECHNICAL DATA

51nano-N-1064-10-Q05-P-5-2-18-0-150

Order Code	51nano-N-1064-10-Q05-P-5-2-18-0-150
Will replace	51nanoFCM-N-1064-10-Q05-P-5-2-18-0-150
Series	51nano-N (single-mode)
Laser class	3В
Wavelength	1064 ± 10 nm
Band width	0.7 - 4 nm



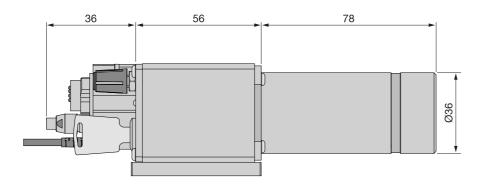
DATA SHEET

Power adjustment <1 - 100 % Power noise typ. < 0.06 % of P _o (RMS, BW < 1 MH2) Coherence length = 300 µm Fiber cable single-mode Fiber cable SMC-980 Nominal fiber NA 0.12 Effective fiber NAe ² 0.09 ± 10 % (1/e ²) Mode field diameter MFD 7.5 µm ± 10 % (1/e ²) Fiber cable length 1.5 ± 0.05 m (standard) Fiber cable type Ø 3 mm with Kevlar strain-relief Fiber connector type FC APC (standard) Power stability max. 12 % power variation between 15°C and 35°C Electronics type H Electronics type Signif (male, Lumberg SV50) Supply voltage 5.0 ± 0.2 V Modulation inputs Analog TTL Max. current consumption* 260 mA Modulation frequency 100 kHz 100 kHz Time delay ON/OFF* 22 kOhm 22 kOhm * Typical value. Depends on laser diode. 100 kHz Operating temperature 15 - 35°C ± 0.5°C Warm-up time Air Input impedance 22 kOhm 100 kHz * Typical value. Depends	Output power		typ. 10 mW
Coherence length $= 300 \mu m$ Fiber cablesingle-modeFiber typeSMC-980Nominal fiber NA0.12Effective fiber NA _e 2 $0.09 \pm 10 \% (1/e^2)$ Mode field diameter MFD $7.5 \mu m \pm 10 \% (1/e^2)$ Fiber cable length $1.5 \pm 0.05 m (standard)$ Fiber cable length $1.5 \pm 0.05 m (standard)$ Fiber cable length $1.5 \pm 0.05 m (standard)$ Fiber cable length $1.5 \pm 0.17 m (standard)$ Fiber cable type $\emptyset 3 mm with Kevlar strain-relief$ Fiber connector typeFC APC (standard)Power stabilitymax. 12 % power variation between 15°C and 35°CElectronics typeHElectr. cable length $1.5 \pm 0.1 m (standard)$ Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 V$ Max. current consumption*260 mAModulation inputsAnalogModulation inputsAnalogMax. input voltage $5 V$ Voltage for P_{min} / P_O $0 V/2.5 V$ Voltage for P_{min} / P_O $0 V/2.5 V$ Voltage for P_min / P_O $0 V/2.5 V$ Voltage for P_min / P_O $1.0/1.0 \mu s$ * Typical value. Depends on laser diode. $00 kHz$ Operating temperature $15 - 35^{\circ}C \pm 0.5^{\circ}C$ Warm-up timeapprox. 10 minAir humiditymax. 90 $\%$ non-condensingWeight $530 g$ Dimensions $50 \times 58 \times 166 mm$	Power adjustment		< 1 - 100 %
Fiber cable single-mode Fiber type SMC-980 Nominal fiber NA 0.12 Effective fiber NAe² 0.09 ± 10 % (1/e²) Mode field diameter MFD 7.5 µm ± 10 % (1/e²) Fiber cable length 1.5 ± 0.05 m (standard) Fiber cable length 1.5 ± 0.05 m (standard) Fiber cable type Ø 3 mm with Kevlar strain-relief Fiber connector type FC APC (standard) Power stability max. 12 % power variation between 15°C and 35°C Electronics type H Electr. cable length 1.5 ± 0.1 m (standard) Connector type 5 pin (male, Lumberg SV50) Supply voltage 5.0 ± 0.2 V Max. current consumption* 260 mA Modulation inputs Analog TTL Max. input voltage 5 V 5 V Voltage for P _{min} / P _O 0 V / 2.5 V < 0.8 V /> 2.4 V Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* 2/0.3 µs 1.5/0.1 µs Rise / fall time* 1.0/1.0 µs 1.0/1.0 µs * Typical valu	Power noise	typ. <0.06 % of P _o (RM	S, BW < 1 MHz)
Fiber type SMC-980 Nominal fiber NA 0.12 Effective fiber NAe² 0.09 ± 10 % (1/e²) Mode field diameter MFD 7.5 µm ± 10 % (1/e²) Fiber cable length 1.5 ± 0.05 m (standard) Fiber cable type Ø 3 mm with Kevlar strain-relief Fiber cable type FC APC (standard) Power stability max. 12 % power variation between 15°C and 35°C Electronics type H Electr. cable length 1.5 ± 0.1 m (standard) Connector type 5 pin (male, Lumberg SV50) Supply voltage 5.0 ± 0.2 V Max. current consumption* 260 mA Modulation inputs Analog TTL Max. input voltage 5 V 5 V Voltage for P _{min} / P _O 0 V / 2.5 V < 0.8 V / > 2.4 V Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* 2/0.3 µs 1.5/0.1 µs Rise / fall time* 1.0/1.0 µs 1.0/1.0 µs * Typical value. Depends on laser diode. Operating temperature 15 - 35°C ± 0.5°C Warm-up time approx.1	Coherence length		≈ 300 µm
Nominal fiber NA 0.12 Effective fiber NAe² 0.09 ± 10 % (1/e²) Mode field diameter MFD 7.5 µm ± 10 % (1/e²) Fiber cable length 1.5 ± 0.05 m (standard) Fiber cable type Ø 3 mm with Kevlar strain-relief Fiber cable type FC APC (standard) Power stability max. 12 % power variation between 15°C and 35°C Electronics type H Electr. cable length 1.5 ± 0.1 m (standard) Connector type 5 pin (male, Lumberg SV50) Supply voltage 5.0 ± 0.2 V Max. current consumption* 260 mA Modulation inputs Analog TTL Max. input voltage 5 V 5 V Voltage for P _{min} / Po 0 V / 2.5 V < 0.8 V / > 2.4 V Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* 2/0.3 µs 1.5/0.1 µs Rise / fall time* 1.0/1.0 µs 1.0/1.0 µs * Typical value. Depends on laser diode. Operating temperature 15 - 35°C ± 0.5°C Warm-up time approx. 10 min Air humidity 530 g	Fiber cable		single-mode
Effective fiber NA_e^2 $0.09 \pm 10 \% (1/e^2)$ Mode field diameter MFD7.5 µm ± 10 % (1/e^2)Fiber cable length1.5 ± 0.05 m (standard)Fiber cable typeØ 3 mm with Kevlar strain-reliefFiber connector typeFC APC (standard)Power stabilitymax. 12 % power variation between 15°C and 35°CElectronics typeHElectr. cable length1.5 ± 0.1 m (standard)Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 V$ Max. current consumption*260 mAModulation inputsAnalogTTLMax. input voltage5 V5 VVoltage for P_{min} / P_O $0 V / 2.5 V$ $< 0.8 V / > 2.4 V$ Input impedance22 kOhm22 kOhmMax. modulation frequency100 kHz100 kHzTime delay ON/OFF*2/0.3 µs1.5/0.1 µs* Typical value. Depends on laser diode.Operating temperature15 - 35°C ± 0.5°CWarm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Fiber type		SMC-980
Mode field diameter MFD7.5 μ m ± 10 % (1/e ²)Fiber cable length1.5 ± 0.05 m (standard)Fiber cable typeØ 3 mm with Kevlar strain-reliefFiber connector typeFC APC (standard)Power stabilitymax. 12 % power variation between 15°C and 35°CElectronics typeHElectr. cable length1.5 ± 0.1 m (standard)Connector type5 pin (male, Lumberg SV50)Supply voltage5.0 ± 0.2 VMax. current consumption*260 mAModulation inputsAnalogMax. input voltage5 V5 V5 VVoltage for Pmin / Po0 V / 2.5 V< 0.8 V />2.4 VInput impedance22 kOhm22 kOhm1.0/1.0 µsMax. modulation frequency100 kHz100 kHz100 kHzTime delay ON/OFF*2/0.3 µs1.5/0.1 µs1.0/1.0 µs* Typical value. Depends on laser diode.0Operating temperature15 - 35°C ± 0.5°CWarm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Nominal fiber NA		0.12
Fiber cable length1.5 \pm 0.05 m (standard)Fiber cable typeØ 3 mm with Kevlar strain-reliefFiber cable typeFC APC (standard)Power stabilitymax. 12 % power variation between 15°C and 35°CElectronics typeHElectr. cable length1.5 \pm 0.1 m (standard)Connector type5 pin (male, Lumberg SV50)Supply voltage5.0 \pm 0.2 VMax. current consumption*260 mAModulation inputsAnalogTTLMax. input voltage5 V5 VVoltage for Pmin / PO0 V / 2.5 V< 0.8 V / >Aux. modulation frequency100 kHz100 kHzTime delay ON/OFF*2/0.3 µs1.5/0.1 µsRise / fall time*1.0/1.0 µs1.0/1.0 µs* Typical value. Depends on laser diode.Depends on laser diode.Operating temperature15 - 35°C \pm 0.5°CWarm-up timeAir humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Effective fiber NA _{e²}	0.0	09 ± 10 % (1/e ²)
Fiber cable typeØ 3 mm with Kevlar strain-reliefFiber connector typeFC APC (standard)Power stabilitymax. 12 % power variation between 15°C and 35°CElectronics typeHElectr. cable length $1.5 \pm 0.1 \text{ m}$ (standard)Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 \text{ V}$ Max. current consumption*260 mAModulation inputsAnalogTTLMax. input voltage 5 V 5 V Voltage for P_{min} / P_O $0 \text{ V} / 2.5 \text{ V}$ $< 0.8 \text{ V} / 2.4 \text{ V}$ Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz $1.0/1.0 \text{ µs}$ Time delay ON/OFF* $2/0.3 \text{ µs}$ $1.5/0.1 \text{ µs}$ * Typical value. Depends on laser diode.Operating temperature $15 - 35°C \pm 0.5°C$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Mode field diameter MFD	7.5 µ	ım ± 10 % (1/e ²)
Fiber connector type FC APC (standard) Power stability max. 12 % power variation between 15°C and 35°C Electronics type H Electr. cable length 1.5 ± 0.1 m (standard) Connector type 5 pin (male, Lumberg SV50) Supply voltage 5.0 ± 0.2 V Max. current consumption* 260 mA Modulation inputs Analog Modulation inputs Analog Max. input voltage 5 V 5 V 5 V Voltage for P _{min} / P _O 0 V / 2.5 V Voltage for P _{min} / P _O 0 V / 2.5 V Input impedance 22 kOhm Max. modulation frequency 100 kHz Time delay ON/OFF* 2/0.3 µs 1.5/0.1 µs Rise / fall time* 1.0/1.0 µs 1.0/1.0 µs * Typical value. Depends on laser diode. Operating temperature 15 - 35°C ± 0.5°C Warm-up time approx. 10 min approx. 10 min Air humidity max. 90 % non-condensing Weight 530 g Dimensions 50 x 58 x 166 mm 50 x 58 x 166 mm	Fiber cable length	1.5 ± 0.	05 m (standard)
Power stabilitymax. 12 % power variation between 15°C and 35°CElectronics typeHElectr. cable length $1.5 \pm 0.1 \text{ m}$ (standard)Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 \text{ V}$ Max. current consumption*260 mAModulation inputsAnalogModulation inputsAnalogModulation inputs 5 V Sv 5 V Voltage for P_{min} / P_0 $0 \text{ V} / 2.5 \text{ V}$ Voltage for P_{min} / P_0 $0 \text{ V} / 2.5 \text{ V}$ Voltage for P_min / P_0 $0 \text{ V} / 2.5 \text{ V}$ Supply impedance 22 kOhm Max. modulation frequency 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ 1.5/0.1 μs * Typical value. Depends on laser diode.Operating temperature $15 - 35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Fiber cable type	Ø 3 mm with Ke	evlar strain-relief
Electronics typeHElectr. cable length $1.5 \pm 0.1 \text{ m}$ (standard)Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 \text{ V}$ Max. current consumption*260 mAModulation inputsAnalogMax. input voltage 5 V 5 V 5 V Voltage for P_{min} / P_0 $0 \text{ V} / 2.5 \text{ V}$ < 0 kHz100 kHzInput impedance22 kOhmMax. modulation frequency100 kHzTime delay ON/OFF* $2/0.3 \mu \text{s}$ 1.5/0.1 μs * Typical value. Depends on laser diode.Operating temperature $15 - 35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight530 gDimensions $50 \times 58 \times 166 \text{ mm}$	Fiber connector type	FC	APC (standard)
Electr. cable length $1.5 \pm 0.1 \text{ m} \text{ (standard)}$ Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 \text{ V}$ Max. current consumption*260 mAModulation inputsAnalogTTLMax. input voltage 5 V 5 V Voltage for Pmin / Po $0 \text{ V} / 2.5 \text{ V}$ $< 0.8 \text{ V} / > 2.4 \text{ V}$ Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode. $0 \text{ Symmetry} = 0.5 \text{ °C} \pm 0.5 \text{ °C}$ Warm-up timeapprox.10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Power stability	max. 12 % power variation betweer	15°C and 35°C
Connector type5 pin (male, Lumberg SV50)Supply voltage $5.0 \pm 0.2 \vee$ Max. current consumption*260 mAModulation inputsAnalogTTLMax. input voltage $5 \vee$ $5 \vee$ Voltage for P _{min} / PO $0 \vee / 2.5 \vee$ $< 0.8 \vee / > 2.4 \vee$ Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode.Operating temperature $15 - 35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Electronics type		Н
Supply voltage $5.0 \pm 0.2 \vee$ Max. current consumption*260 mAModulation inputsAnalogMax. input voltage $5 \vee$ $5 \vee$ $5 \vee$ Voltage for P_{min} / P_0 $0 \vee / 2.5 \vee$ Voltage for P_{min} / P_0 $0 \vee / 2.5 \vee$ $2.4 \vee$ Input impedance 22 kOhm 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode.Operating temperature $15 - 35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Electr. cable length	1.5 ± (0.1 m (standard)
Max. current consumption*260 mAModulation inputsAnalogTTLMax. input voltage $5 \vee$ $5 \vee$ Voltage for P_{min} / P_0 $0 \vee / 2.5 \vee$ $< 0.8 \vee / >$ Voltage for P_min / P_0 $0 \vee / 2.5 \vee$ $< 0.8 \vee / >$ Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode. $20 \mu \text{s}$ $15 - 35^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Connector type	5 pin (male,	Lumberg SV50)
Modulation inputsAnalogTTLMax. input voltage $5 \vee$ $5 \vee$ Max. input voltage for P_{min} / P_0 $0 \vee / 2.5 \vee$ $< 0.8 \vee / > 2.4 \vee$ Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode. $0 \text{ perating temperature}$ $15 - 35^\circ \text{C} \pm 0.5^\circ \text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Supply voltage		5.0 ± 0.2 V
Max. input voltage $5 \vee$ $5 \vee$ Max. input voltage $5 \vee$ $5 \vee$ Voltage for Pmin / Po $0 \vee / 2.5 \vee$ $< 0.8 \vee / > 2.4 \vee$ Input impedance 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode. $15 - 35^{\circ} \text{C} \pm 0.5^{\circ} \text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Max. current consumption*		260 mA
Voltage for P_{min} / P_0 $0 \lor / 2.5 \lor$ $< 0.8 \lor / > 2.4 \lor$ Input impedance 22 kOhm 22 kOhm 22 kOhm Max. modulation frequency 100 kHz 100 kHz 100 kHz Time delay ON/OFF* $2/0.3 \mu \text{s}$ $1.5/0.1 \mu \text{s}$ Rise / fall time* $1.0/1.0 \mu \text{s}$ $1.0/1.0 \mu \text{s}$ * Typical value. Depends on laser diode. $53^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$ Warm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight 530 g Dimensions $50 \times 58 \times 166 \text{ mm}$	Modulation inputs	Analog	TTL
2.4 V Input impedance 22 kOhm Max. modulation frequency 100 kHz 100 kHz 100 kHz Time delay ON/OFF* 2/0.3 μs Rise / fall time* 1.0/1.0 μs * Typical value. Depends on laser diode. Operating temperature 15 - 35°C ± 0.5°C Warm-up time approx. 10 min Air humidity max. 90 % non-condensing Weight 530 g Dimensions 50 x 58 x 166 mm	Max. input voltage	5 V	5 V
Max. modulation frequency100 kHz100 kHzTime delay ON/OFF*2/0.3 μs1.5/0.1 μsRise / fall time*1.0/1.0 μs1.0/1.0 μs* Typical value. Depends on laser diode.15 - 35°C ± 0.5°COperating temperature15 - 35°C ± 0.5°CWarm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Voltage for P _{min} / P _O	0 V / 2.5 V	
Time delay ON/OFF*2/0.3 μs1.5/0.1 μsRise / fall time*1.0/1.0 μs1.0/1.0 μs* Typical value. Depends on laser diode.15 - 35°C ± 0.5°COperating temperature15 - 35°C ± 0.5°CWarm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Input impedance	22 kOhm	22 kOhm
Rise / fall time*1.0/1.0 µs* Typical value. Depends on laser diode.Operating temperature15 - 35°C ± 0.5°CWarm-up timeapprox. 10 minAir humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Max. modulation frequency	100 kHz	100 kHz
* Typical value. Depends on laser diode. Operating temperature 15 - 35°C ± 0.5°C Warm-up time approx. 10 min Air humidity max. 90 % non-condensing Weight 530 g Dimensions 50 x 58 x 166 mm	Time delay ON/OFF*	2/0.3 µs	1.5/0.1 μs
Operating temperature 15 - 35°C ± 0.5°C Warm-up time approx. 10 min Air humidity max. 90 % non-condensing Weight 530 g Dimensions 50 x 58 x 166 mm	Rise / fall time*	1.0/1.0 µs	1.0/1.0 μs
Warm-up time approx. 10 min Air humidity max. 90 % non-condensing Weight 530 g Dimensions 50 x 58 x 166 mm	* Typical value. Depends on las	ser diode.	
Air humiditymax. 90 % non-condensingWeight530 gDimensions50 x 58 x 166 mm	Operating temperature	1	5 - 35°C ± 0.5°C
Weight 530 g Dimensions 50 x 58 x 166 mm	Warm-up time		approx. 10 min
Dimensions 50 x 58 x 166 mm	Air humidity	max. 90 % non-condensing	
	Weight		530 g
Protection Class IP30	Dimensions	50 x 58 x 166 mm	
	Protection Class		IP30



DATA SHEET

Dimensions (for a complete dimensional drawing please refer to the downloads section)



TECHNOTES

- Fiber-coupled low noise beam source
 Comparison of a low noise laser source to a conventional laser source
- <u>51nano: Electronics Type H</u>
 <u>Electronic features for electronics type H</u>

DOWNLOADS



000824000400.pdf (Dimensional drawing)



Conformity_51nano_2023_E_web.PDF (CE certificate)

ACCESSORIES

PS051003E	Power Supply 5 V
SBN050501	For laser diode beam sources of electronics type S/C/P/H and 5 V power supply
FIBER COLLIMATORS SINGLE-MODE/PM	Fiber Collimators for collimating light exiting a single- mode or polarization-maintaining fiber cable

RELATED PRODUCTS

DATA SHEET

51NANO-N (POLARIZATION- MAINTAINING, OEM)	Fiber-coupled low coherence laser source with polarization-maintaining fiber cable (OEM version)
51NANO-S (SINGLE- MODE)	Fiber-coupled low coherence laser source with single-mode fiber cable
51NANOFI-N WITH FARADAY ISOLATOR (SM/OEM)	Fiber-coupled low coherence laser source with single-mode fiber cable (OEM version)

This is a printout of the page <u>https://sukhamburg.com/products/details/51nano-N-1064-10-Q05-P-5-2-18-0-150</u> from 5/5/2024

CONTACT

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