

# nano direct diode\* Turn-key Systems

## Compact. Versatile. Reliable.

The NANIO Direct Diode lasers are designed to perfectly fit today's requirements for industrial grade diode laser processing systems. The compact module size, its modular turn-key design, the armored delivery fiber and industrial grade connectors make the NANIO Direct Diode a rugged tool with exceptional performance and reliability. Based on patented

single emitter technology the NANIO Direct Diode is designed for longest diode life times and ease of integration and operation. The armored delivery fiber allows fast connection with optionally available imagers, collimator modules or commercially available beam delivery packages.

## Applications

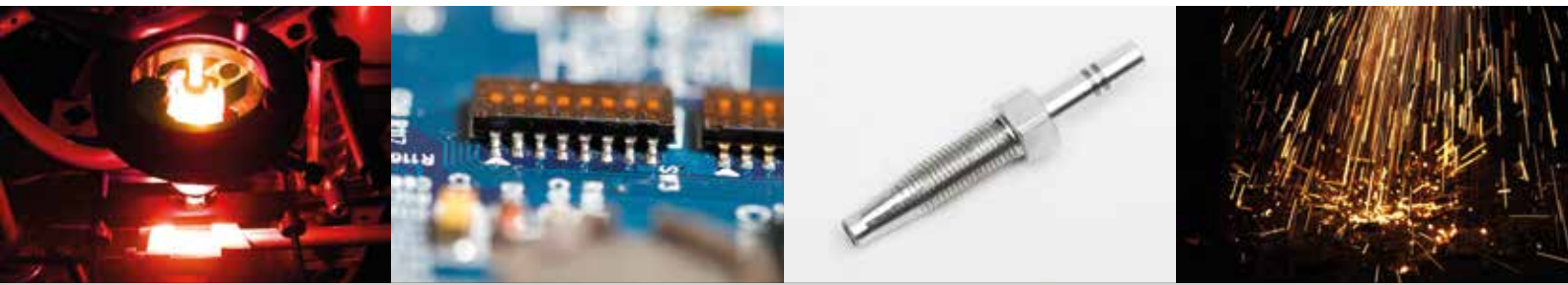
- \* Laser Hardening
- \* Plastic Welding
- \* Thin Sheet Metal Welding
- \* Brazing & Soldering
- \* BioTec & Scientific

## Features

- \* Modular industrial design
- \* Outstanding performance & reliability
- \* Superior power stability
- \* Small 2 RU, air-cooled unit
- \* Field proven long life diode modules



( i ) 810 nm fiber coupled direct diode lasers for industrial applications ranging from 50 to 100 W in a 400  $\mu$ m industrial grade armored fiber. The air-cooled system is only 2 RU high and features the same ILC interfacing as all other InnoLas Photonics industrial lasers.



## Specifications

Model	810-100-400	810-80-400	810-50-400
Wavelength	810 nm	810 nm	810 nm
Wavelength Tolerance	± 10 nm	± 10 nm	± 10 nm
Nominal Power	100 W	80 W	50 W
Rise/Fall Time	< 10 µs	< 10 µs	< 10 µs
Power Stability (rms, 8 h)	< 1%	< 1%	< 1%
Fiber Core Diameter	400 µm	400 µm	400 µm
Fiber Numerical Aperture	0.17	0.17	0.17
Collimated Beam Diameter	10 mm	10 mm	10 mm
Fiber Type & Length (Standard)	Industrial Armored, 3 m	Industrial Armored, 3 m	Industrial Armored, 3 m
Power Stability (rms, 8 h)	< 1%	< 1%	< 1%
Warm-up Time	< 10 min	< 10 min	< 10 min
Operating Voltage	115-230 VAC ± 10%, 50-60 Hz	115-230 VAC ± 10%, 50-60 Hz	115-230 VAC ± 10%, 50-60 Hz
Laser Power Consumption	< 600 W	< 550 W	< 500 W
Cooling	Air	Air	Air
Ambient Temperature	15-35 °C, non-condensing	15-35 °C, non-condensing	15-35 °C, non-condensing
External Control	RS232, USB, TTL and Analog Control	RS232, USB, TTL and Analog Control	RS232, USB, TTL and Analog Control
Dimensions (L x W x H)	500 x 447 x 88.1 mm, 19" system, 2 RU high	500 x 447 x 88.1 mm, 19" system, 2 RU high	500 x 447 x 88.1 mm, 19" system, 2 RU high
Weight	15 kg	15 kg	15 kg

InnoLas follows a policy of continuous product improvement. All specifications are subject to change without notice. Rev. 1.2, 06/2017.  
InnoLas Photonics GmbH is DIN EN ISO 9001 certified.

## Technical Drawing

