

nLIGHT pearl

Fiber coupled diode lasers for specialized material processing, medical, aerospace and defense applications.



With a range of configurations to meet diverse needs, nLIGHT® pearl™ diode lasers deliver a variety of wavelength, power and fiber combinations to give you maximum versatility.

These diodes provide efficient and reliable performance for solid state laser pumping, direct diode material processing, surgical lasers and medical therapeutics, LiDAR capabilities and more.

Key Features & Benefits

- A choice of optimized configurations allows you to best meet your unique needs.
- Special wavelengths give you optimization for most efficient absorption or pumping ranges.
- Wavelength stabilization yields consistent performance across a range of operating conditions.
- nLIGHT reliability produces the uptime and performance you and your customers demand.

Specifications Overview

- Wavelengths: 793, 808, 878.6, 885, 980, 1470, 1532, 1550 nm
- Fiber core: 200, 400, 600 μ m
- Power: 30 – 130 W

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Solid State Laser Pumping Specifications

Wavelength (nm)	Model Number	Fiber Core (μm)	Power (W)	Excitation NA	Efficiency (%)	Housing Type
808 ± 3	NL-P2-040-0808-3	200	40	0.17	52	P10
	NL-P2-065-0808-3	200	65	0.17	52	P16
	NL-P4-070-0808-3	400	70	0.17	51	P10
	NL-P4-110-0808-3	400	110	0.17	51	P16
885 ± 3	NL-P2-050-0885-3	200	50	0.17	53	P10
	NL-P2-080-0885-3	200	80	0.17	53	P16
	NL-P4-080-0885-3	400	80	0.17	56	P10
	NL-P4-130-0885-3	400	130	0.17	55	P16
878.6 ± 3	NL-P2-045-0878.6-0.5	200	45	0.17	51	P10
	NL-P2-075-0878.6-0.5	200	75	0.17	50	P16
	NL-P4-075-0878.6-0.5	400	75	0.17	52	P10
	NL-P4-120-0878.6-0.5	400	120	0.17	51	P16

Direct Diode Material Processing Specifications

Wavelength (nm)	Model Number	Fiber Core (μm)	Power (W)	Excitation NA	Efficiency (%)	Housing Type
980 ± 7	NL-P2-080-0980-7	200	80	0.17	52	P10
	NL-P2-130-0980-7	200	130	0.17	52	P16

Surgical and Medical Therapeutics Processing Specifications

Wavelength (nm)	Model Number	Fiber Core (μm)	Power (W)	Excitation NA	Efficiency (%)	Housing Type
1470 ± 10	NL-P4-030-1470-10	400	30	0.17	32	P10
	NL-P2-040-1470-10	200	40	0.16	24	P14
	NL-P4-050-1470-10	400	50	0.17	32	P16

Aerospace Applications Specifications

Wavelength (nm)	Model Number	Fiber Core (μm)	Power (W)	Excitation NA	Efficiency (%)	Housing Type
1532 ± 1	NL-P2-035-1532-1	200	35	0.16	26	P14

Performance characteristics are typical at 25 °C housing temperature.