



The Pearl™ P10 is designed for Material Processing to optimize the demanding industrial requirements of continuous performance with ease of integration.

These pump lasers use a revolutionary fiber technology, PowerCore™, which delivers high-brightness, Gaussian or top-hat pump profiles to maximize overlap with the TEM₀₀ cavity mode for efficient brightness conversion to 1 μm. The industry-leading efficiency of these pump sources is enabling compactness, reliability and simplified cooling for the next generation of solid-state laser systems. Pearl's embedded nXLT™ single-emitter technology is resetting the benchmark for high-brightness semiconductor laser reliability.

Features

- Patented nXLT™ diode protection for extended life
- Low-current, fault-tolerant architecture
- Industry-leading wall-plug efficiency >50%
- Field-replaceable, PowerCore™ mode-stable fiber
- Plug and play compatibility with nLIGHT's DL system
- Electrically isolated housing

Applications

- Rod Pumping
- Disk Pumping
- Slab Pumping

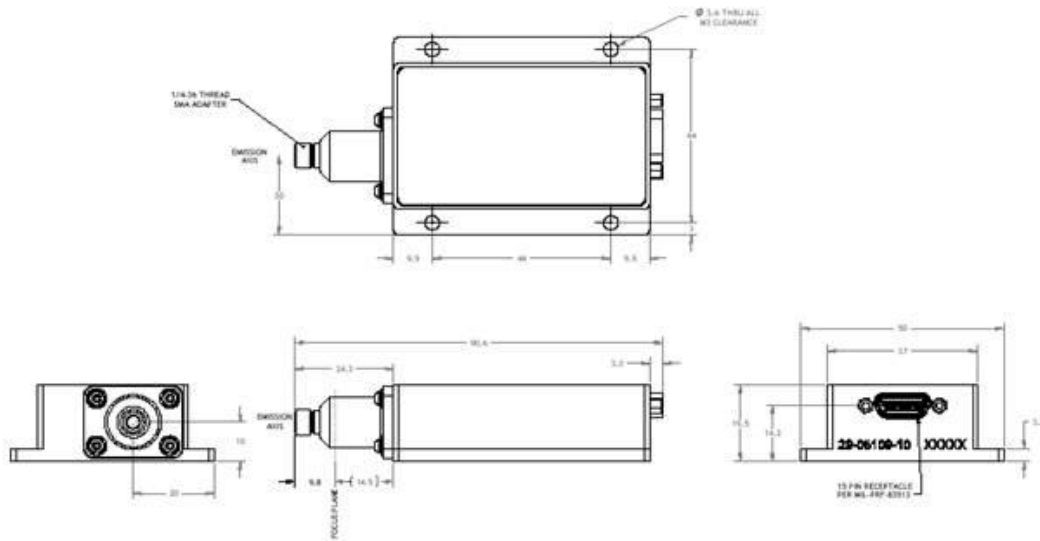
Typical Device Performance

Package		P10			
Optical					
Wavelength	nm	790-830 nm			
Wavelength tolerance	nm	± 10			
CW output power	W	20	30	40	50
Fiber core diameter	µm	400 or 600			
Beam divergence	NA ¹	0.17			
Fiber length (standard)	m	2.0			
Electrical					
Power conversion efficiency (typical)	%	50			
Operating current (typical)	A	5.7			
Operating voltage (typical)	V	7.4	11.1	14.8	18.5
Mechanical					
Storage temperature range ²	°C	-40 to +80			
Mass	gr	220			
Thermal					
Operating temperature ²	°C	+15 to +35			
Accessories					
Line Generator Optic Modules					
Collimator and Spot Generator Optic Modules					
Monitor Photo Diode					
PPS™ OEM Diode Controller					
Turn-Key System					

¹ Numerical aperture (NA) is the sine of the half-angle encircling 90% of the optical energy from the fiber.

² A non-condensing environment is required for storage and operation.

Package Dimensions



CFR Regulation

These components do not comply with the federal regulation (Title 21 CFR, Chapter 1, Subchapter J) as administered by the Center for Device and radiological Health. Purchaser acknowledges that their products must comply with these regulations before they can be sold to an end-use.

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Notice

nLIGHT continually improves its products to provide our customers with outstanding quality and reliability. nLIGHT may make changes to specifications and product descriptions at any time, without notice. In addition, nLIGHT offers a limited warranty to ensure customer satisfaction. For complete details, please contact your nLIGHT sales representative.