



The Pearl™ fiber laser pump series is optimized to meet the demanding requirements of high brightness pumping with minimal cladding light and imbedded feedback protection.

Pearl pump lasers use a proprietary fiber coupling technology to eliminate light in the cladding. nLIGHT's proprietary single-emitter integration technology enables high power pumping without the need for fiber combiners, thus maximizing efficiency, cost-effectiveness and useful life.

Features

- 1 μ m feedback protection
- Patented nXLT™ diode protection for extended life
- Low-current, fault-tolerant architecture
- Ultra-low cladding light
- Industry-leading wall-plug efficiency
- Plug and play compatibility with OptoTools™ DL system
- Electrically isolated housing

Applications

- Erbium/Ytterbium fiber lasers
- CW/pulsed fiber lasers

Proven Performance

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Typical Device Performance

Package format		P10	P16
Optical			
Wavelength	nm	915 ± 5	
	nm	938 ± 5	
	nm	976 ± 3	
CW output power	W	Up to 70	Up to 120
Fiber core diameter	µm	200	
Beam divergence	NA ¹	0.16	0.16
Spectral width (FWHM)	nm	<5	
Slope efficiency	W / A	>10	>16
Electrical			
Power conversion efficiency	%	>52	
Threshold current	A	<0.6	
Operating current	A	<8.2	<8.1
Operating voltage	V	<17.1	<27.4
Series resistance	Ω	<0.4	<0.6
Mechanical			
Storage temperature range ²	°C	-40 to +80	
Mass	gr	100	180
Thermal			
Thermal resistance ³	°C / W	<0.6	<0.4
Operating temperature ²	°C	+15 to +35	
Wavelength temperature coefficient ⁴	nm / °C	0.32	
Accessories			
Fiber termination (distal end)	SMA or pigtail		
PPS™ OEM laser diode driver			
OptoTools™ DL System with DiodeSafe™			

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

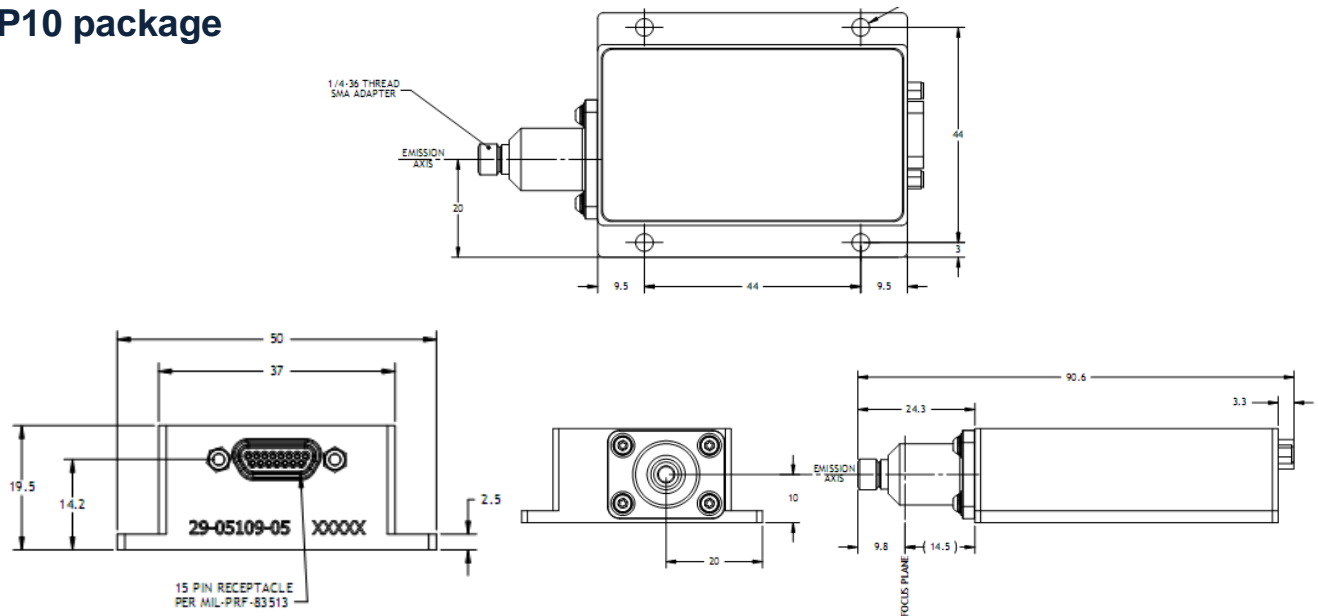
² A non-condensing environment is required for storage and operation.

³ Thermal resistance is the diode junction temperature shift per incremental Watt of heat load.

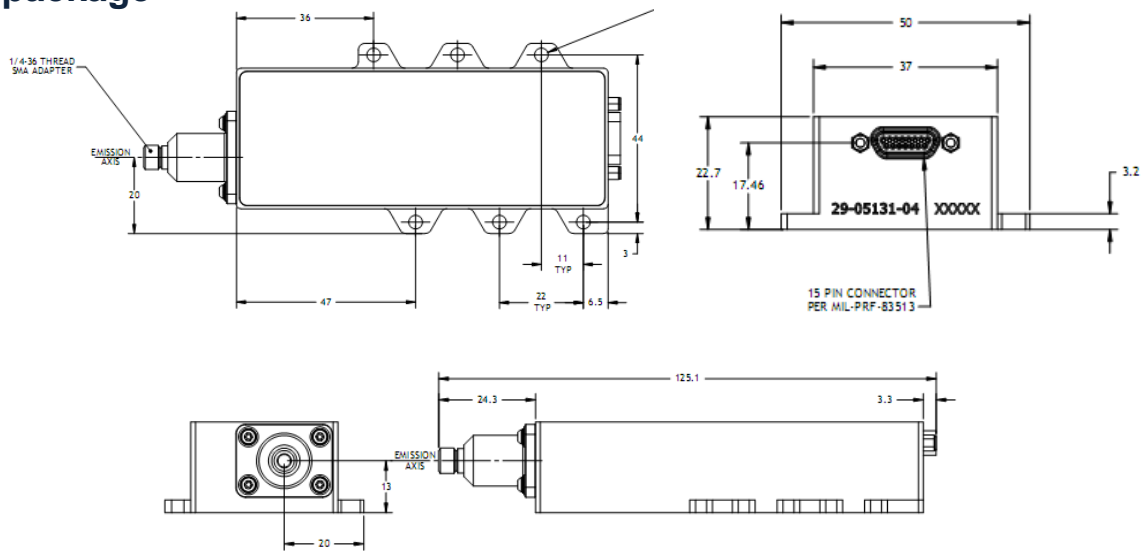
⁴ The wavelength temperature coefficient is the wavelength shift per °C change at the diode junction.

Package Dimensions

P10 package



P16 package



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.