



nLIGHT's industry-leading high brightness Pearl is the most efficient 18MW/cm²-sr beam source available, which significantly reduces Capex and Opex costs for many industrial applications.

Pearl delivers up to 100W from 100μm 0.15 or 0.22NA fiber by leveraging nLIGHT's patented single-emitter integration technology for high efficiency and reliability.

Features

- Industry-leading brightness and superior efficiency (WPE > 45%)
- Patented nXLT™ diode protection for extended life
- Compatible with OptoTools™ DL system for plug and play operation

Applications

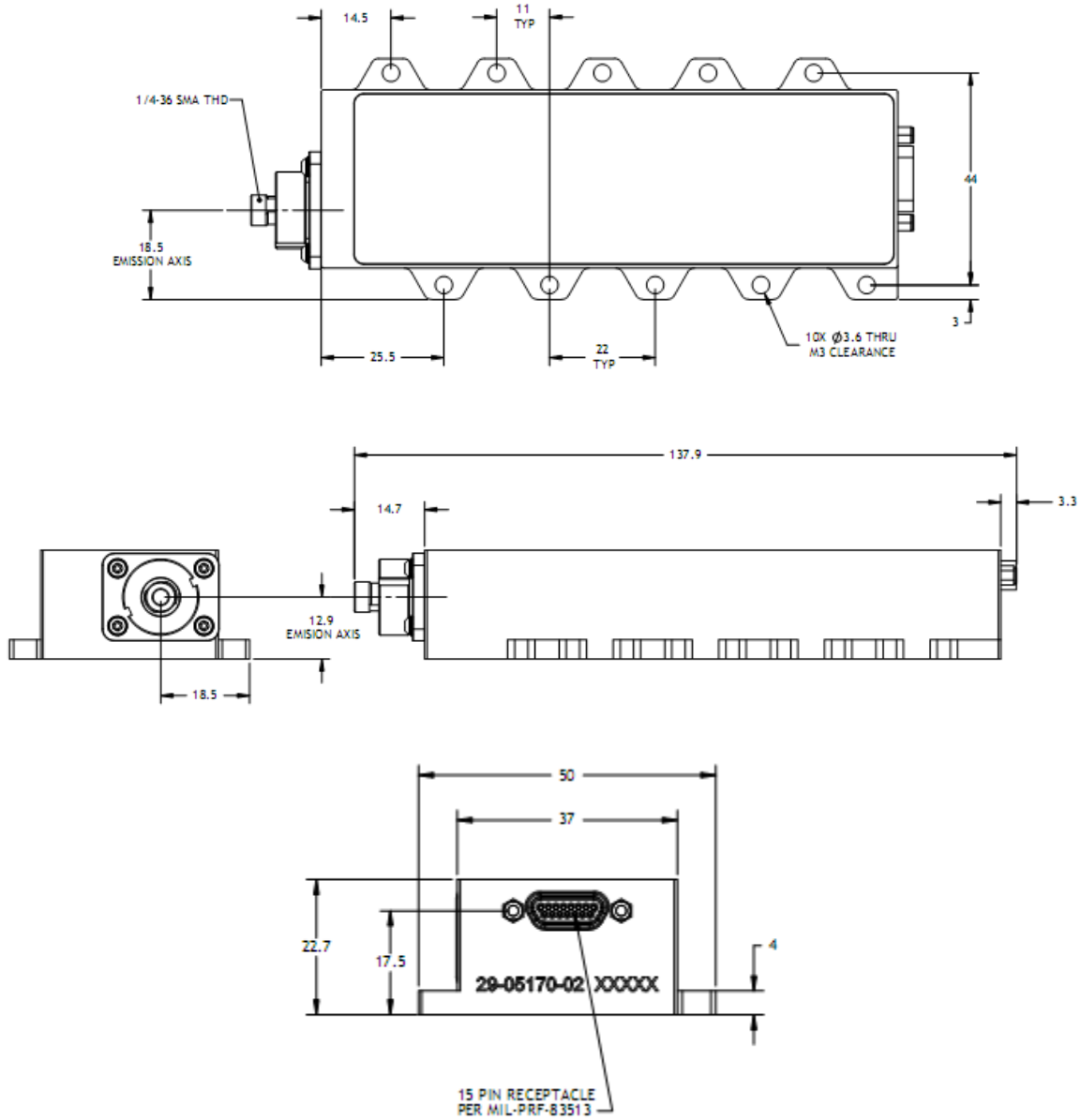
- Fiber Laser Pumping
- Micro-Welding / Cutting
- Medical / Dermatology

Proven Performance

Typical Device Performance

Common Application					
Typical Application		Material Processing; FL Pumping	Material Processing; FL Pumping	Dermatology	Dermatology
Optical					
Wavelength	nm	915	976	1470	1530
Wavelength tolerance	nm	± 10	± 3	± 20	± 20
CW output power	W	90	100	30	25
Fiber core diameter	µm	105			
Fiber numerical aperture	NA ¹	0.15 / 0.22			
Spectral width (FWHM)	nm	10	5	15	20
Slope efficiency	W / A	10	10	3.5	3.5
Cladding light specification	%	2%			
1µm Isolation	dB	35			
Wavelength temperature coefficient ⁴	nm / °C	0.32	0.32	0.55	0.55
Fiber termination		SMA / Pigtail			
Electrical					
Power conversion efficiency	%	45	45	20	20
Threshold current	A	0.5	0.5	0.5	0.5
Operating current	A	10			
Operating voltage	V	24	24	18	18
Series resistance	Ω	0.5			
Mechanical					
Storage temperature range ²	°C	25			
Mass	g	175			
Thermal resistance ³	°C / W	0.5			
Operating temperature	°C	+25 to +35			

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.