

# element<sup>®</sup> e18

## Fiber-Coupled Semiconductor Laser



**90W, 793nm, 105μm**

Item Number : 1082076

	Unit	Minimum	Typical	Maximum
<b>Optical Specifications</b>				
CW Output Power (in fiber) <sup>4</sup>	W	83	90	
Wavelength Centroid	nm	790.0	793.0	796.0
Spectral Width (FWHM)	nm		1.8	4.0
NA within 95% Power Enclosure	-		0.15	
Fiber Core / Clad Diameter	μm		105 / 125	
Fiber NA / Index Type / Cladding Type	-		0.22 NA / Step Index / Single	
Back Reflection Isolation 1850 - 2100nm	dB	15		
<b>Electrical Specifications</b>				
Electrical-to-Optical Efficiency	%		41	
Threshold Current	A		1.1	
Operating Current	A		7.0	7.0
Operating Voltage	V		31.4	32.0
<b>Thermal Specifications</b>				
Operating (Housing) Temperature <sup>3</sup>	°C		+30	
Storage Temperature <sup>3</sup>	°C	-25		70
Wavelength Temperature Coefficient	nm / °C		0.28	
Wavelength Current Coefficient	nm / A		0.7	
<b>Mechanical Specifications</b>				
Mass	g		510	
Fiber Length	m	1.5	2.0	
Active Fiber Bend Radius	mm	25		
<b>Product Information</b>				
Item Description	-	e18-18-090-0793-3-105-0.22-SI-FPT-2.0-HT		
Fiber Jacketing	-	900 μm Hytel Tubing		
Fiber Termination	-	FPT		
Export Control Classification Number (ECCN)	-	EAR99		

### Notes

- 1 Product image not necessarily representative of exact appearance.
- 2 Production specifications shown are for beginning of life performance at the typical operating temperature. End of life operating current (I<sub>op</sub>) is 110% beginning of life I<sub>op</sub>.
- 3 A non-condensing environment with relative humidity between 5 - 85% is required for operation and storage.
- 4 The CW Output Power (in-fiber) specified is 3.5% higher than the as-measured values to account for Fresnel loss that wouldn't be present in the intended spliced use condition.

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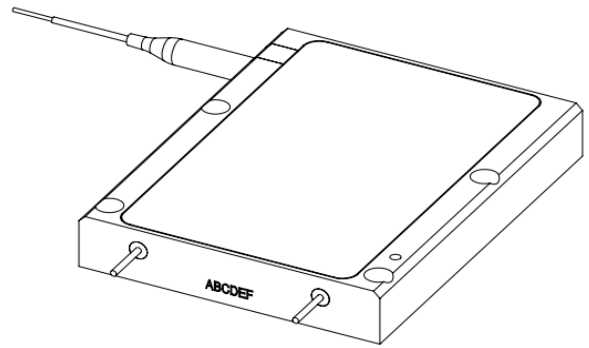
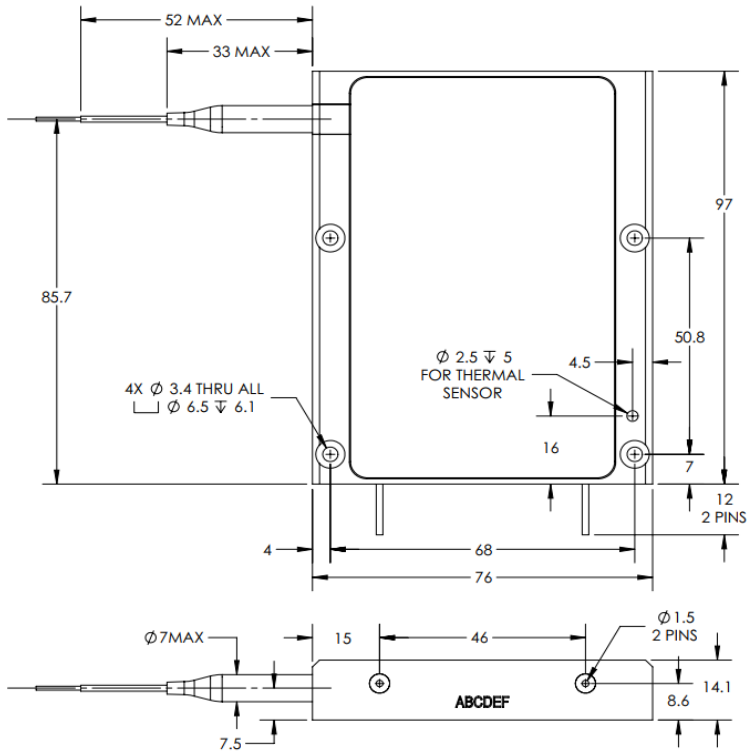
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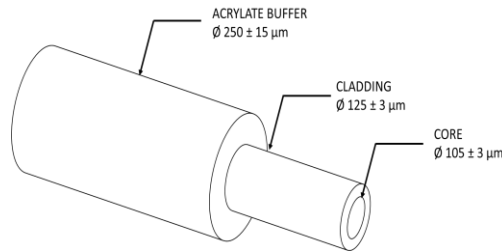
## 900 $\mu\text{m}$ Hytrel Tubing Bare fiber pigtail

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### Mechanical Drawings



ALL DIMENSIONS IN mm WITH  $\pm 0.25\text{mm}$  TOLERANCE.



BARE FIBER DRAWING

nLIGHT continually improves its products to provide customers outstanding quality and reliability. The information contained herein is subject to change without notice.

This product is not certified in accordance with IEC 60825-1 or 21CFR1040.10/ 21CFR1040.11 and is solely intended to be integrated into a laser product certified by the Purchaser. The Purchaser acknowledges that their product (incorporating nLIGHT laser product) must comply with the applicable regulations before it can be sold.



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