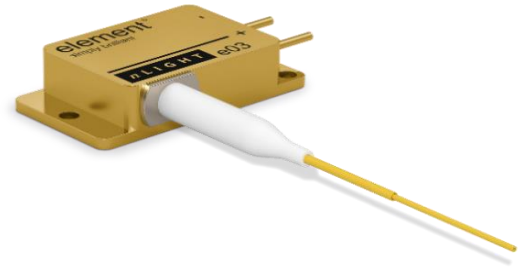


# element<sup>®</sup> e03

## Fiber-Coupled Semiconductor Laser



### 12W, 976nm, 105µm Wavelength Stabilized

Item Number : 1125456

|  | Unit    | Minimum                                      | Typical                            | Maximum |
|--|---------|--|------------------------------------|---------|
| <b>Optical Specifications</b>                        |         |  |                                    |         |
| CW Output Power (in fiber) <sup>4</sup>              | W       |  | 12                                 |         |
| Wavelength Peak                                      | nm      | 975.0  | 976.0                              | 977.0   |
| Spectral Width (FWHM)                                | nm      |  | 0.4                                | 1.0     |
| NA within 95% Power Enclosure                        | -       |  | 0.13                               |         |
| Fiber Core / Clad Diameter                           | µm      |  | 105 / 125                          |         |
| Fiber NA / Index Type / Cladding Type                | -       |  | 0.22 NA / Step Index / Single Clad |         |
| Back Reflection Isolation 1030 - 1200nm              | dB      | 15   |                                    |         |
| <b>Electrical Specifications</b>                     |         |  |                                    |         |
| Electrical-to-Optical Efficiency                     | %       |  | 51                                 |         |
| Threshold Current                                    | A       |  | 0.4                                |         |
| Operating Current                                    | A       |  | 13.8                               | 15.0    |
| Operating Voltage                                    | V       |  | 1.7                                | 2.2     |
| Wavelength Stabilized Operating Current <sup>5</sup> | A       | 11.0   |                                    | 17.0    |
| <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 |  | 0.01                               |         |
| Wavelength Current Coefficient                       | nm / A  |  | 0.02                               |         |
| <b>Mechanical Specifications</b>                     |         |  |                                    |         |
| Mass   | g       |  | 60                                 |         |
| Fiber Length   | m       | 1.5  | 2.0                                | 2.5     |
| Active Fiber Bend Radius                             | mm      | 25   |                                    |         |
| <b>Product Information</b>                           |         |  |                                    |         |
| Item Description                                     | -       | e03-01-012-0976-1-105-0.22-SI-FPT-2.0-HT-VBG |                                    |         |
| Fiber Jacketing                                      | -       | 900 µm Hytrel 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 (Iop) is 110% beginning of life Iop.
- 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.
- 5 Wavelength stabilized to > 95% power in band of 974.5nm to 977.5nm at the rated operating temperature.

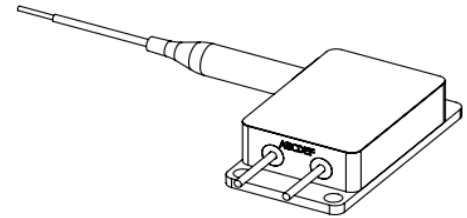
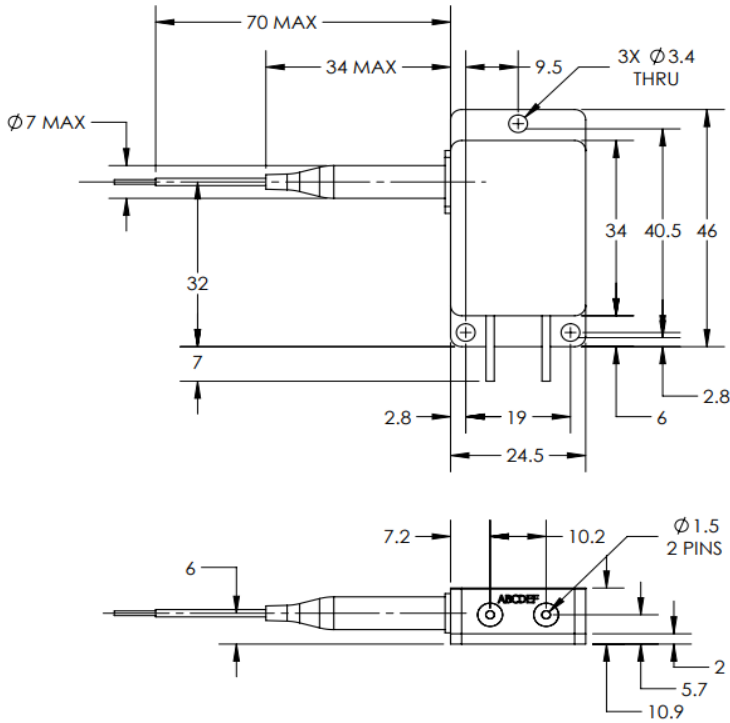
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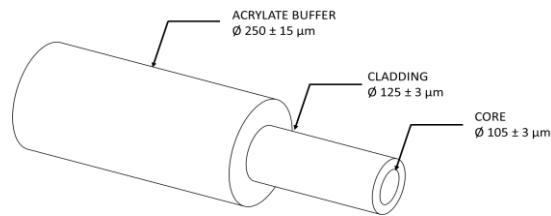
## 900 $\mu\text{m}$ Hytel Tubing Bare fiber pigtail

Item Number : 1125456

### Mechanical Drawings



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



BARE FIBER DRAWING

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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.



[sales@nlight.net](mailto:sales@nlight.net) | [www.nlight.net](http://www.nlight.net)

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