



# Necsel™ Blue DE Laser

## Blue 46x nm Direct Emitting Laser

These specifications are for the Necsel blue direct emitting package. The centroid of the wavelength spectrum will be within the indicated wavelength range.



| Model #     | Symbol    | Min. (nm) | Typical (nm) | Max. (nm) |
|-------------|-----------|-----------|--------------|-----------|
| Blue-DE-46x | $\lambda$ | 460       | 464          | 468       |

### Operating Wavelengths

| Laser Parameter  | Symbol           | Min. | Typical | Max. | Unit  |
|--|------------------|------|---------|------|-------|
| Operating Power (CW)                                     | $P_{op}$         | —    | 4.6     | —    | W     |
| Module Operating Temperature [Non-condensing Atmosphere] | $T_{Thermistor}$ | —    | 30      | —    | °C    |
| Center Wavelength [at 25°C and $P_{op}$ ]                | $\lambda$        | 460  | 464     | 468  | nm    |
| Wavelength Temperature Coefficient                       | —                | —    | —       | 0.1  | nm/°C |
| Threshold Current  | $I_{th}$         | —    | 450     | —    | mA    |
| Slope Efficiency   | $\eta$           | —    | 2.8     | —    | W/A   |
| Laser Power Conversion Efficiency                        | PCE              | —    | 24      | —    | %     |

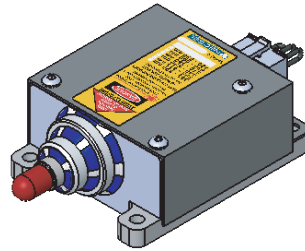
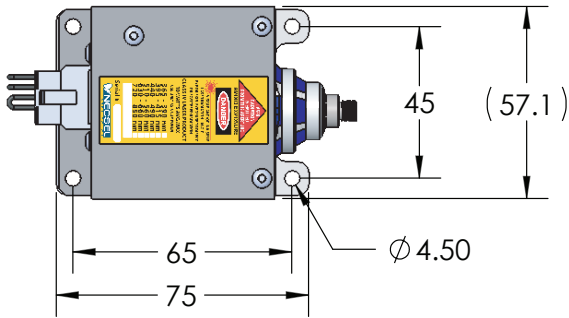
| Power Supply Requirements       | Symbol   | Min. | Typical | Max. | Unit |
|---------------------------------|----------|------|---------|------|------|
| Operating Voltage (2 in series) | $V_{op}$ | 6.0  | 8.8     | 9.6  | V    |
| Operating Current               | $I_{op}$ | —    | 2.1     | 2.3  | A    |
| Allowable Reverse Current       | $I_r$    | —    | —       | 85   | mA   |

| Fiber Specifications   | Symbol | Min. | Typical | Max. | Unit |
|--|--------|------|---------|------|------|
| Fiber Core Diameter (Centration $\leq 10 \mu m$ )                  | —      | —    | 0.400   | —    | mm   |
| Connector Type (Nose Length 0.3850 - 0.3863 in., 9.779 – 9.812 mm) | —      | —    | SMA-905 | —    | —    |
| Numerical Aperture   | —      | —    | 0.22    | —    | —    |

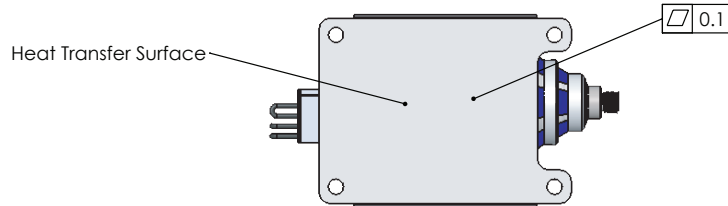
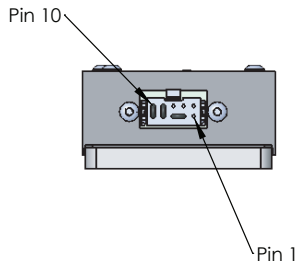
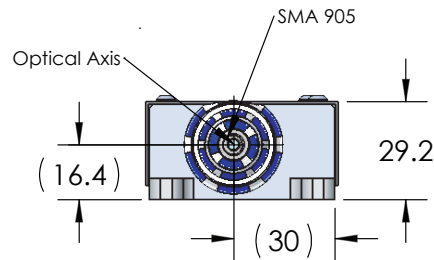
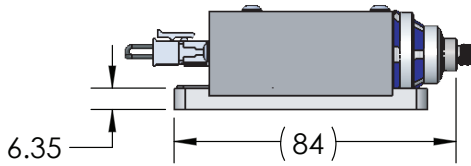
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# OUTLINE DRAWING AND ELECTRICAL CONNECTIONS



| Molex Micro-Fit 10 circuit header 430451012 |                  |
|---|------------------|
| PIN   | DESCRIPTION      |
| 1   | Thermistor 1     |
| 2   | NA               |
| 3   | NA               |
| 4   | Blue laser 1 -ve |
| 5   | Blue laser 2 -ve |
| 6   | Thermistor 1     |
| 7   | Thermistor 2     |
| 8   | Thermistor 2     |
| 9   | Blue laser 1 +ve |
| 10  | Blue laser 2 +ve |



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