

## Datasheet: Necsel™ Green SHG FS Laser

These specifications are for the Necsel green SHG free space package. The centroid of the wavelength spectrum will be within the indicated wavelength range.



| Model #           | Symbol    | Min. (nm) | Typical (nm) | Max. (nm) |
|-------------------|-----------|-----------|--------------|-----------|
| Necsel-SHG-FS-52x | $\lambda$ | 521       | -            | 529       |

### Operating Wavelengths

| Laser Parameter  | Symbol           | Min. | Typical | Max. | Unit |
|--|------------------|------|---------|------|------|
| Operating Power (CW)                                     | $P_{op}$         | 3.0  | -       | -    | W    |
| Module Operating Temperature [non-condensing atmosphere] | $T_{Thermistor}$ | -    | 30      | -    | °C   |
| Center Wavelength [at 25°C and $P_{op}$ ]                | $\lambda$        | 521  | -       | 529  | nm   |
| Spectral width @ FWHM                                    | $\Delta\lambda$  | -    | 0.2     | -    | nm   |
| Laser Power Conversion Efficiency                        | PCE              | -    | 6.5     | -    | %    |

### Single Beam Specifications

|  |             |   |      |      |      |
|--|-------------|---|------|------|------|
| Beam Diameter at $1/e^2$               | $2\omega_r$ | - | 0.08 | 0.15 | mm   |
| Beam Divergence, Full Angle at $1/e^2$ | $\theta_r$  | 8 | 10   | 14   | mrad |

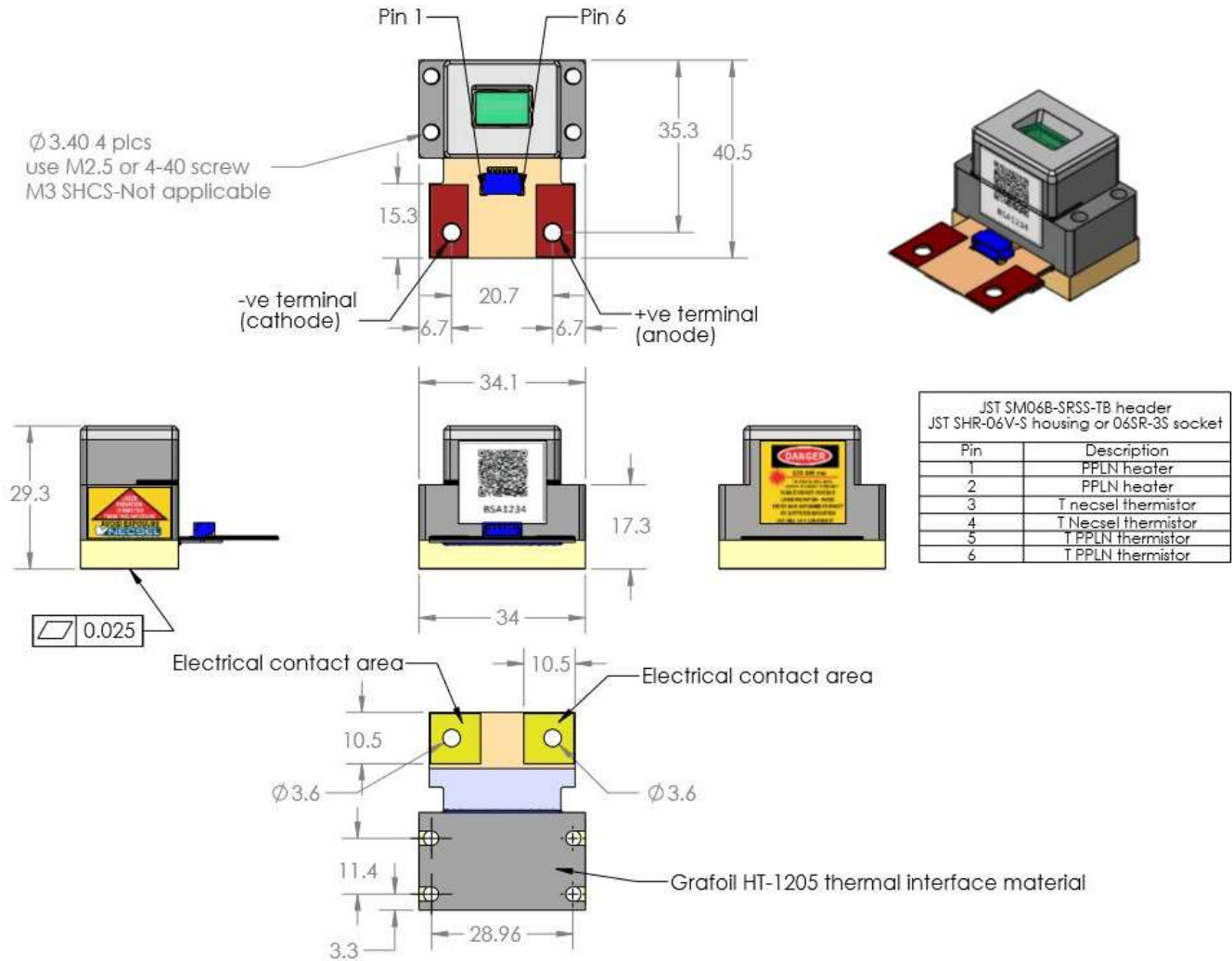
### Array Specifications

|                                |          |       |       |        |    |
|--------------------------------|----------|-------|-------|--------|----|
| Number of rows                 | -        | 2     | -     | 2      | -  |
| Number of output beams per row | N        | 20    | 24    | 24     | -  |
| Row separation                 | -        | -     | 2.1   | -      | mm |
| Emitter Pitch                  | d        | -     | 0.328 | -      | mm |
| Polarization ratio             | -        | 100:1 | 150:1 | 2000:1 | -  |
| IR leakage [diffuse]           | $P_{IR}$ | -     | 3     | 5      | mW |

### Power Supply Requirements

|                   |          |   |     |     |   |
|-------------------|----------|---|-----|-----|---|
| Operating Voltage | $V_{op}$ | - | 2.5 | 3.0 | V |
| Operating Current | $I_{op}$ | - | 18  | 23  | A |

## Outline Drawing and Electrical Connections



Necsel follows a policy of continuous product improvement and may change product descriptions and specifications at any time without notice. Necsel offers a limited product warranty to ensure customer satisfaction. Standard terms and conditions can be found on the web at <http://necsel.com/terms-conditions>. This product is solely intended to be integrated into a laser product certified by the Customer. The Customer acknowledges that their product(s) that incorporate Necsel laser products must comply with the applicable regulations before it can be sold.



**Datasheet: Necsel™ Green SHG FC Laser**

These specifications are for the Necsel green SHG fiber-coupled package. The centroid of the wavelength spectrum will be within the indicated wavelength range.



| Model #           | Symbol    | Min. (nm) | Typical (nm) | Max. (nm) |
|-------------------|-----------|-----------|--------------|-----------|
| Necsel-SHG-FC-52x | $\lambda$ | 521       | -            | 529       |

**Operating Wavelengths**

| Laser Parameter  | Symbol           | Min. | Typical | Max. | Unit |
|--|------------------|------|---------|------|------|
| Operating Power (CW)                                     | $P_{op}$         | 2.5  | -       | -    | W    |
| Module Operating Temperature [non-condensing atmosphere] | $T_{Thermistor}$ | -    | 30      | -    | °C   |
| Center Wavelength [at 25°C and $P_{op}$ ]                | $\lambda$        | 521  | -       | 529  | nm   |
| Spectral width @ FWHM                                    | $\Delta\lambda$  | -    | 0.2     | -    | nm   |
| Laser Power Conversion Efficiency                        | PCE              | -    | 5.5     | -    | %    |

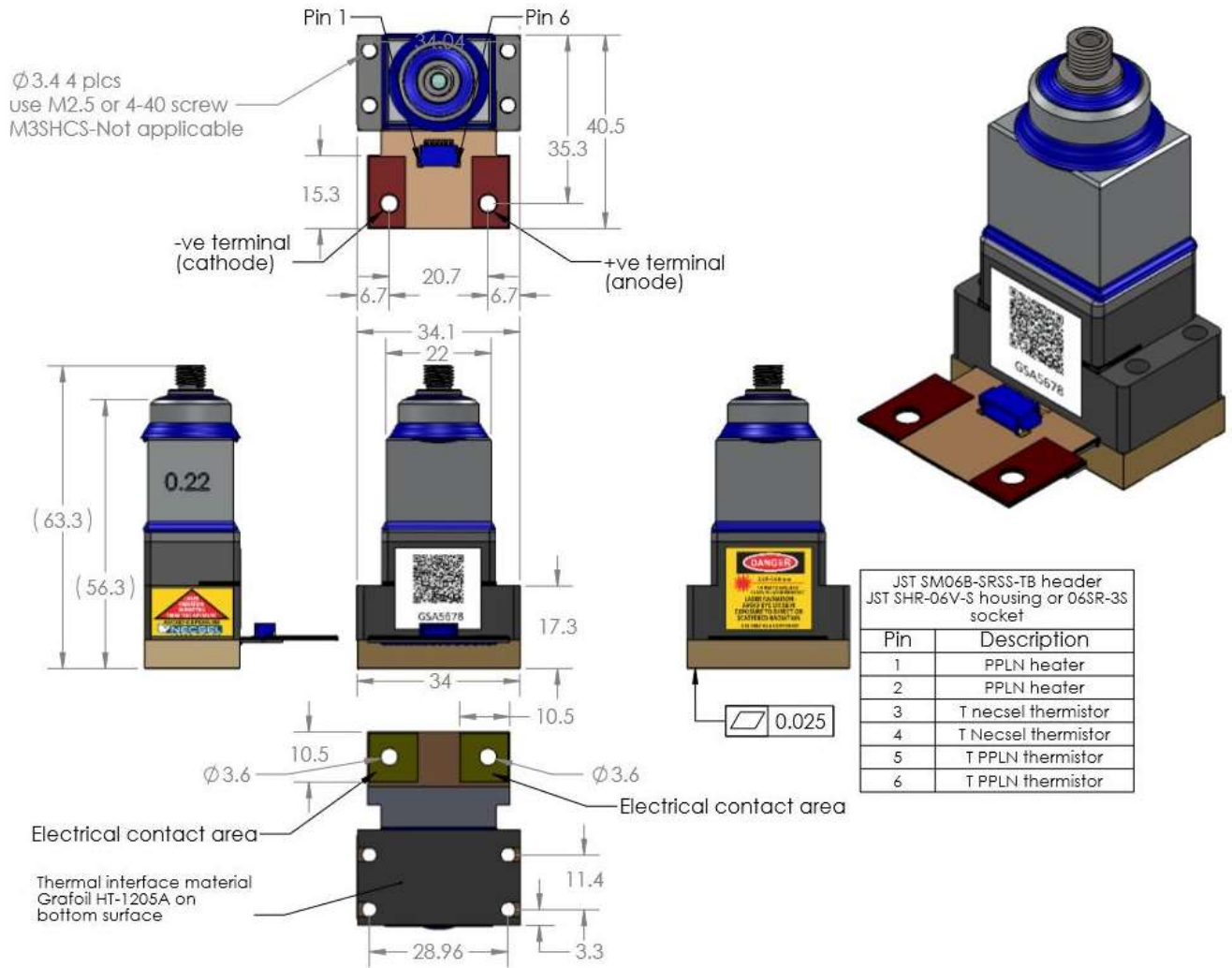
**Power Supply Requirements**

|                   |          |   |     |     |   |
|-------------------|----------|---|-----|-----|---|
| Operating Voltage | $V_{op}$ | - | 2.5 | 3.0 | V |
| Operating Current | $I_{op}$ | - | 18  | 23  | A |

**Fiber Specifications**

|  |  |         |  |    |
|--|--|---------|--|----|
| Fiber Core Diameter<br>(Centration $\leq 10 \mu\text{m}$ )               |  | 0.400   |  | mm |
| Connector Type<br>(Nose length 0.3850 - 0.3863 in.,<br>9.779 – 9.812 mm) |  | SMA-905 |  |    |
| Numerical Aperture   |  | 0.22    |  |    |

## Outline Drawing and Electrical Connections



Necsel follows a policy of continuous product improvement and may change product descriptions and specifications at any time without notice. Necsel offers a limited product warranty to ensure customer satisfaction. Standard terms and conditions can be found on the web at <http://necsel.com/terms-conditions>. This product is solely intended to be integrated into a laser product certified by the Customer. The Customer acknowledges that their product(s) that incorporate Necsel laser products must comply with the applicable regulations before it can be sold.

