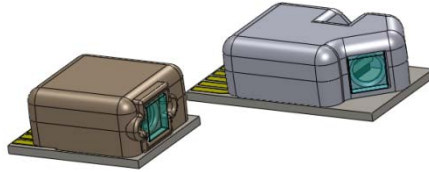


## Spectralus<sup>®</sup> Atto Green Laser Source<sup>(a)</sup> Models Atto-40-1600-30, Atto-K-40-1600-30<sup>(b)</sup>



### SPECIFICATIONS<sup>(c)</sup>

Rev 1.3

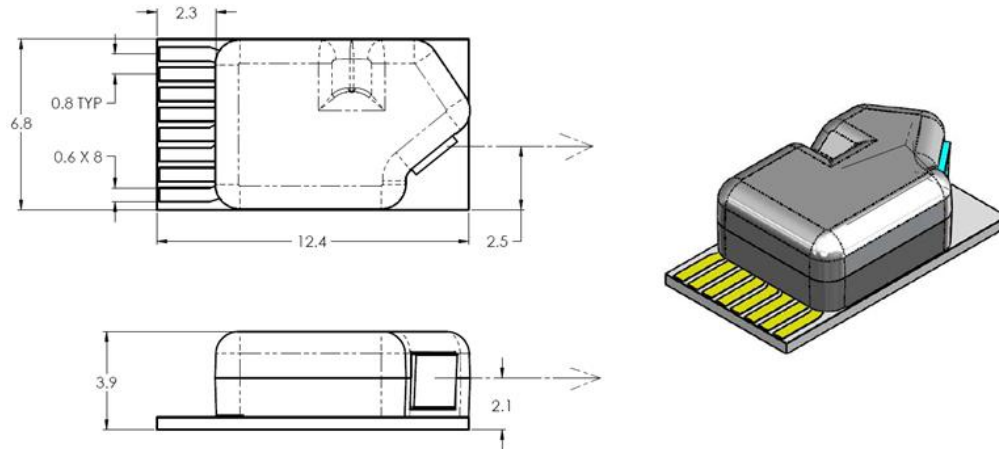
| Parameter                                 | Symbol                                       | Unit           | Min   | Typical   | Max |
|---|--|----------------|---|---|-----|
| <b>1.0 Optical Performance</b>            |  |                |   |   |     |
| a   | Average Optical Output Power                 | P <sub>o</sub> | mW  | 40  |     |
| c   | Green Center Wavelength, Operating           | λ <sub>c</sub> | nm  | 532   |     |
| e   | Beam Quality                                 | M2             |   | 1.2   |     |
| f   | Beam Waist Diameter                          |                | micron  | 40  |     |
| g   | Beam Divergence                              |                | mrad  | 10  | 20  |
| h   | Power Stability (RMS)                        |                | %   | +/-8% over 2 hr over temp. range,<br>+/-3% over 2 hr at fixed temp. |     |
| i   | Polarization                                 |                |   | Linear <sup>(d)</sup> , >100:1                                      |     |
| j   | IR Residual Power in Beam                    |                | mW  |   | 2   |
| <b>2.0 Electrical-Optical Performance</b> |  |                |   |   |     |
| a   | Laser Operating Current (peak)               | I <sub>o</sub> | A   | 0.7   |     |
| b   | Laser Operating Voltage                      | V <sub>o</sub> | V   | 1.8   |     |
| d   | Nominal Operating Mode                       |                | 1600Hz, 30% duty cycle or per model number <sup>(b)</sup> |   |     |
| h   | Peak Wall-plug Efficiency BOL <sup>(e)</sup> | PCE            | %   | 12  |     |
| <b>3.0 Thermal Performance</b>            |  |                |   |   |     |
| a   | Case Operating Temperature                   |                | °C  | 10  | 50  |
| b   | Optimum Case Operating Temperature           |                | °C  | 35  |     |
| <b>4.0 Mechanical</b>                     |  |                |   |   |     |
| a   | Length                                       | L              | mm  | 8.7 for Atto-K, 12.4 for Atto <sup>(g)</sup>                        |     |
| b   | Width  | W              | mm  | 6.8   |     |
| c   | Height                                       | H              | mm  | 3.9   |     |
| d   | Volume                                       | V              | cm <sup>3</sup>   | 0.23 for Atto-K, 0.33 for Atto <sup>(g)</sup>                       |     |

- Protected under U.S. Patents 7,742,510 and 7,413,635. Other U.S. and international patents pending.
- The models Atto-p-f-dc and Atto-K-p-f-dc are pre-set at the factory and are coded by the package type (Atto or Atto-K), power (p in mW), repetition frequency (f in Hz) and duty cycle (dc in %).  
Standard models include: **Atto-40-1600-30, Atto-K-40-1600-30**  
Models with other frequencies and duty cycles may be supplied per customer request.
- All specifications are subject to change without notice.
- Polarization is linear and is parallel to the package base.
- BOL: beginning of life

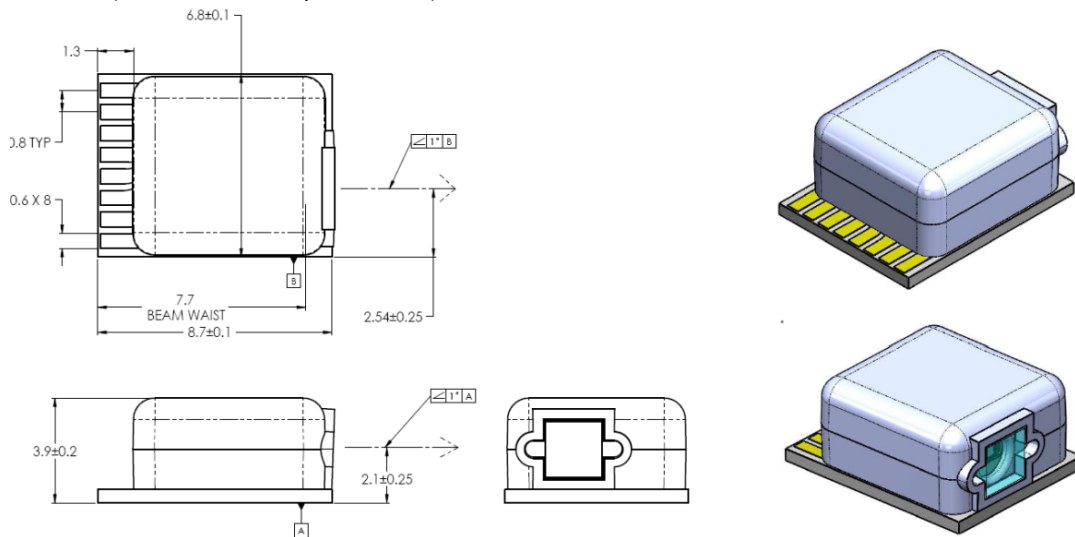
- f. Atto and Atto-K lasers can be supplied with a driver board powered by the wall outlet.
- g. See product drawings on the next page for the package versions with or without monitor photodiode.

## LASER HEAD DIMENSIONS (in mm):

Atto Laser (with monitor photodiode):



Atto-K Laser (without monitor photodiode):



# SPECTRALUS<sup>®</sup>

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