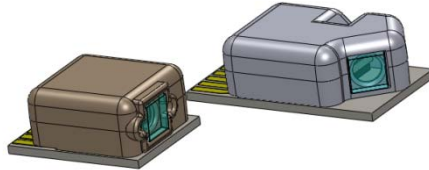


## Spectralus<sup>®</sup> Atto Green Laser Source<sup>(a)</sup> Models Atto-180-120-50, Atto-K-180-120-50<sup>(b)</sup>



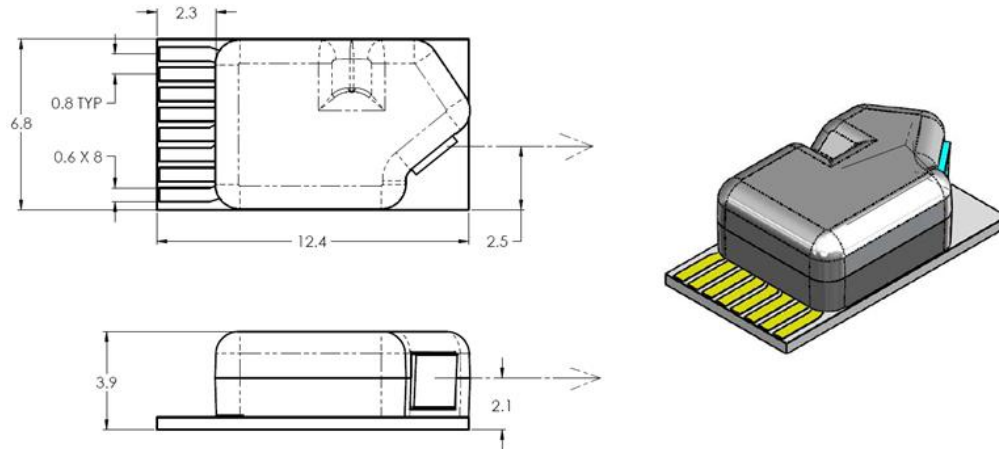
### SPECIFICATIONS<sup>(c)</sup>

Rev 1.1						
Parameter	Symbol	Unit	Min	Typical	Max	
<b>1.0 Optical Performance</b>						
a	Average Optical Output Power	P <sub>o</sub>	mW	180		
c	Green Center Wavelength, Operating	λ <sub>c</sub>	nm	532		
e	Beam Quality	M2		2.0		
f	Beam Waist Diameter	Hor	micron	45	66	87
		Vert		55	75	95
g	Beam Divergence	Hor	mrad	12	20	28
		Vert		19	25	31
h	Power Stability		%	+/-8% over 2 hr over temp. range, +/-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	1.7		
b	Laser Operating Voltage	V <sub>o</sub>	V	1.9		
d	Nominal Operating Mode		120Hz, 50% duty cycle or per model number <sup>(b)</sup>			
h	Peak Electr. to Opt. 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>		

- a. Protected under U.S. Patents 7,742,510 and 7,413,635. Other U.S. and international patents pending.
- b. 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-180-120-50, Atto-K-180-120-50**. Models with other frequencies and duty cycles may be supplied per customer request.
- c. All specifications are preliminary and are subject to change.
- d. Polarization is linear and is parallel to the package base.
- e. 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):

