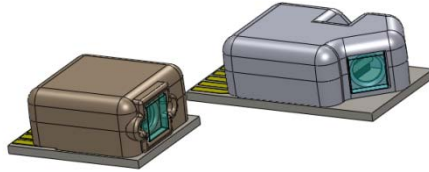


## Spectralus<sup>®</sup> Atto Green Laser Source<sup>(a)</sup> Models Atto-60-120-33, Atto-K-60-120-33<sup>(b)</sup>



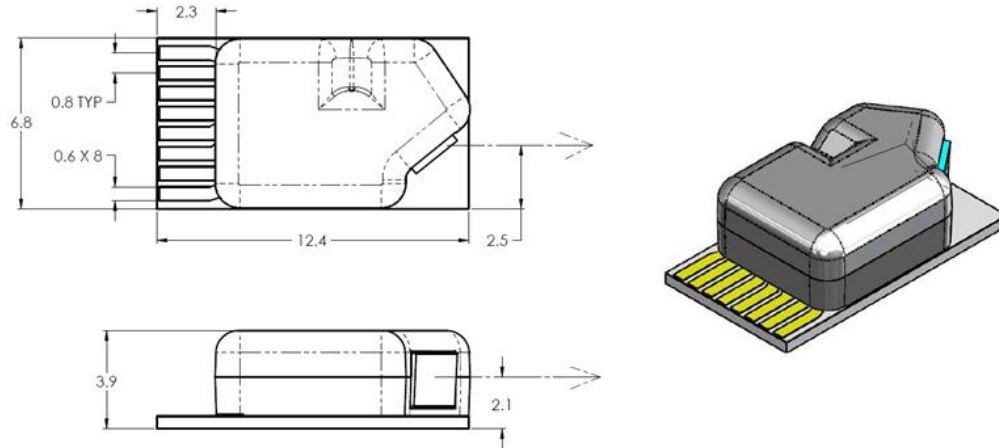
### SPECIFICATIONS

						Rev 1.3
	Parameter	Symbol	Unit	Min	Typical	Max
<b>1.0</b>	<b>Optical Performance</b>					
a	Average Optical Output Power	P <sub>o</sub>	mW		60	
c	Green Center Wavelength, Operating	λ <sub>c</sub>	nm		532	
e	Beam Quality	M2			2.0	
f	Beam Waist Diameter		micron		60	
g	Beam Divergence	Hor	mrad	9		19
		Vert	mrad	11		21
h	Power Stability (RMS)		%	+/-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</b>	<b>Electrical-Optical Performance</b>					
a	Laser Operating Current (peak)	I <sub>o</sub>	A		0.85	
b	Laser Operating Voltage	V <sub>o</sub>	V		1.8	
d	Nominal Operating Mode			120Hz, 33% duty cycle or per model number <sup>(b)</sup>		
h	Peak Wall-plug Efficiency BOL <sup>(e)</sup>	PCE	%		12	
<b>3.0</b>	<b>Thermal Performance</b>					
a	Case Operating Temperature		°C	10		50
b	Optimum Case Operating Temperature		°C		35	
<b>4.0</b>	<b>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-60-120-33, Atto-K-60-120-33**  
 Models with other frequencies and duty cycles may be supplied per customer request.
- c.
- 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):

