



Mode-Hop-Free Laser Module

Features

- Mode-hop-free and single mode
- High wavelength stability
- Very low noise
- Small size and low cost
- CDHR compliant built-in shutter, key switch and emission indicator.

Applications

- Interferometry
- Holography
- Metrology
- Spectroscopy
- Laser gauging

ATMF102 laser module generates low noise, long coherent length, mode-hop-free, and good quality bare, collimated and circularized laser beams.

ATMF102 is composed of 3 detachable components: laser body, collimation lens and circularizer. When needing a bare laser beam, use only the laser body; when needing collimated beam, use the laser body and the collimation lens; when needing collimated and circularized beam, use all the 3 components: the laser body, the collimation lens and the circularizer. These 3 configurations are shown in Figure 1, 2 and 3 respectively.

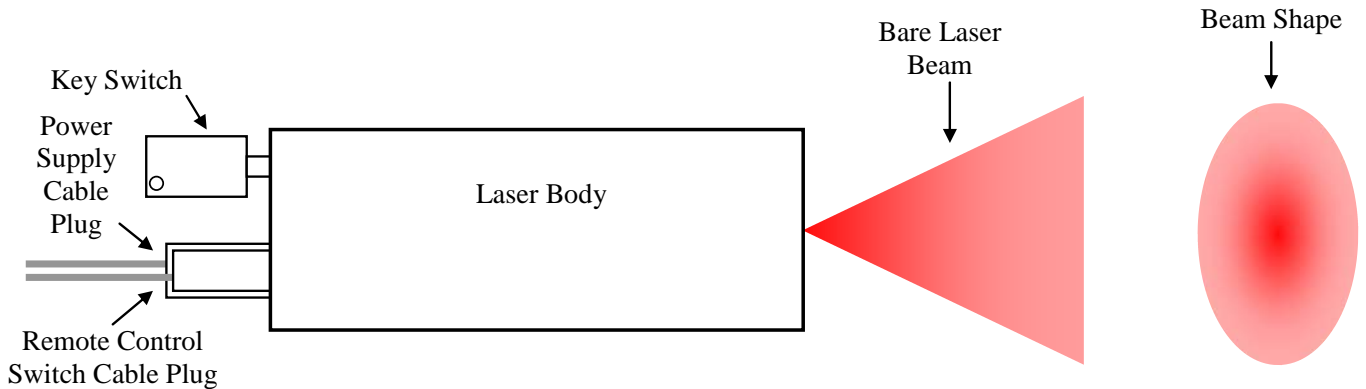


Figure 1 Generating a Bare Laser Beam

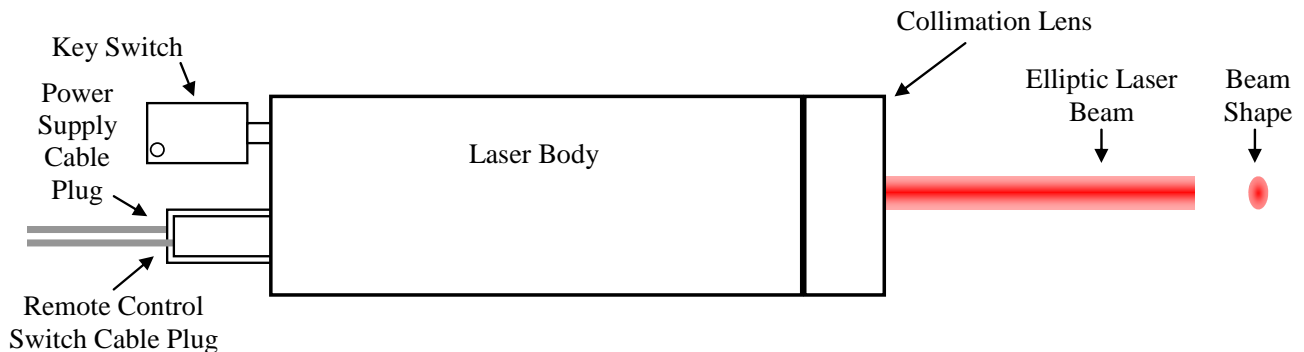


Figure 2 Generating an Elliptic Laser Beam

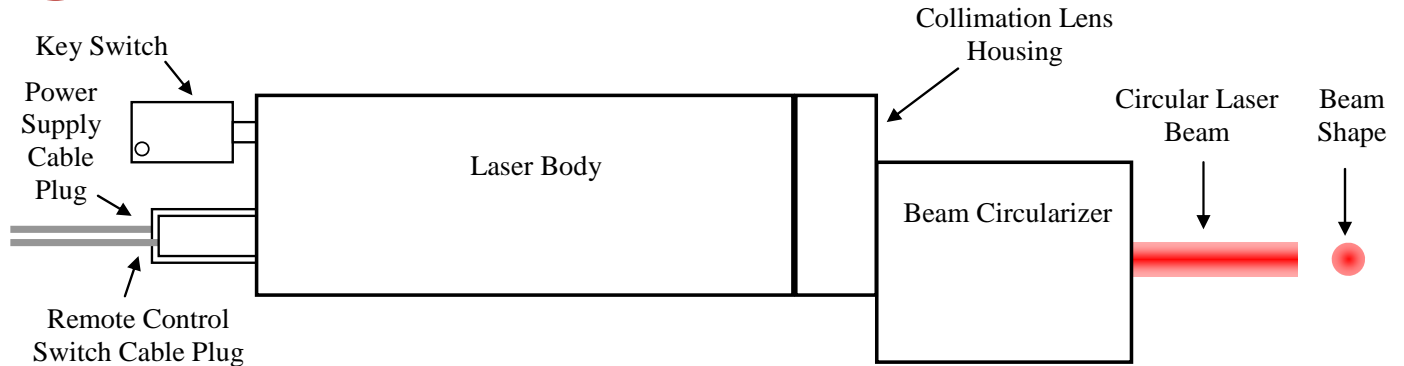


Figure 3 Generating a Circular Laser Beam

Specifications

Parameters Name	Values	Note
Wavelength selection range*:	638nm to 665nm and 405nm	
Absolute wavelength accuracy:	<±0.1nm	
Output power:	1mW to 50mW	
Output power stability:	0.1% within 24 hours	
Output noise (10Hz to 2MHz):	0.01% RMS	
Spectrum line-width:	<20MHz	
Coherent length	>10m	
Beam divergence:	<1mrad	Both elliptic and circular beams
Elliptic Beam size:	2mm × 4mm	Collimated elliptic beam
Circular Beam size:	φ4mm	Collimated circular beam
Polarization:	> 100:1	
DC power supply voltage required:	5V ± 5%	
DC power supply current drawn:	0.1A to 1A	
AC input voltage:	80V – 240V, 47Hz to 63Hz	
AC input power:	7W max	
Environmental operating temperature:	0°C to 40°C	
Environmental relative humidity:	<80%	
Case operating temperature:	0°C to 65°C	
Overall dimensions:	See the drawings in Figure 4 to 6	

*Wavelength depends on the laser diode used. The laser diode, the output wavelength and output power can be specified when ordering.

Contact us for more information: gang.liu@analogtechnologies.com



Mechanical Dimensions

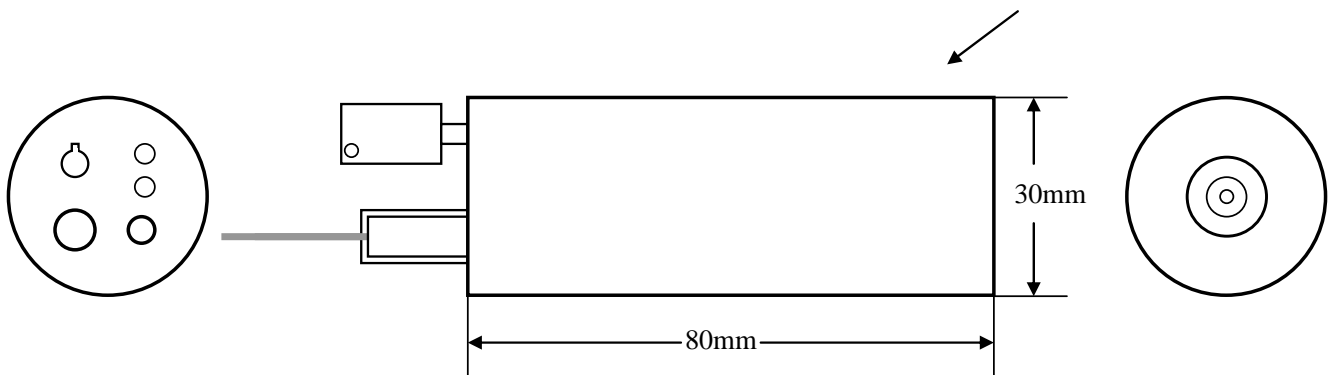


Figure 4 Laser Body

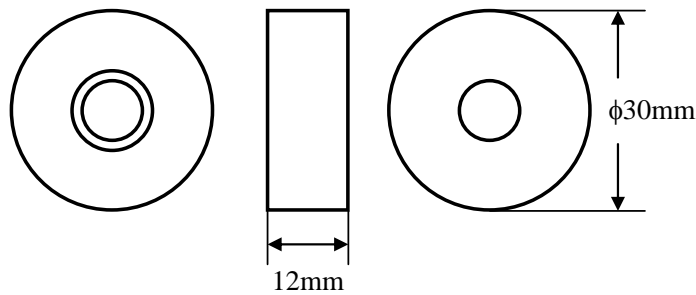


Figure 5 Collimation Lens

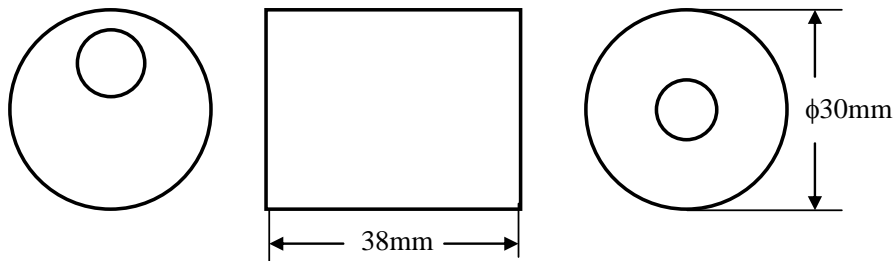


Figure 6 Beam Circularizer