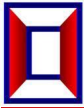


## GM82020 PC control

# Product Specification for Fast Tunable Laser

## Source Module





## Overview

The GM82020 fast tunable laser source module is mainly used for the measurement and application of high-precision wavelength division multiplexing DWDM components, optical waveguide grating array AWG components, planar optical waveguide PLC components, optical amplifiers EDFA and other general fiber optics, and is especially suitable for the fast scanning test of fiber grating sensors. The GM82020 series of modules offer superior performance with a wavelength scanning speed of 30 nm/s (10pm step).

The GM82020 fast tunable laser module can be connected to a computer via a USB cable and communicates with the PC control software provided by UC Instruments to form a tunable laser source measurement system with high precision, high power, compact size, fast startup and low price. Our company can provide C-band and L-band GM82020 tunable laser light source modules for users to choose. At the same time, this series of modules can be specially customized and controlled through RS232 interface.

The BNC output trigger port is integrated into the customer's production system.



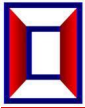
## Characteristic

High wavelength  
precision ; continuous  
wavelength tuning ;  
high power ; fast  
tuning speed ; PC  
software control

Small form factor for integration into  
customer product systems

## Application

Testing of filters and optical devices  
Measurement of WSS, PLC and AWG  
components and modules Measurement  
of fiber grating sensors Laser scanning  
spectral analysis Passive optical devices  
Optical path adjustment monitoring



## Performance indicators

Product model	<i>GM82020C</i>	
Wavelength adjustable range	<i>41 nm</i>	
Minimum wavelength value	<i><math>\leq 1527 \text{ nm}</math></i>	
Maximum wavelength value	<i><math>\geq 1568 \text{ nm}</math></i>	
Output Power	<i><math>\geq 10 \text{ dBm}</math></i>	
Wavelength resolution		<i>1.0 pm</i>
Absolute wavelength accuracy	<i><math>\pm 10 \text{ pm}</math>, typ. <math>&lt; 5 \text{ pm}</math></i>	
Relative wavelength accuracy	<i><math>\pm 5 \text{ pm}</math>, typ <math>\pm 2 \text{ pm}</math></i>	
Wavelength repeatability	<i><math>\pm 2 \text{ pm}</math>, typ. <math>\pm 1 \text{ pm}</math></i>	
Wavelength stability	<i><math>\leq \pm 2 \text{ pm}</math></i>	
Tuning speed	<i>Typical value: <math>\leq 0.2 \text{ ms}</math></i>	
Scanning speed	<i><math>\leq 30 \text{ nm/sec}</math> (10pm step)</i>	
Power stability	<i><math>\pm 0.05 \text{ dB}</math> (1 hour). Typical value: <math>\pm 0.1 \text{ dB}</math> (24 hours)</i>	
Power repeatability	<i><math>\pm 0.05 \text{ dB}</math></i>	
Power linearity	<i><math>\pm 0.3 \text{ dB}</math></i>	
Power wavelength flatness	<i>0.3 dB typical, 0.5 dB maximum</i>	
Side mode suppression ratio	<i><math>\geq 45 \text{ dB}</math></i>	



Relative noise intensity	$< -135\text{ dB}$
Optical output interface	<i>PM, FC/PC connector</i>
Communication interface	<i>RS232</i>
Trigger output port	<i>BNC trigger</i>
Power supply power	<i>12 V; 1A</i>
Starting current	$\leq 1\text{ A}$
Operating current	$\leq 120\text{ mA}$
Operating current at room temperature	$\leq 100\text{ mA}$
Cold start time	$\leq 10\text{ seconds}$
Hot start time	$\leq 3\text{ seconds}$
Overall dimensions	<i>40 mm X 150 mm X 170 mm</i>

## Technical support and services

We provide our customers with high performance, high quality and low price measuring instruments and test systems. Our powerful technical resources can help you select and use the right products to meet your application needs. Every instrument we sell is backed by a worldwide warranty that provides a minimum of 12 months of factory warranty.

## Our commitment

All of our measuring instruments and test systems meet the functional and performance specifications described in our literature. Once you choose our products, we will provide you with qualified products and product operation methods. For use with special functions, we will provide basic measurement assistance.