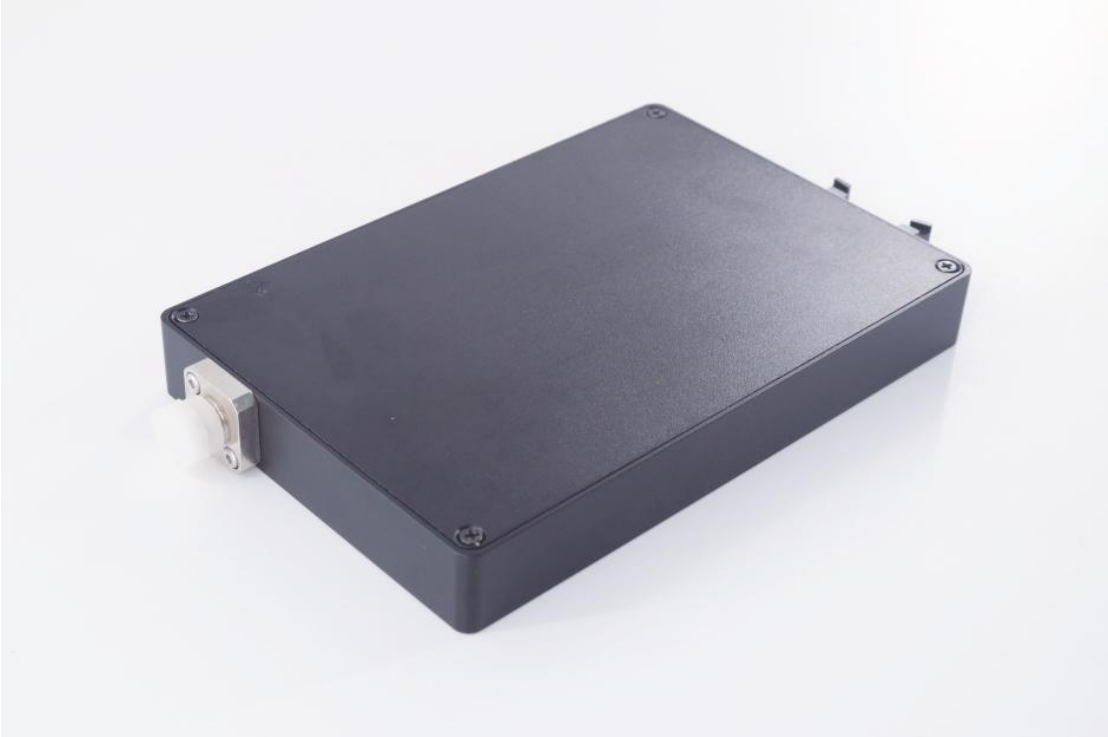
Swept tunable laser module



Product Description

The scanning semiconductor laser module of Idealphotonics, Ltd. is an adjustable laser module based on independent intellectual property rights. It has the characteristics of precise wavelength, stable power and fast scanning speed. It is widely used in fiber grating demodulation systems and optical passive device test systems.

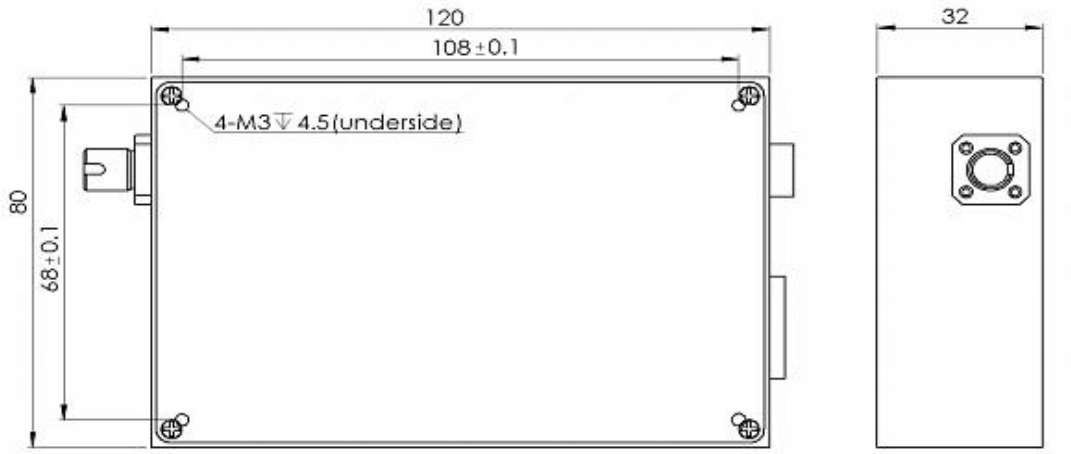
Part Number

GC-76000C

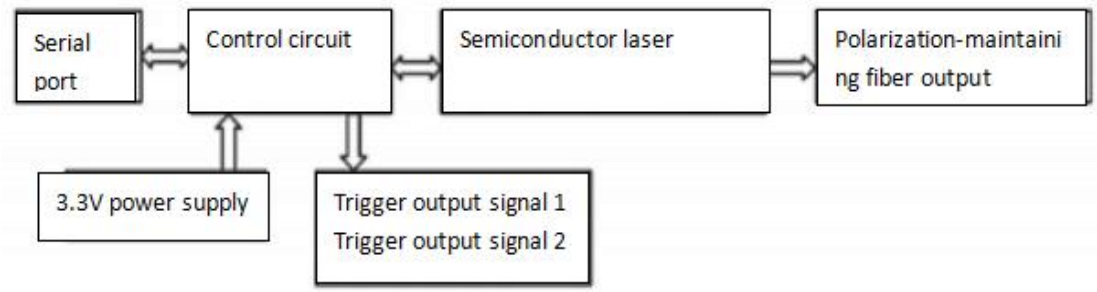
Product features

Adjustable wavelength range 1528-1563 nm、 High output power、 Low power consumption、 Wide operating temperature range、 Fast scanning speed、 Simple communication interface、 High wavelength stability

● Dimensional Drawing



Internal structure of the module



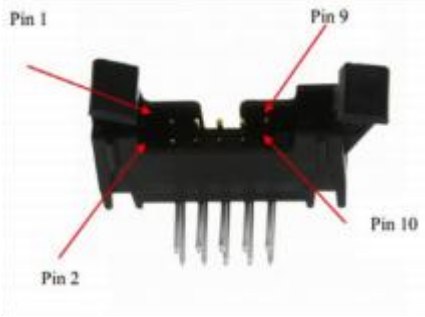
Parameter

PN#	GC-76000C	GC-76001C
Wavelength range	1528.8 -1563.8 nm	1528 - 1568 nm
Output power	20 mW	
Minimum resolution	0.1 GHz or 1 pm	
Absolute wavelength accuracy	+/-10 pm Typ < 5 pm	
Relative wavelength accuracy	+/-5 pm Typ +/- 2 pm	
Wavelength repeatability	+/-2 pm Typ +/-1 pm	
Wavelength stability(-5 to +65 ℃)	< +/- 2 pm	
Scan speed	1.2 Second for 4000 Points (C-Band)	
Default scan step	1 GHz or 0.5 GHz	
Power stability	+/- 0.05 dB	
Power vs wavelength flatness	< 0.5 dB	

Side mode suppression ratio	> 40 dB
Relative intensity noise	< -135 dB/Hz
Power supply	+3.3 V/3 A
linewidth	< 5 MHz, Typ 1 MHz
Trigger signal output level	TTL
Communication interface	RS232
Communication protocol	OIF-ITLA-MSA-1.2
Dimension	120mm x 80mm x 32mm
Optical interface	FC/UPC or customer defined
Temperature range	0-60 ℃

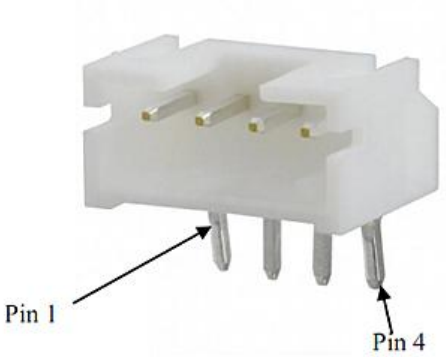
Spectral analysis test chart

Electrical characteristics:
Signal socket link (3M 155210-5303-RB)



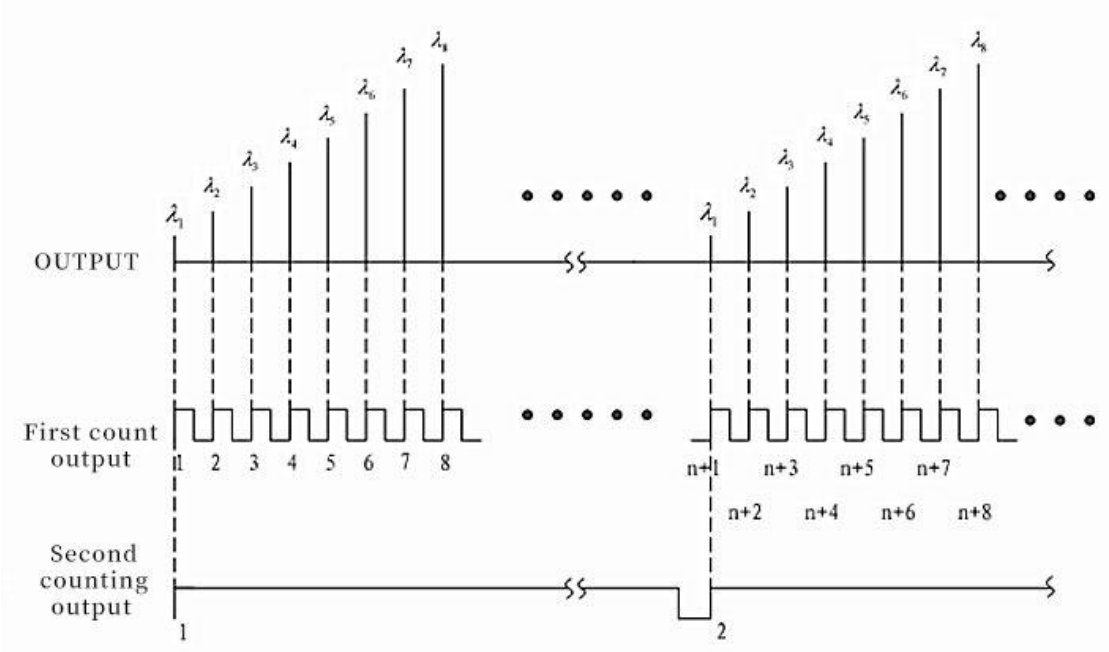
Pin 1	trigger output 1
Pin 2	GND
Pin 3	trigger output 2
Pin 4	GND
Pin 5	GND
Pin 6	TXD
Pin 7	RXD
Pin 8	GND
Pin 9	Reset
Pin 10	NC

Power socket link (S4B-PH-K-S) (SN)



Pin 1	GND
Pin 2	GND
Pin 3	+3.3V
Pin 4	+3.3V

Signal timing diagram



As shown in the figure, when the laser outputs at each wavelength, there is a synchronous rising edge output in the trigger output signal 1, and at the beginning of

the first wavelength of each cycle, there is a synchronous rising edge output in the trigger output signal 2. In this way, the receiving end starts the counter at the rising edge of the trigger output signal 2, and counts the number of trigger output signals 1. The wavelength information can be easily obtained based on the starting wavelength and step information, which is convenient and accurate.