

1550nm Narrow linewidth frequency stabilization laser module

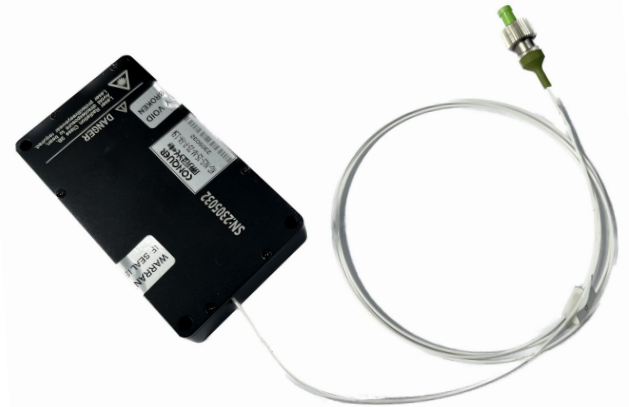
Micro source photon series narrow line width semiconductor laser module, with ultra-narrow line width, ultra-low RIN noise, excellent frequency stability and reliability, is widely used in optical fiber sensing and detection systems (DTS, DVS, DAS, etc.)

Performance characteristics:

Line width: 2KHz-10KHz (customizable)

Optical power: 10mW-30mW (limited by line width, can be customized)

VRIN noise: -150dB/ Hz@100KHz



Parameter:

Parameter	Min	Typ	Max	Unit	Remarks
Wave length	1530	1550	1570	nm	customizable
Output optical power		10	30	mW	customizable
Relative intensity noise		-150		dB/Hz	@100kHz
Edge mode rejection ratio	60	60		dB	
Polarization extinction ratio	20			dB	
Power stability		$\pm 2\%$ $\pm 0.5\%$			$-20^{\circ} \text{C} \sim +70^{\circ} \text{C}$ 12h @ $25 \pm 2^{\circ} \text{C}$
Wavelength stability		± 15		pm	$-20^{\circ} \text{C} \sim +70^{\circ} \text{C}$
Short-time drift of light frequency		0.1	1	MHz/s	
Light frequency shifts over long periods of time		± 38		MHz	12h @ $25 \pm 2^{\circ} \text{C}$
Working current		400	2000	mA	
Operating	4.75	5	5.25	v	

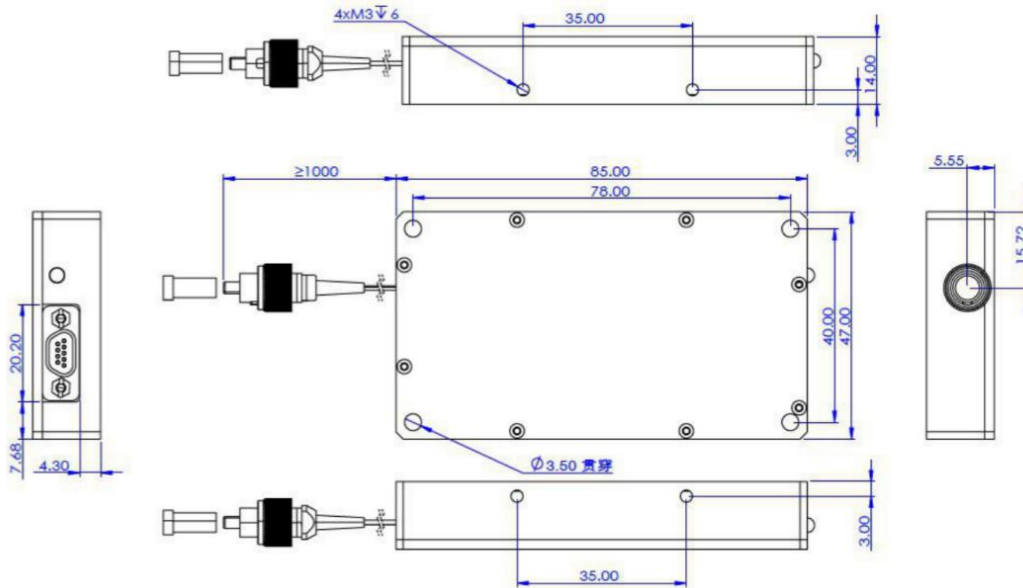


voltage					
Operating temperature	-20		70	° C	customizable
Storage temperature	-40		85	° C	
Storage humidity	5		95	%RH	
Optical Fiber/Connector	Polarization-maintaining (PM) fiber, FC-APC, minimum bending radius 35mm, maximum fiber tension 5N				
Module size	Length, width and height 85*47*14mm				
Module quality	145g(Cable not included)				
ESD grade	500V				
Authentication/instruction	CE、ROHS、WEEE				
Line width and noise parameters					
Line width & Noise	Level 1	Level 2	Level 3	Unit	
Integral line width 1	10	5	3	kHz	
Instantaneous line width 2	1.17	0.78	0.32	kHz	
Optical noise @10Hz	7E+06	1E+06	7E+05	Hzrms^2/Hz	
Optical noise @200Hz	7E+04	2E+04	6E+03	Hzrms^2/Hz	

Note 1: The integral linewidth is measured by self-heterodyne non-equilibrium interferometry;

Note 2: The instantaneous line width is Lorentz line width.

Structure size: Unit (mm)



Port definition:

Sequential	Name	Features/Specifications
1	Vcc	Input power 5V/3A, low noise (recommended ripple <5mV)
2	Tx (output)	Data output, 3.3V TTL (default)
3	Rx (input)	Data entry, 3.3V TTL (default)
4	Gnd	electrically
5	Gnd	electrically
6	Vcc	Input power 5V/3A, low noise (recommended ripple <5mV)
7	Mod+ (input)	Modulating signal input, no reverse connection (custom function)
8	Mod- (input)	Modulated signal reference, no reverse connection (custom function)
9	Enable (input)	Module restart interface, default low level, high level restart