




## RLAS-785

### Key Features:

Narrow Laser Linewidth  
 High Power Stability  
 Low Power Consumption  
 High Reliability

### Applications:

Raman Spectrograph  
 Sensing  
 Bio-medical

Model Number		RLAS-785			
Optical Parameters		Specs			Conditions
		Min	Typ	Max	
Wavelength		784nm	785nm	786nm	
Line-width		-	0.08nm	0.1nm	FWHM
Central Wavelength Stability	2hours	-	-	15pm	RMS
	Over-life	-	-	30pm	RMS
Central Wavelength Shift	Over Operating Temp Range	-	-	15pm/°C	RMS
Output Power		-	-	450mW	Free space
Output Power		-	-	350mW	Multimode fiber coupled
Power Stability	2hours @ Constant Temp	-	-	±2%	ACC, peak to peak
	Over Operating Temp Range	-	-	±5%	ACC, peak to peak
Polarization Ratio(linear, horizontal)		100:1	-	-	Free space
Operating Temperature (Case)		-20°C	-	70°C	ACC
Noise		-	-	0.2%	RMS
Beam Diameter		-	1mm*1mm	-	At output window, free space
Beam Divergence(Fast Axis)		-	36mrad	-	Far field full angle, 1/e <sup>2</sup>
Beam Divergence(Low Axis)		-	6mrad	-	Far field full angle, 1/e <sup>2</sup>
SMSR		30dB	-	-	
Warm up Time		-	-	1 minute	module
Optical Fiber		105/125um Multimode Fiber,0.2~0.22NA			Fiber coupled
Connector		FC/PC or to be Customized			Fiber coupled
Electrical Parameters					
LD Working Current		-	1550mA	1800mA	From -20°C~70 °C
LD Working Voltage		-	2.6	2.8	
Internal TEC	Voltage	-	-	4.8V	Room temperature
	Current	-	-	2.5A	Room temperature
Internal Temperature Sensor		-	10KΩ@25°C	-	
Module	Input Voltage	4.8VDC	5VDC	5.2VDC	
	Input Current	4A	-	-	
	Input Voltage Ripple	-	-	1%	
	DC Plug	-	φ5.5/φ2.1	-	

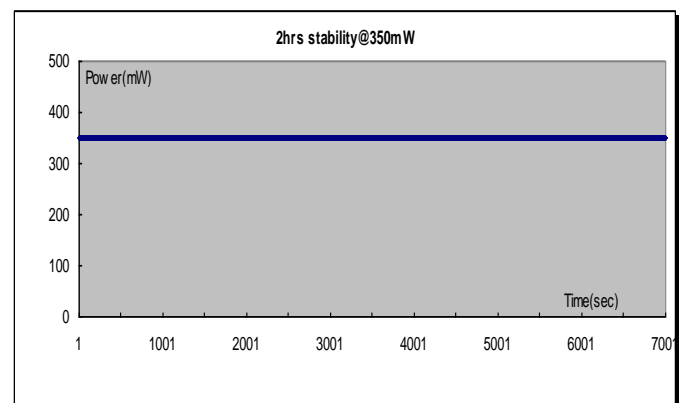
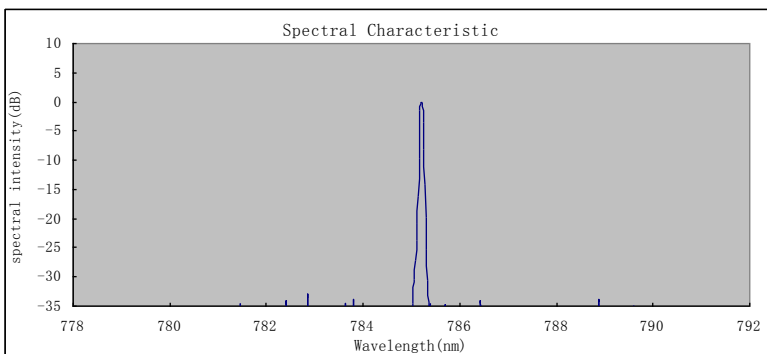
### Mechanical Parameters

Laser Head Dimensions	Length	29.8mm	30mm	30.2mm	
	Width	12.5mm	12.7mm	12.9mm	
	Height	9.3mm	9.37mm	9.5mm	
Module Dimensions	Length	89.8mm	90mm	90.2mm	
	Width	59.8mm	60mm	60.2mm	
	Height	26.8mm	27mm	27.2mm	
Beam Alignment Tolerance	Angle	-	7mrad	17.5mrad	Free Space
Laser Weight		-	16.5g	-	Free Space
Module Weight		-	510g	-	Laser Head + Module

### Reliability

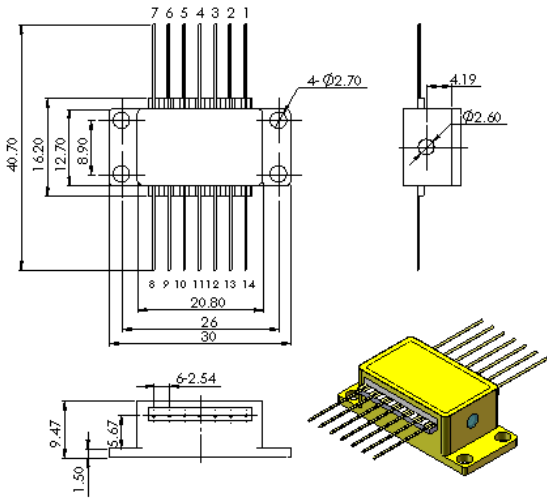
Operating Humidity			5%~85% R.H.		
Storage Temperature		-40°C	-	+85°C	
Shock		-	500g, 1ms, 6 shocks	-	3 axes, 2 shocks/axis
Vibration		-	20~2KHz, 0.02g <sup>2</sup> /Hz	-	3 axes, 1hr/axis
Expected Lifetime (MTTF)		10000hrs	-	-	Room temperature

## Typical Output Performance

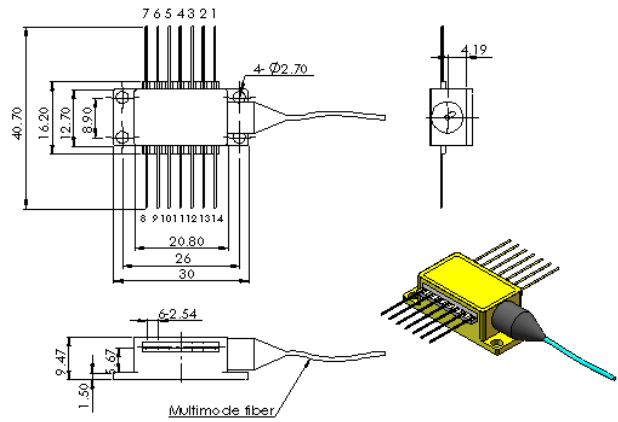


## Dimensions (Unit: mm)

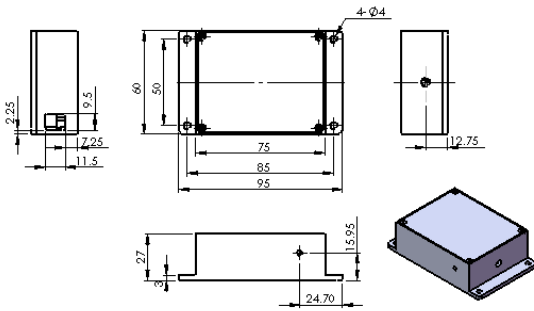
### Free Space



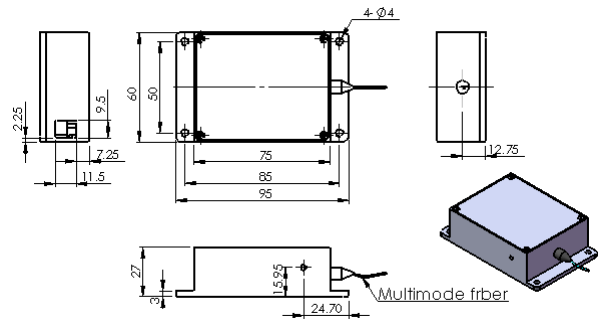
### Fiber Coupled (MM)



### Module with Free Space



### Module with Fiber Coupled (MM)



## Pin Configuration:

1	TEC+	8	LD+
2	PD-	9	LD-
3	Idle	10	Idle
4	Idle	11	Idle
5	Idle	12	Idle
6	RH	13	PD+
7	RH	14	TEC-