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Quasi-wavelength Laser Module



Reallight Technology's quasi-wavelength semiconductor laser modules are available in various wavelengths. Standard I/O interfaces enable easy integration into user's machine system with stable power output. This product series uses fiber coupled output and has built-in PD and TE cooling modules. Reallight Technology provides customized products according to users' requirements.

Key Features

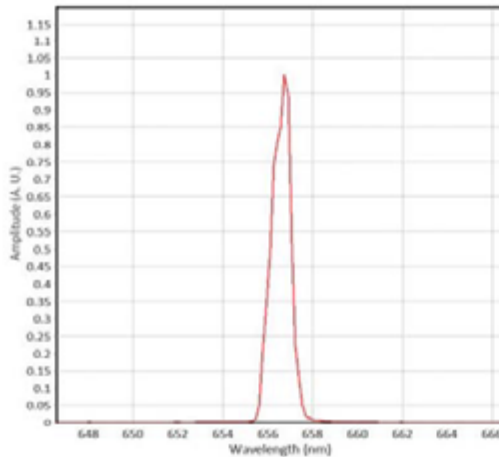
- Excellent power stability $\pm 1\%$ @8H
- Built-in TEC, power consumption<3W
- Both singlemode and multimode fiber output available
- Compact structure
- Multiple interfaces reserved

Standard Wavelengths

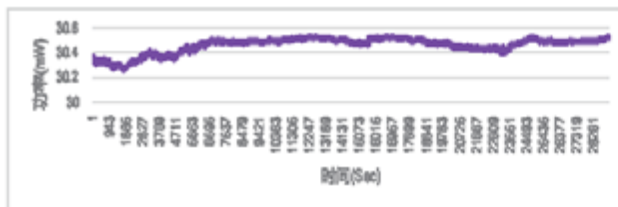
- 405nm • 450nm • 520nm
- 638nm • 658nm

Applications

- Fluorescence Spectrometer
- Particle Measurement
- Flow Cytometry
- Confocal Microscope
- Raman Spectrometer



658nm Laser Spectrum

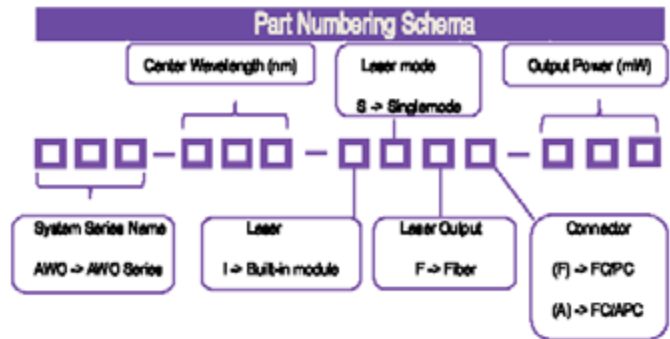


658nm Power Stability@8H

Optical Parameters					
Center Wavelength (nm)	405	450	520	638	658
Power (mW)	30	20	20	30	30
Wavelength Tolerance (nm)	± 3	± 10	± 5	± 3	± 5
Linewidth (nm)	0.5	1	1	0.3	0.3
Wavelength Stability	± 0.005 nm @8H				
Power Stability	$\pm 1.0\%$ @8H				
System Parameters					
Adjustability % full Power	0~100%				
Warm up Time	15 min				
Interface	10-PIN 2.54mm Interface				
Fiber Interface	FC/PC , FC/APC				
Supply Voltage	4.9V ~ 5.1V				
Power Consumption	<3 W				
Storage Humidity	0~80% RH				
Storage Temperature	0 ~ 55 °C				
Operating Humidity	10~45 °C (Need to install radiator)				
Weight	<130 g				
Dimensions	76.2×63.5×18 mm				

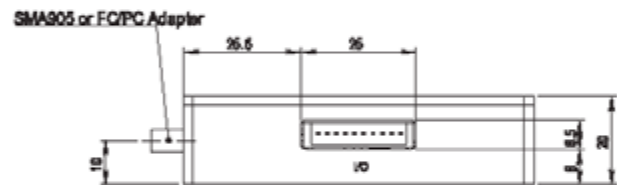
Ordering Information

AWO Series Model List			
Wavelength (nm)	Power (mW)	Part Number	Connector
405	30	AWO-405-ISF(A)-030	FC/APC
	30	AWO-405-ISF(F)-030	FC/PC
450	20	AWO-450-ISF(A)-020	FC/APC
	20	AWO-450-ISF(F)-020	FC/PC
520	20	AWO-520-ISF(A)-020	FC/APC
	20	AWO-520-ISF(F)-020	FC/PC
638	30	AWO-638-ISF(A)-030	FC/APC
	30	AWO-638-ISF(F)-030	FC/PC
658	30	AWO-658-ISF(A)-030	FC/APC
	30	AWO-658-ISF(F)-030	FC/PC

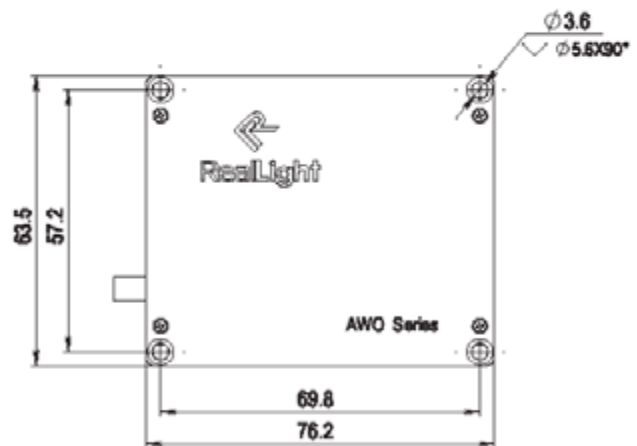


16-PIN I/O		
PIN	Functions	Notes
1	NC	Not Connected, left open Note: Pin 1 is adjacent to the fiber connector
2	VSET ENABLE	When this pin is driven low, the inputs used for adjusting the laser from minimum to maximum
3	AGND	Signal Ground
4	RT Sense	The Voltage output from this pin is about 1.25V when the internal TEC finally controlled the laser temperature near 25 °C. If voltage output from this pin is less than 1V, the module may get into trouble with the heat dissipation, you have to turn off the laser by ground the interlock pin to protect the laser, for RT, 1.25 standard for 25 °C
5	GND	Input Power Ground
6	+5V	The Voltage Input for this pin is required from 4.9V-5.1V
7	Interlock	When this pin is driven high, the laser will turn on. If this pin is left open or driven low, the laser will turn off
8	LD SET	Signal Ground
9	AGND	This pin is enabled when VsetEnable is driven high, input 0~1.2V to control the output power from minimum to maximum power Note: Ensure the input analog voltage does not exceed 1.2V
10	Monitor	The Voltage output from this pin is linearly to output power (1mW/1mW) and is reference to Signal Ground. Note: this Voltage output is calibrated without the fiber connector connected

Mechanical Specifications



Front View



Top View

Unit: mm

