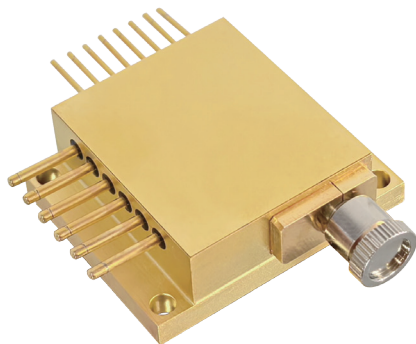




R3M High Power Diode Laser Components

R3M diode laser components are Reallight's AW series multi-function laser modules, providing multi-wavelength output with 3 emitters integrated. These fiber detachable lasers are equipped with fiber detector, photodiode and thermistor.

Key Features

- ◆ Superior power stability
- ◆ Excellent beam quality
- ◆ Efficient heat dissipation
- ◆ High reliability
- ◆ Different-wavelength combinations available

Applications

Spectroscopic Detection
Biomedicine
Material Analysis
Display&Lighting
Laser Manufacturing

Technical Specifications (25°C)

Package Type		R3M					
		3-wavelength			3-wavelength		
Center Wavelength (nm)		650	808	9XX / 1064	650	980	1470
Optical	CW Output Power / P_{op} (W)	0.5	10	15 / 10	0.5	15	4
	Wavelength Tolerance (nm)	± 10					
	Spectral Width / $\Delta\lambda$ (nm)	< 6					
	Temperature Drift of Wavelength / $\Delta\lambda/\Delta T$ (nm/°C)	0.3					
Electrical	Threshold Current / I_{th} (A)	0.5	1.8	1 / 1.2	0.5	1	1.4
	Operating Current / I_{op} (A)	1.2	14	18 / 13	1.2	18	14
	Operating Voltage / V_{op} (V)	2.3	2	1.8 / 1.8	2.3	1.8	1.5
	Slope Efficiency / η_{es} (W/A)	0.7	0.8	0.9 / 0.8	0.7	0.9	0.3
	PD Parameter / I_{pd} (μA)	< 8000					
	Thermistor / R_t ($k\Omega/\beta$ (25°C))	$10\pm 1\%/3930$					
Fiber	Fiber Core Diameter / d_{core} (μm)	200 / 400					
	Fiber Cladding Diameter / D_{clad} (μm)	220 / 440					
	Fiber Coating Diameter / D_{buffer} (μm)	400 / 720					
	Numerical Aperture / NA	0.22					
	Connector	SMA905					

1. All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

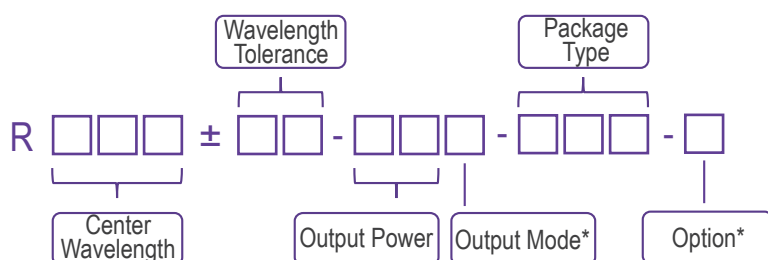
Other Parameters

Parameter	Operating Temperature /°C	Operating Relative Humidity /%	Storage Temperature /°C	Storage Relative Humidity /%	Lead Soldering Temperature (max/°C)
Min	10	-	-20	-	-
Max	30	75	70	90	250(10Sec.)

Order Information

Package	Wavelength (nm)	Output Power (W)	Part Number
R3M	650/808/9XX	0.5/10/15	R650/808/9XX±10-0.5/10/15WD-R3M-PFS
	650/808/1064	0.5/10/10	R650/808/1064±10-0.5/10/10WD-R3M-PFS
	650/980/1470	0.5/15/4	R650/980/1470±10-0.5/15/4WD-R3M-PFS

Part Numbering Schema

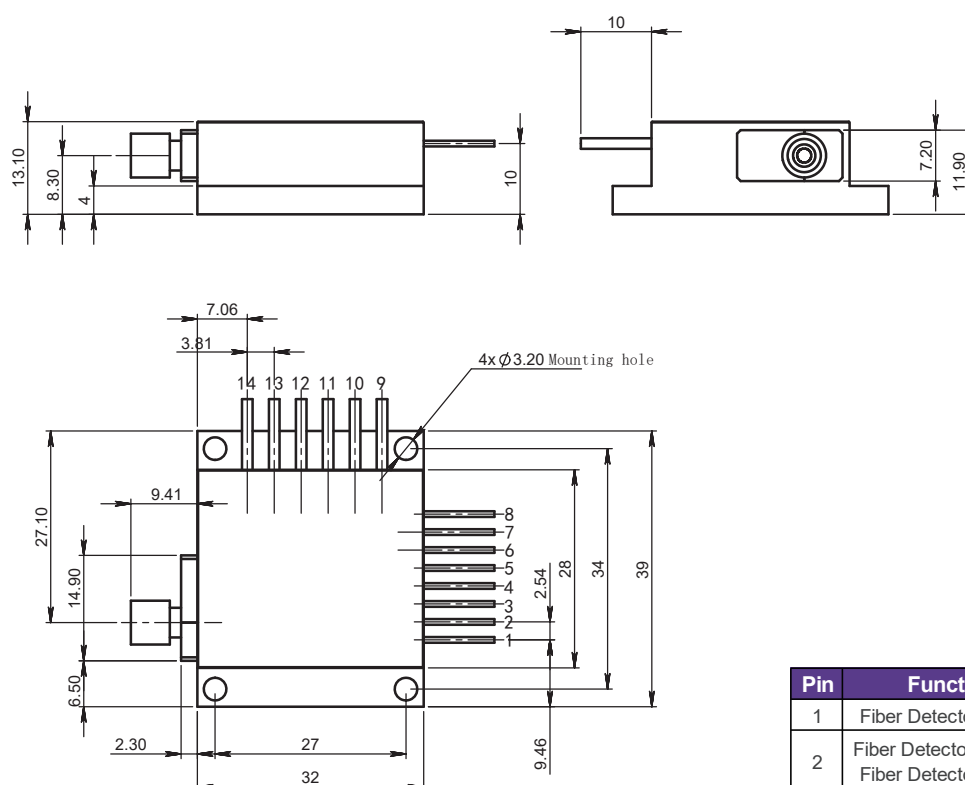


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



Pin	Function	Pin	Function
1	Fiber Detector PD (P)	8	-
2	Fiber Detector LED (+); Fiber Detector PD (N)	9	LD2(+)
3	Fiber Detector LED (-)	10	LD2(-)
4	PD(P)	11	LD1(+)
5	PD(N)	12	LD1(-)
6	RT	13	Red laser LD(+)
7	RT	14	Red laser LD(-)

