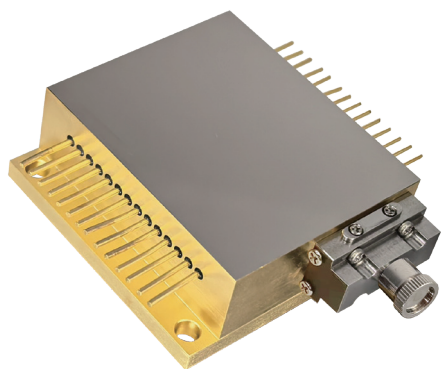




R7M High Power Diode Laser Components

R7M diode laser components are RealLight's AW series multi-function laser modules, providing multi-wavelength output with 3-4 different wavelength emitters integrated. These fiber detachable lasers are equipped with fiber detector, photodiode, thermistor and replaceable window.

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		R7M						
		3-wavelength			4-wavelength			
Center Wavelength (nm)		638	980	1470	638	808	980	1064
Optical	CW Output Power / P _{op} (W)	0.5	30	15	0.5	20	20	20
	Wavelength Tolerance (nm)	±10						
	Spectral Width / Δλ (nm)	<6						
	Temperature Drift of Wavelength / Δλ/ΔT (nm/°C)	0.3						
Electrical	Threshold Current / I _{th} (A)	0.5	1.2	1.4	0.5	2	1.2	1.2
	Operating Current / I _{op} (A)	1.2	18	15	1.2	15	14	15
	Operating Voltage / V _{op} (V)	2.3	3.6	5.8	2.3	4	3.8	3.8
	Slope Efficiency / η _{es} (W/A)	0.7	1.8	1.1	0.7	1.5	1.6	1.4
	PD Parameter / I _{pd} (μA)	<8000						
	Thermistor / Rt (kΩ/β (25°C))	10±1%/3930						
Fiber	Fiber Core Diameter / D _{core} (μm)	400						
	Fiber Cladding Diameter / D _{clad} (μm)	440						
	Fiber Coating Diameter / D _{buffer} (μm)	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.

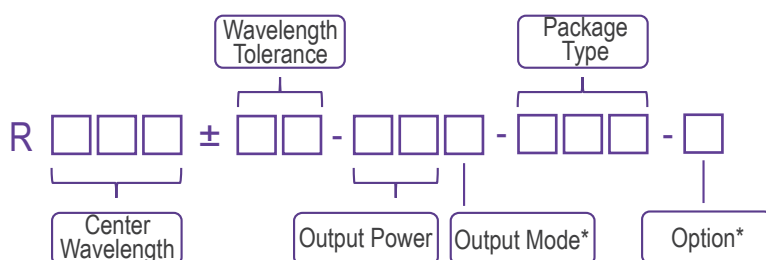
Other Parameters

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
R7M	638/980/1470	0.5/30/15	R638/980/1470±10-0.5/30/15WD-R7M-PFS
	638/808/980/1064	0.5/20/20/20	R638/808/980/1064±10-0.5/20/20/20WD-R7M-PFS

Part Numbering Schema

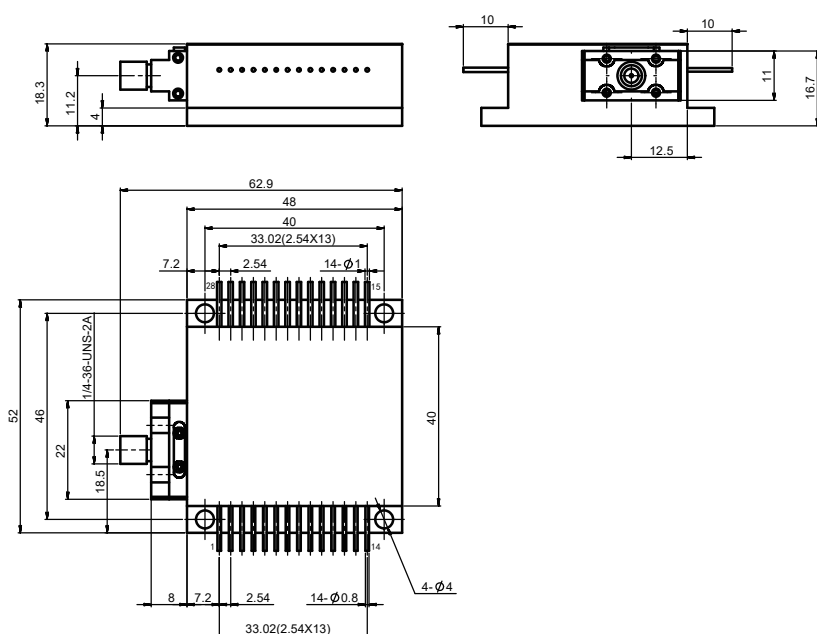


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



638/980/1470nm			
Pin	Function	Pin	Function
1	Fiber Detector PD (P)	15	LD1(+)
2	Fiber Detector LED (+); Fiber Detector PD (N)	16	LD1(+)
3	Fiber Detector LED (-)	17	-
4	-	18	-
5	-	19	-
6	-	20	LD1(-)
7	-	21	LD1(-)
8	-	22	LD2(+)
9	-	23	LD2(+)
10	-	24	-
11	PD(P)	25	LD2(-)
12	PD(N)	26	LD2(-)
13	Thermistor	27	Red laser LD(+)
14	Thermistor	28	Red laser LD(-)

638/808/980/1064nm			
Pin	Function	Pin	Function
1	Fiber Detector PD (P)	15	LD1(+)
2	Fiber Detector LED (+); Fiber Detector PD (N)	16	LD1(+)
3	Fiber Detector LED (-)	17	LD1(-)
4	-	18	LD1(-)
5	-	19	LD2(+)
6	-	20	LD2(+)
7	-	21	LD2(-)
8	-	22	LD2(-)
9	-	23	LD3(+)
10	-	24	LD3(+)
11	PD(P)	25	LD3(-)
12	PD(N)	26	LD3(-)
13	Thermistor	27	Red laser LD(+)
14	Thermistor	28	Red laser LD(-)

