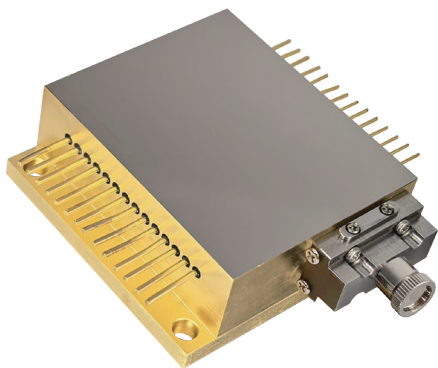




R7M High Power Diode Laser Components

R7M diode laser components are RealLight's AW series multi-function laser modules, providing multi-wavelength output with 2-3 different wavelength emitters integrated. These fiber detachable lasers are equipped with aiming beam, 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				
		2-wavelength		3-wavelength		
Center Wavelength (nm)		980	1470	808	980	1064
Optical	CW Output Power / P_{op} (W)	30	15	20	20	20
	Wavelength Tolerance (nm)	± 10				
	Spectral Width / $\Delta\lambda$ (nm)	<6				
	Temperature Drift of Wavelength / $\Delta\lambda/\Delta T$ (nm/°C)	0.3				
Aiming Beam	Output Power / P_a (mW)	2~5				
	Wavelength / λ_a (nm)	650 $\pm$ 10				
	Voltage / V_a (V)	5				
Electrical	Threshold Current / I_{th} (A)	1.2	1.4	2	1.2	1.2
	Operating Current / I_{op} (A)	18	15	15	14	15
	Operating Voltage / V_{op} (V)	3.6	5.8	4	3.8	3.8
	Slope Efficiency / η_{es} (W/A)	1.8	1.1	1.5	1.6	1.4
	PD Parameter / I_{pd} (μ A)	<8000				
	Thermistor / R_t (k Ω/β (25°C))	10 $\pm$ 1%/3930				
Fiber	Fiber Core Diameter / D_{core} (μ m)	400				
	Fiber Cladding Diameter / D_{clad} (μ m)	440				
	Fiber Coating Diameter / D_{buffer} (μ m)	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.

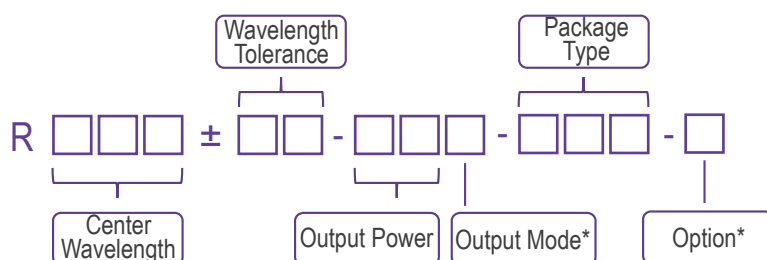
Other Parameters

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	980/1470	30/15	R980/1470±10-30/15WD-R7M-PFS
	808/980/1064	20/20/20	R808/980/1064±10-20/20/20WD-R7M-PFS

Part Numbering Schema

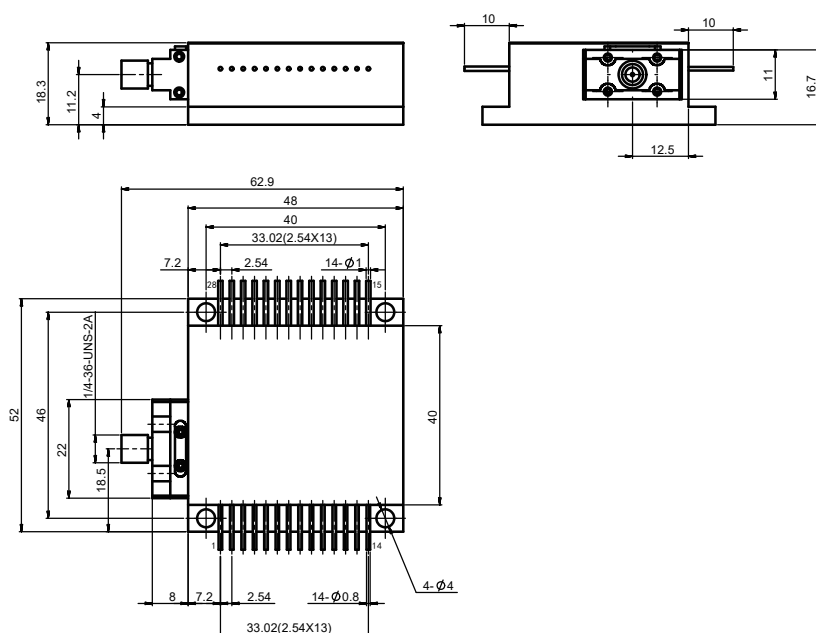


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



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	-
7	-	21	LD1(-)
8	-	22	LD1(-)
9	-	23	LD2(+)
10	-	24	LD2(+)
11	PD(P)	25	LD2(-)
12	PD(N)	26	LD2(-)
13	Thermistor	27	Aiming Beam LD(+); [DC 5V]
14	Thermistor	28	Aiming Beam LD(-); [GND]

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	Aiming Beam LD(+); [DC 5V]
14	Thermistor	28	Aiming Beam LD(-); [GND]

