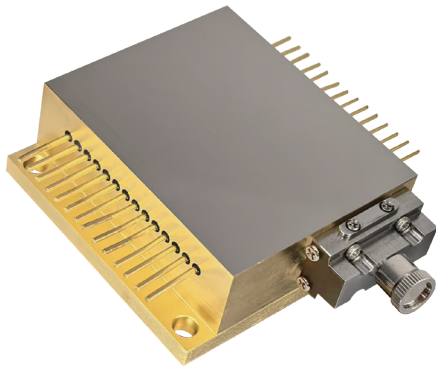




R7M High Power Diode Laser Components

R7M diode laser components are RealLight's AW series multi-function laser modules, providing multi-wavelength output with 1-3 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						
		Single-wavelength		2-wavelength		3-wavelength		
Center Wavelength（nm）		1940	1720	980	1470	808	980	1064
Optical	CW Output Power / P _{op} （W）	10	20	30	15	20	20	20
	Wavelength Tolerance（nm）	±15	±10					
	Spectral Width / Δλ（nm）	<15	<6					
	Temperature Drift of Wavelength / Δλ/ΔT（nm/℃）	0.7	0.3					
Aiming Beam	Output Power / P _a （mW）	5	2~5					
	Wavelength / λ _a （nm）	520±10	650±10					
	Voltage / V _a （V）	5.5	5					
Electrical	Threshold Current / I _{th} （A）	2.2	1.9	1.2	1.4	2	1.2	1.2
	Operating Current / I _{op} （A）	16	20	18	15	15	14	15
	Operating Voltage / V _{op} （V）	8.1	8.4	3.6	5.8	4	3.8	3.8
	Slope Efficiency / η _{es} （W/A）	0.7	1.1	1.8	1.1	1.5	1.6	1.4
	PD Parameter / I _{pd} （μA）	<8000						
	Thermistor / R _t （kΩ/β（25℃））	10±1%/3930						
Fiber	Fiber Core Diameter / D _{core} （μm）	200, 400	400					
	Fiber Cladding Diameter / D _{clad} （μm）	220, 440	440					
	Fiber Coating Diameter / D _{buffer} （μm）	400, 720	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.

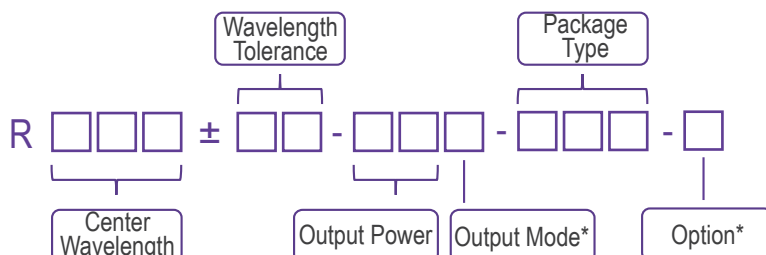
Other Parameters

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	1720	20	R1720±10-20WD-R7M-PFS
	1940	10	R1940±15-10WD-R7M-PFS
	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

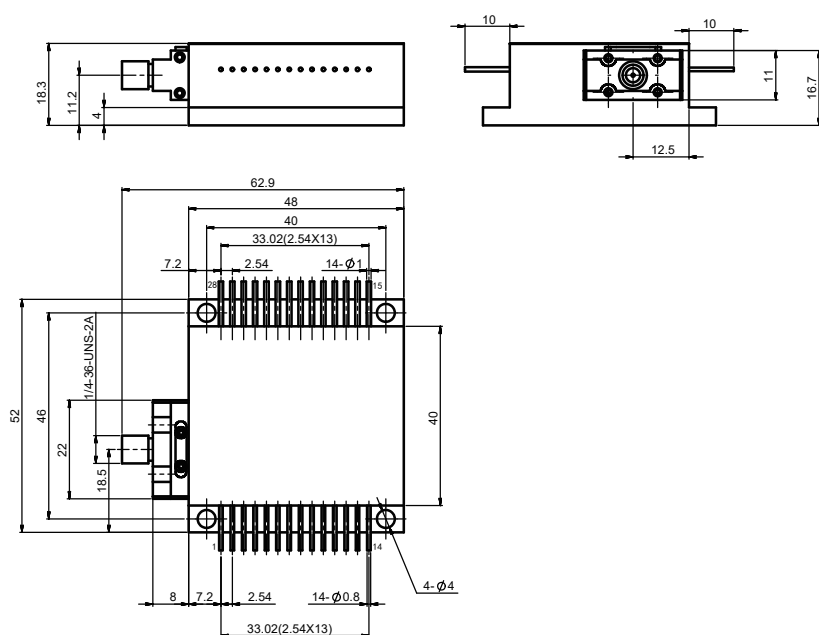


*Output Mode: D - Fiber Detachable

*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]

1720nm/1940nm			
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	-
8	-	22	-
9	-	23	-
10	-	24	-
11	PD(P)	25	LD1(-)
12	PD(N)	26	LD1(-)
13	Thermistor	27	Aiming Beam LD(+)
14	Thermistor	28	Aiming Beam LD(-)

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]

