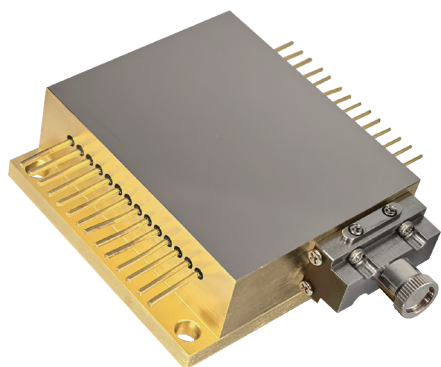




R7M Diode Laser Components

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

Aesthetic medicine
Laser surgery
Laser therapy

Technical Specifications (25°C)

Package Type		R7M						
		3-wavelength			4-wavelength			
Center Wavelength (nm)		650	980	1470	650	808	980	1064
Optical	CW Output Power / P_{op} (W)	0.4	30	20	0.4	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						
Electrical	Threshold Current / I_{th} (A)	0.2	1.2	1.4	0.2	2	1.2	1.2
	Operating Current / I_{op} (A)	0.8	18	15	0.9	15	14	15
	Operating Voltage / V_{op} (V)	2.2	3.6	5.5	2.2	4	3.8	3.8
	Slope Efficiency / η_{es} (W/A)	0.7	1.8	1.5	0.7	1.5	1.6	1.4
	PD Parameter / I_{pd} (μA)	< 3000						
	Thermistor / R_t ($k\Omega/\beta$ (25°C))	$10 \pm 1\%/3930$						
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.

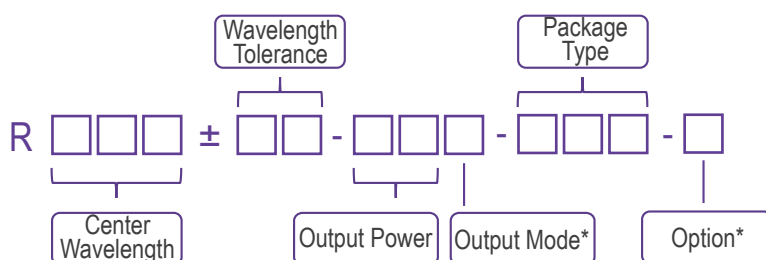
Other Parameters

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	650/980/1470	0.4/30/20	R650/980/1470±10-0.4/30/20WD-R7M-PFS
	650/808/980/1064	0.4/20/20/20	R650/808/980/1064±10-0.4/20/20/20WD-R7M-PFS

Part Numbering Schema

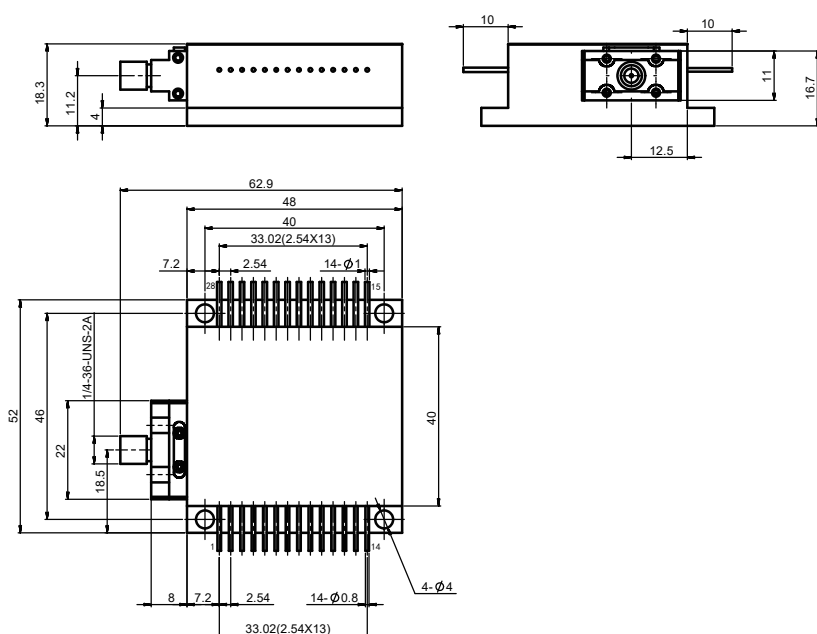


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



650/980/1470nm			
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(-)

650/808/980/1064nm			
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(-)

