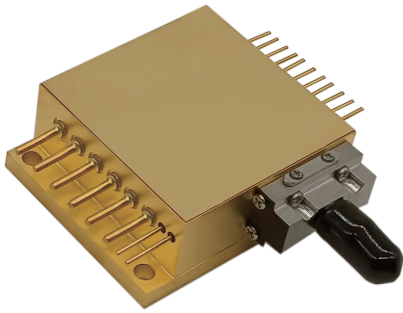


R4M Diode Laser Components



R4M diode laser components are Reallight's AW series multi-function laser modules, providing multi-wavelength output with 2-4 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
- Material processing

Technical Specifications (25°C)

Package Type		R4M																															
		4-wavelength																3-wavelength															
Center Wavelength (nm)		660/808/980/1064				660/808/980/1064				638/808/980/1064				638/808/980/1064				638/808/915/980				450/638/980/1064				450/638/980				450/638/808			
Optical	CW Output Power / P _{op} (W)	1.2	8.5	10	10	1.2	15	15	15	0.2	8.5	10	10	0.5	8.5	10	10	0.2	8.5	10	10	4	0.5	10	10	4	0.5	10	4	0.5	8.5		
	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	0.4	1.2	0.5	2.8	1.2	1.2	0.2	1.2	0.4	1.2	0.5	1.2	0.4	1.2	0.2	1.2	0.4	1.2	0.32	0.5	0.6	1.2	0.32	0.5	0.6	0.32	0.5	1.2		
	Operating Current / I _{op} (A)	2	13	13	14	2	20	18	20	0.5	13	13	14	1.2	13	13	14	0.5	13	13	14	3.5	1.2	12	13	3.5	1.2	12	3.5	1.2	11		
	Operating Voltage / V _{op} (V)	2.2	2.2	1.8	1.8	2.2	2.2	1.8	1.8	2.2	2.2	1.8	1.8	2.4	2.2	1.8	1.8	2.2	2.2	1.8	1.8	5	2.3	1.8	1.8	5	2.3	1.8	5	2.3	2		
	Slope Efficiency / η _{es} (W/A)	0.8	1	0.9	0.8	0.8	0.9	0.9	0.8	0.8	1	0.9	0.8	0.8	1	0.9	0.8	0.8	1	0.9	0.8	1.2	0.9	1	0.9	1.2	0.9	1	1.2	0.9	1		
	PD Parameter / I _{pd} (μA)	<3000																															
Thermistor / Rt (kΩ/β (25°C))	10±5%/3450																																
Fiber	Fiber Core Diameter / D _{core} (μm)	200				400																200											
	Fiber Cladding Diameter / D _{clad} (μm)	220				440																220											
	Fiber Coating Diameter / D _{buffer} (μm)	400				720																400											
	Numerical Aperture / NA	0.22																															
	Connector	SMA905																															

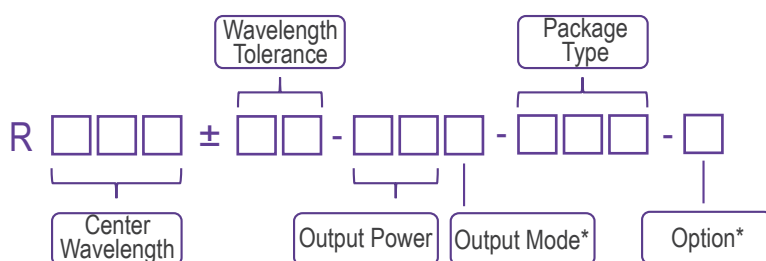
Other Parameters

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
R4M	660/808/980/1064	1.2/8.5/10/10	R660/808/980/1064±10-1.2/8.5/10/10WD-R4M-PFS
	660/808/980/1064	1.2/15/15/15	R660/808/980/1064±10-1.2/15/15/15WD-R4M-PFS
	638/808/980/1064	0.2/8.5/10/10	R638/808/980/1064±10-0.2/8.5/10/10WD-R4M-PFS
	638/808/980/1064	0.5/8.5/10/10	R638/808/980/1064±10-0.5/8.5/10/10WD-R4M-PFS
	638/808/915/980	0.2/8.5/10/10	R638/808/915/980±10-0.2/8.5/10/10WD-R4M-PFS
	450/638/980/1064	4/0.5/10/10	R450/638/980/1064±10-4/0.5/10/10WD-R4M-PFS
	450/638/980	4/0.5/10	R450/638/980±10-4/0.5/10WD-R4M-PFS
	450/638/808	4/0.5/8.5	R450/638/808±10-4/0.5/8.5WD-R4M-PFS

Part Numbering Schema

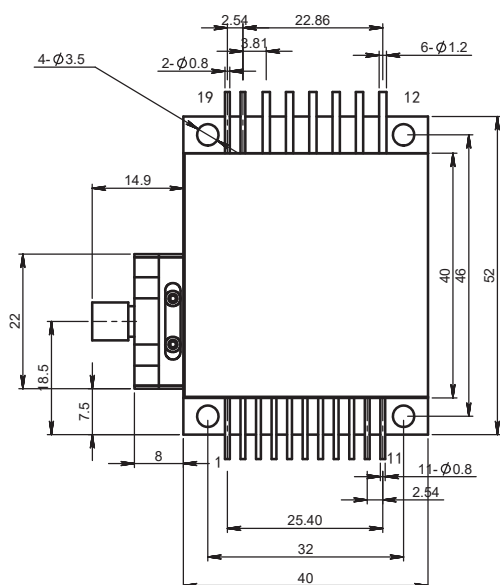
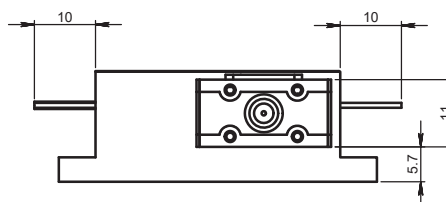
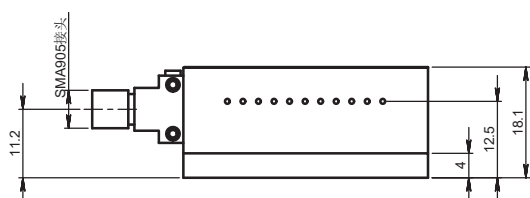


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



Pin	Function	Pin	Function
1	Fiber Detector PD (P)	11	Thermistor
2	Fiber Detector LED (+); Fiber Detector PD (N)	12	LD1(+)
3	Fiber Detector LED (-)	13	LD1(-)
4	-	14	LD2(+)
5	-	15	LD2(-)
6	-	16	LD3(+)
7	-	17	LD3(-)
8	PD(P)	18	Red laser LD(+)
9	PD(N)	19	Red laser LD(-)
10	Thermistor		

