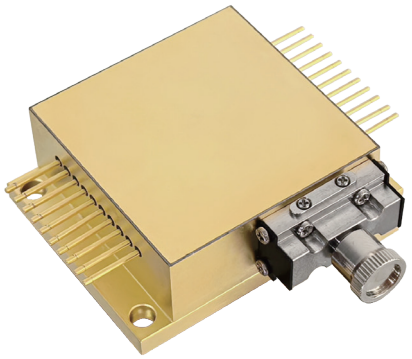


R3MH High Power Diode Laser Components

R3MH diode laser components are RealLight's AW series multi-function laser modules, providing multi-wavelength output with 3 emitters integrated. These fiber detachable lasers are equipped with fiber detector, photodiode and thermistor.

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℃）

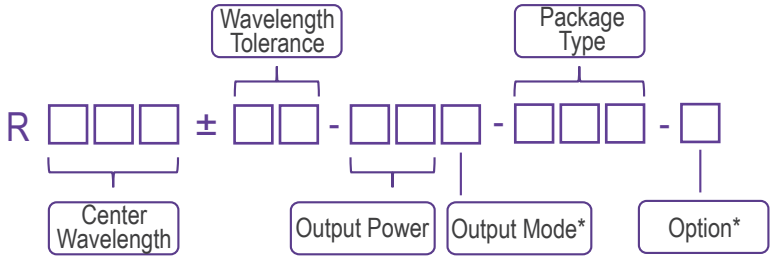
Package Type		R3MH					
		3-wavelength (1)			3-wavelength (2)		
Center Wavelength（nm）		450	650	808 / 980 / 1064	450	650	808 / 980 / 1064
Optical	CW Output Power / P_{op}（W）	4	0.5	10	4	0.5	20 / 30 / 20
	Wavelength Tolerance（nm）	±10					
	Spectral Width / △λ（nm）	<6					
	Temperature Drift of Wavelength / △λ/△T（nm/℃）	0.3					
Electrical	Threshold Current / I_{th}（A）	0.35	0.5	1.8 / 1.2 / 1.2	0.35	0.5	1.8 / 1.2 / 1.2
	Operating Current / I_{op}（A）	3.5	1.2	13 / 13 / 14	3.5	1.2	14 / 18 / 15
	Operating Voltage / V_{op}（V）	4.7	2.2	2 / 1.8 / 1.8	4.7	2.2	4 / 3.6 / 3.8
	Slope Efficiency / η_{es}（W/A）	1.3	0.7	0.9 / 0.8 / 0.8	1.3	0.7	1.6 / 1.8 / 1.4
	PD Parameter / I_{pd}（μA）	<8000					
	Thermistor / Rt（kΩ/β（25℃））	10±1%/3930					
Fiber	Fiber Core Diameter / dcore（μm）	200 / 400			400		
	Fiber Cladding Diameter / Dclad（μm）	220 / 440			440		
	Fiber Coating Diameter / Dbuffer（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℃, and the final data is subject to the final test report.

Other Parameters

Parameter	Operating Temperature /℃	Operating Relative Humidity /%	Storage Temperature /℃	Storage Relative Humidity /%	Lead Soldering Temperature (max/℃)
Min	10	-	-20	-	-
Max	30	75	70	90	250(10Sec.)

Part Numbering Schema

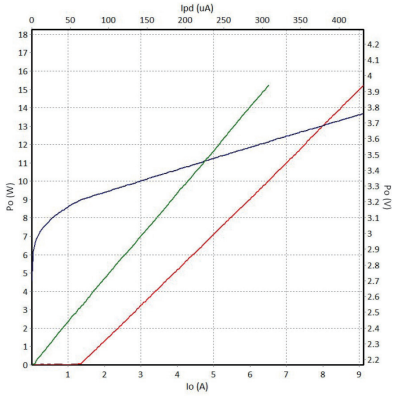


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

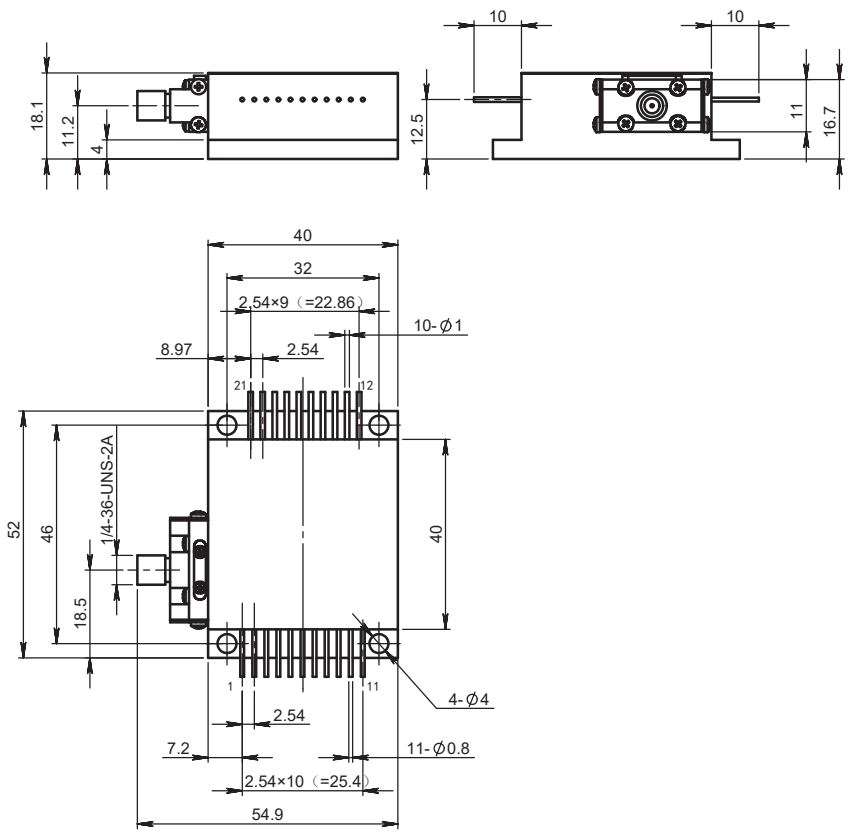
FS - Fiber Detector

Product Characteristics Diagrams



PIV curve of 808nm Diode Laser Components

Mechanical Drawings (in mm)



3-wavelength (1)			
Pin	Function	Pin	Function
1	Fiber Detector PD (P)	12	-
2	Fiber Detector LED (+); Fiber Detector PD (N)	13	-
3	Fiber Detector LED (-)	14	LD1(+)
4	PD(P)	15	LD1(-)
5	PD(N)	16	LD2(+)
6	-	17	LD2(-)
7	-	18	-
8	-	19	-
9	-	20	450nm(-)
10	Thermistor	21	450nm(+)
11	Thermistor		

3-wavelength (2)			
Pin	Function	Pin	Function
1	Fiber Detector PD (P)	12	LD1(+)
2	Fiber Detector LED (+); Fiber Detector PD (N)	13	LD1(+)
3	Fiber Detector LED (-)	14	LD1(-)
4	PD(P)	15	LD1(-)
5	PD(N)	16	LD2(+)
6	-	17	LD2(-)
7	-	18	-
8	-	19	-
9	-	20	450nm(-)
10	Thermistor	21	450nm(+)
11	Thermistor		

