

R4D Diode Laser Components

R4D diode laser components are RealLight's AW series multi-function laser modules, providing single-wavelength output. These fiber detachable lasers are equipped with aiming beam, fiber detector, photodiode and thermistor.

Key Features

- ◆ High reliability
- ◆ Superior power stability
- ◆ Excellent beam quality
- ◆ Efficient heat dissipation
- ◆ Various wavelengths

Applications

Laser aesthetics
Medical application
Laser surgery
Laser therapy

Technical Specifications (25°C)

Package Type		R4D			
Center Wavelength (nm)		808	980	1064	1470
Optical	CW Output Power / P_{op} (W)	30	30	30	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			
	Wavelength / λ_a (nm)	650 ± 10			
	Voltage / V_a (V)	2.2, 5.0			
Electrical	Threshold Current / I_{th} (A)	1.5	0.7	1.2	1.8
	Operating Current / I_{op} (A)	13	13	13	14
	Operating Voltage / V_{op} (V)	6.2	6	6	7
	Slope Efficiency / η_{es} (W/A)	2.6	2.7	2.5	1.6
	PD Parameter / I_{pd} (μA)	< 8000			
	Thermistor / R_t ($k\Omega/\beta$ (25°C))	$10 \pm 1\%/3930$			
Fiber	Fiber Core Diameter / d_{core} (μm)	200, 400			
	Fiber Cladding Diameter / D_{clad} (μm)	220, 440			
	Fiber Coating Diameter / D_{buffer} (μm)	400, 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.

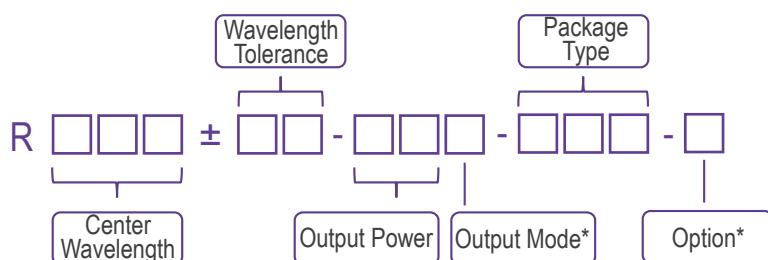
Other Parameters

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	Output Power	Part Number
R4D	808	30	R808±10-30WD-R4D-PFS
	980	30	R980±10-30WD-R4D-PFS
	1064	30	R1064±10-30WD-R4D-PFS
	1470	20	R1470±10-20WD-R4D-PFS

Part Numbering Schema

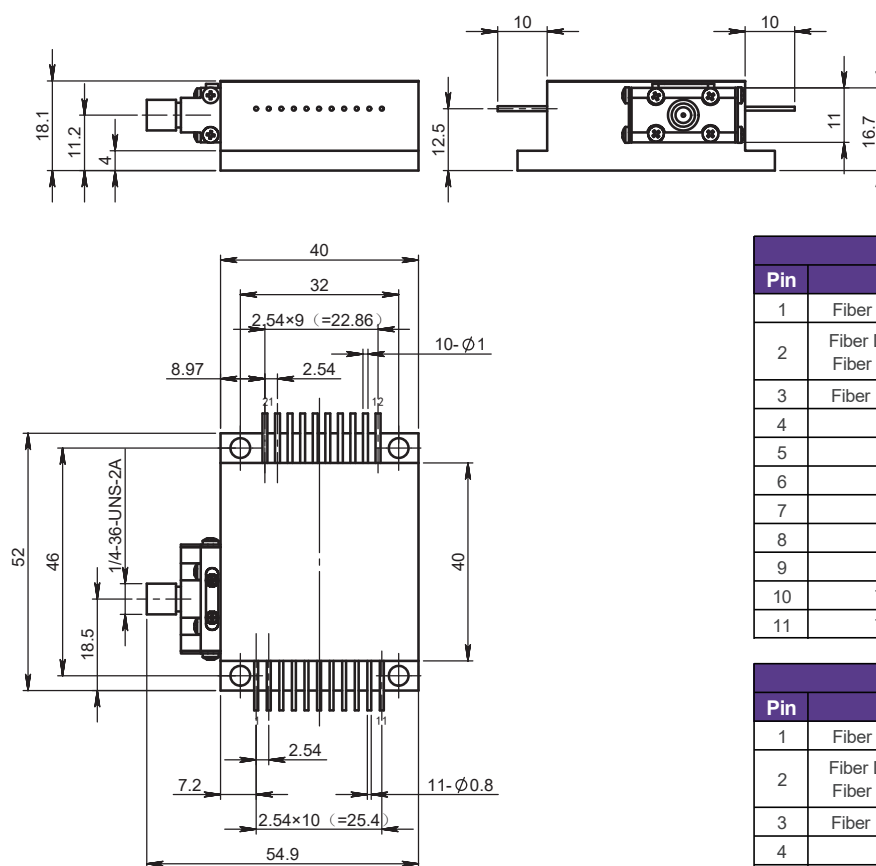


*Output Mode: D - Fiber Detachable

*Option: P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



808/980/1064nm			
Pin	Function	Pin	Function
1	Fiber Detector PD (P)	12	-
2	Fiber Detector LED (+) Fiber Detector PD (N)	13	-
3	Fiber Detector LED (-)	14	LD(+)
4	PD(P)	15	
5	PD(N)	16	-
6	-	17	-
7	-	18	-
8	-	19	LD(-)
9	-	20	Aiming Beam LD(+)
10	Thermistor	21	Aiming Beam LD(-)
11	Thermistor		

1470nm			
Pin	Function	Pin	Function
1	Fiber Detector PD (P)	12	LD(+)
2	Fiber Detector LED (+) Fiber Detector PD (N)	13	-
3	Fiber Detector LED (-)	14	-
4	PD(P)	15	
5	PD(N)	16	-
6	-	17	-
7	-	18	-
8	-	19	LD(-)
9	-	20	Aiming Beam LD(+)
10	Thermistor	21	Aiming Beam LD(-)
11	Thermistor		

