

14HHL Diode Laser Components

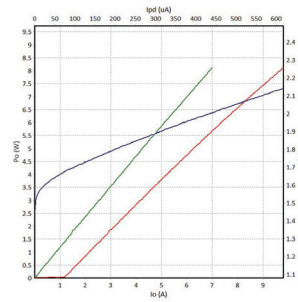
14HHL diode laser components are RealLight's AW series multi-function laser modules, available in fiber detachable configurations. These lasers are equipped with aiming beam, fiber detector, photodiode and thermistor.

Key Features

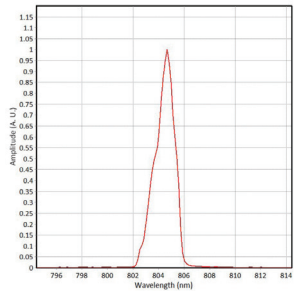
- ◆ Compact size
- ◆ Efficient heat dissipation
- ◆ High reliability
- ◆ Superior power stability
- ◆ Excellent beam quality
- ◆ Various wavelengths

Applications

- Medical application
- Laser processing
- Scientific research



808nm P-I-V Graph



808nm Spectrum

Technical Specifications (25°C)

Package Type		14HHL				
Center Wavelength (nm)		450	808	940/976/980	1064	1470
Optical	CW Output Power / P _{op} (W)	4	9	15	10	5
	Wavelength Tolerance (nm)	±10				
	Spectral Width / Δλ (nm)	<4				
	Temperature Drift of Wavelength / Δλ/ΔT (nm/°C)	0.3				
Aiming Beam	Output Power / P _a (mW)	2				
	Wavelength / λ _a (nm)	650±10				
	Voltage / V _a (V)	5				
Electrical	Threshold Current / I _{th} (A)	0.35	1.2	1	1.2	1.8
	Operating Current / I _{op} (A)	3.5	12	18	13	14
	Operating Voltage / V _{op} (V)	4.4	2	2	2	1.5
	Slope Efficiency / η _{es} (W/A)	1.1	0.9	0.9	0.9	0.4
	PD Parameter / I _{pd} (μA)	<3000				
	Thermistor / R _t (kΩ/β (25°C))	10±1%/3930				
	TEC Max Current I _{max} (A)	6				
	TEC Max Voltage V _{max} (V)	9.8				
Fiber	Fiber Core/Cladding Diameter D _{core} (μm)	105/125, 200/220, 400/440				
	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.

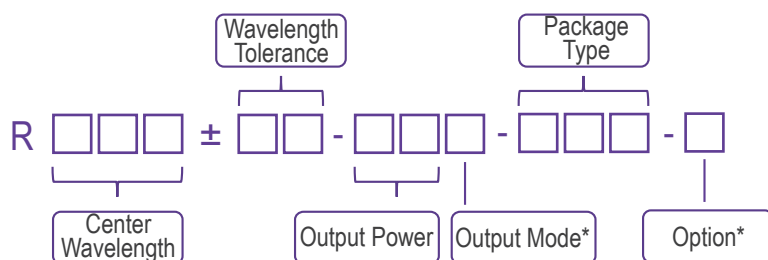
Other Parameters

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
14HHL	450	4	R450±10-4WD-14HHL-PTFS
	808	9	R808±10-9WD-14HHL-PTFS
	9xx (940/976/980)	15	R9xx±10-15WD-14HHL-PTFS
	1064	10	R1064±10-10WD-14HHL-PTFS
	1470	5	R1470±10-5WD-14HHL-PTFS

Part Numbering Schema



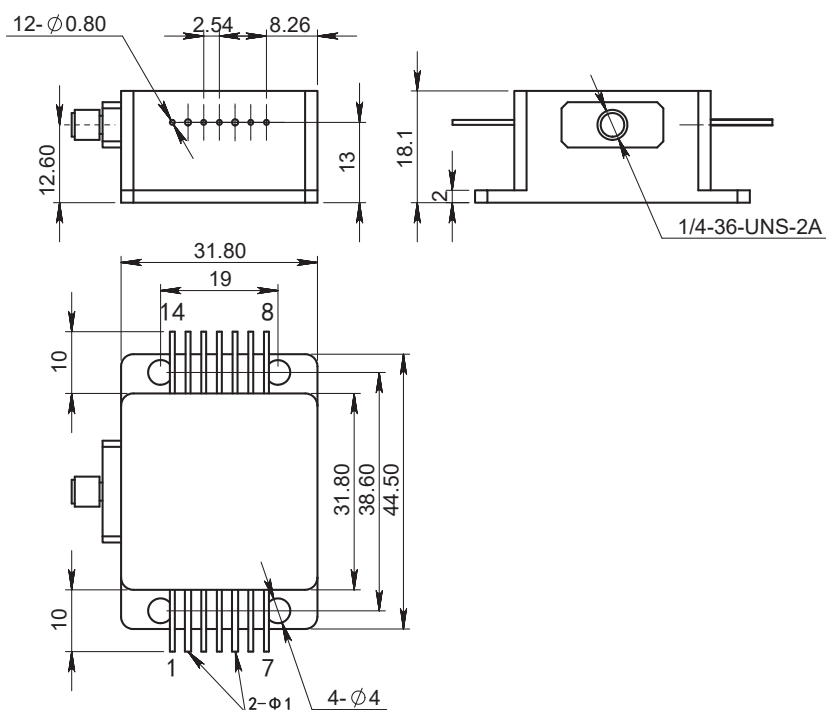
*Output Mode: D - Fiber Detachable

*Option: T - TEC

P - Pilot Light

FS - Fiber Detector

Mechanical Drawings (in mm)



Pin	Function	Pin	Function
1	Case	8	TEC (-)
2	Laser (+)	9	FCD PD(P)
3	Thermistor	10	FCD LED(-)
4	Thermistor	11	FCD LED(+), FCD PD(N)
5	Laser (-)	12	Aiming Beam LD(+); [DC 5V]
6	PD(P)	13	Aiming Beam LD(-); [GND]
7	PD(N)	14	TEC (+)

