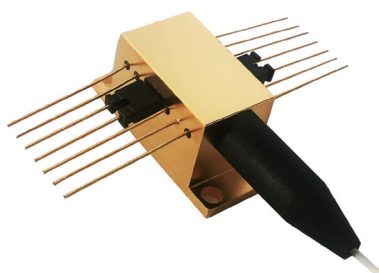


# 14BTF Diode Laser Components



14BTF diode laser components are Reallight's AW series laser modules, available in fiber-coupled configuration with single emitter. Equipped with photodiode and thermistor, these lasers feature compact size, superior power stability, high reliability and more.

## Key Features

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

## Applications

- Pumping source
- Laser processing
- Scientific research

## Technical Specifications (25°C)

Package Type		14BTF		
Center Wavelength (nm)		405	450	520
Optical	CW Output Power / Pop (mW)	100	100	100
	Wavelength Tolerance (nm)	±5	±10	±10
	Spectral Width / $\Delta\lambda$ (nm)	<2	<2	<3
Electrical	Threshold Current / I <sub>th</sub> (A)	<0.06	<0.05	<0.09
	Operating Current / I <sub>op</sub> (A)	<0.14	<0.14	0.23
	Operating Voltage / V <sub>op</sub> (V)	<6	<6.5	<7
	Slope Efficiency / $\eta_{es}$ (W/A)	>1.2	>0.9	>0.5
	Thermistor / R <sub>t</sub> (k $\Omega$ / $\beta$ (25°C))	10±5%/3450		
	TEC Max Current I <sub>max</sub> (A)	2.2		
	TEC Max Voltage V <sub>max</sub> (V)	8.7		
Fiber	Fiber Core Diameter / d <sub>core</sub> ( $\mu$ m)	105		
	Fiber Cladding Diameter / D <sub>clad</sub> ( $\mu$ m)	125		
	Fiber Coating Diameter / D <sub>buffer</sub> ( $\mu$ m)	250		
	Fiber Length / L (cm)	100±10 (Customizable)		
	Numerical Aperture / NA	0.22		
	Connector	FC/PC, 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.

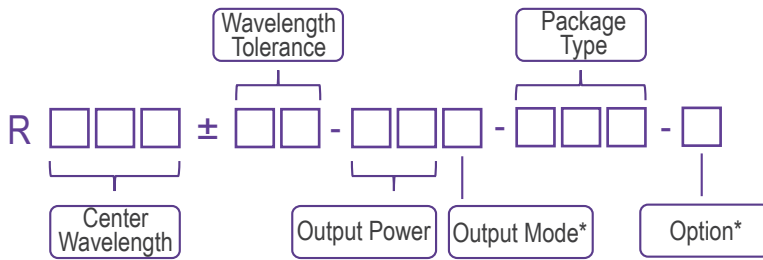
## Other Parameters

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 (mW)	Part Number
14BTF	405	100	R405±5-100mWF-14BTF-T
	450	100	R450±10-100mWF-14BTF-T
	520	100	R520±10-100mWF-14BTF-T

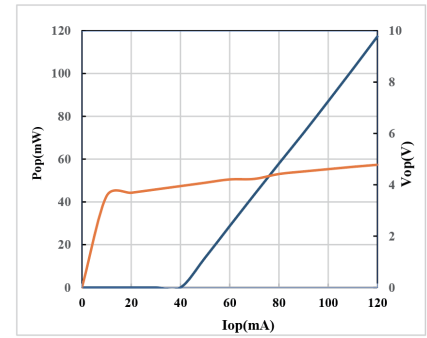
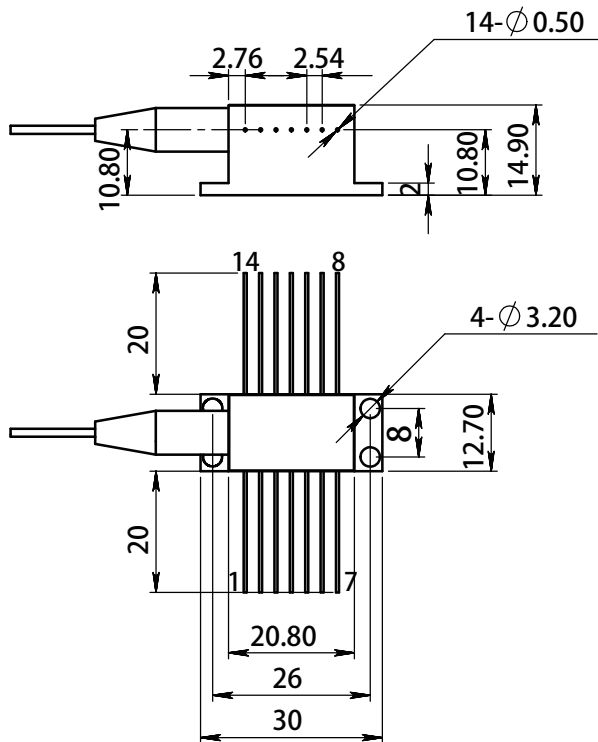
## Part Numbering Schema



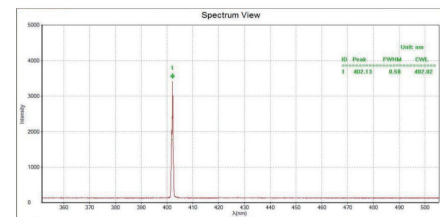
\*Output Mode: F - Fiber Pigtailed

\*Option: T - TEC

## Mechanical Drawings (in mm)



405nm P-I-V Graph



405nm Spectrum

## 520nm-Pin description

Pin	Function	Pin	Function
1	TEC (+)	8	Laser (-)
2	-	9	-
3	Thermistor	10	-
4	Thermistor	11	-
5	PD (P)	12	-
6	PD (N)	13	-
7	Laser (+)	14	TEC (-)

## 405nm/450nm-Pin description

Pin	Function	Pin	Function
1	TEC (+)	8	Laser (-)
2	-	9	-
3	Thermistor	10	-
4	Thermistor	11	-
5	*	12	-
6	*	13	-
7	Laser (+)	14	TEC (-)

