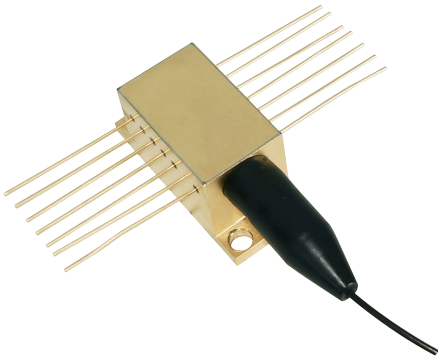


14BTF Diode Laser Components



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
Fluorescence detection
Laser processing
Scientific research

Technical Specifications (25°C)

Package Type		14BTF (Single Mode)					14BTF (Multi Mode)				
Center Wavelength（nm）		405	450	520	638	650	405	450	520	638	650
Optical	CW Output Power / P _{op} （mW）	50	50	50	60	60	100	100	100	130	130
	Wavelength Tolerance（nm）	±10									
	Spectral Width / Δλ（nm）	<3									
Electrical	Threshold Current / I _{th} （A）	40	22	60	50	60	40	22	60	60	60
	Operating Current / I _{op} （A）	180	150	240	260	260	180	150	240	240	260
	Operating Voltage / V _{op} （V）	5	5	7	2.5	2.5	5	5	7	2.3	2.3
	Slope Efficiency / η _{es} （W/A）	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.7	0.7
	Thermistor / Rt（kΩ/β（25℃））	10±1%/3450									
	TEC Max Current I _{max} （A）	2.2									
	TEC Max Voltage V _{max} （V）	8.7									
Fiber	Fiber Core Diameter / Cladding Diameter（μm）	4/125, 6/125, 9/125					105/125				
	Fiber Coating Diameter / Dbuffer（μm）	250									
	Fiber Length / L（cm）	100±10（Customizable）									
	Numerical Aperture / NA	0.14					0.22				
	Connector	FC/PC, SMA905									

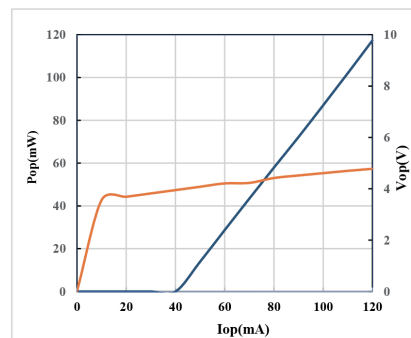
1. All the data in the above table are the typical values obtained from the tests at room temperature of 25°C, and the final data is subject to the final test report.

Other Parameters

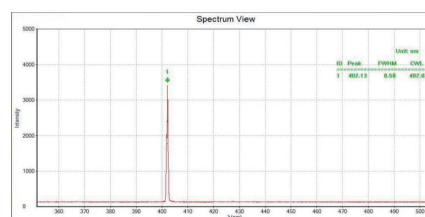
Parameter	Operating Temperature /°C	Operating Relative Humidity /%	Storage Temperature /°C	Storage Relative Humidity /%	Lead Soldering Temperature (max/°C)
Min	10	-	-20	-	-
Max	30	75	70	90	250(10Sec.)

Order Information

Package	Wavelength (nm)	Output Power (mW)	Part Number
14BTF	405	50	R405±10-50mWF-14BTF-T-S
	450	50	R450±10-50mWF-14BTF-T-S
	520	50	R520±10-50mWF-14BTF-T-S
	638	60	R638±10-60mWF-14BTF-T-S
	650	60	R650±10-60mWF-14BTF-T-S
	405	100	R405±10-100mWF-14BTF-T-M
	450	100	R450±10-100mWF-14BTF-T-M
	520	100	R520±10-100mWF-14BTF-T-M
	638	130	R638±10-130mWF-14BTF-T-M
	650	130	R650±10-130mWF-14BTF-T-M

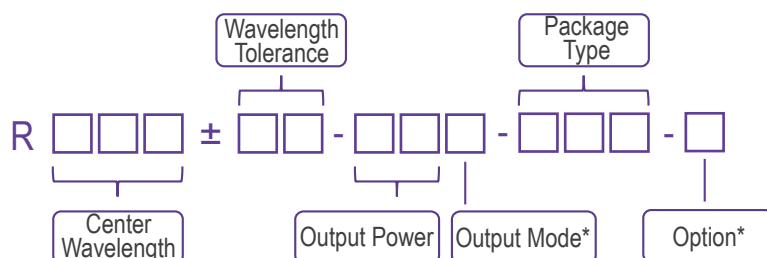


405nm P-I-V Graph



405nm Spectrum

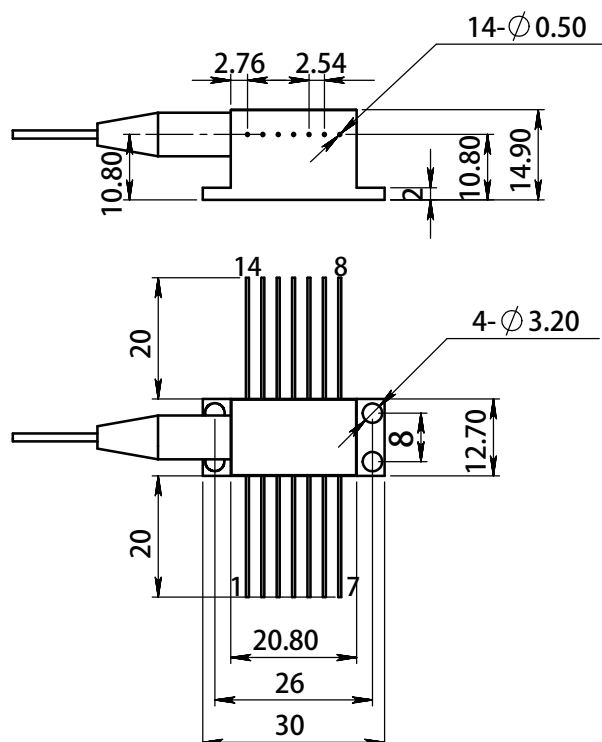
Part Numbering Schema



*Output Mode: F - Fiber Pigtailed

*Option: T - TEC S - Single Mode Fiber M - Multi Mode Fiber

Mechanical Drawings (in mm)



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 (-)

520nm/638nm/650nm 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 (-)

