ДИОДНЫЕ ЛАЗЕРЫ С ВОЛОКОННЫМ ВЫХОДОМ BWT Beijing Ltd

ТЕХНИЧЕСКАЯ ИНФОРМАЦИЯ

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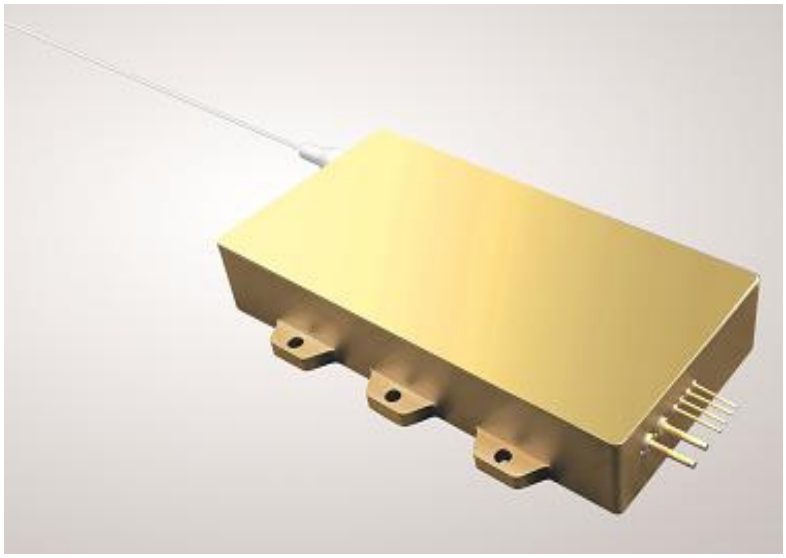
915nm 158W High Power Fiber Coupled Diode Laser

K915FG2RN-158.0W（Standard Product）



Features：

- 915nm wavelength
- 158W output power
- 106.5μm fiber core diameter
- 0.22 N.A.
- 1040-1200nm feedback protection

Applications：

- Fiber laser pumping
- Material processing

BWT Beijing's High Power Diode Laser Modules are manufactured by adopting specialized fiber-coupling techniques, resulting in volume products with a high efficiency, stability and superior beam quality. The products are achieved by transforming the asymmetric radiation from the laser diode chip into an output fiber with small core diameter by using special micro optics. Inspecting and burn-in procedures in every aspect come to a result to guarantee each product with the reliability, stability and long lifetime.

Our research staffs are constantly improving and innovating the processing technology in the producing process, based on the professional knowledge and experience accumulated in long-terms. We are also continuously developing new products to meet customers' specific needs.

At BWT Beijing, to provide high quality products with reasonable price is our always goal.

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Specifications(25℃)		Symbol	Unit	K915FG2RN-158.0W		
				Minimum	Typical	Maximum
Optical Data(1)	CW-Output Power	P_o	W	158	-	-
	Center Wavelength	λ_c	nm	915±10nm		
	Spectral Width (FWHM)	$\triangle\lambda$	nm	6		
	Wavelength Shift with Temperature	$\triangle\lambda/\triangle T$	nm/℃	-	0.3	-
	Wavelength Shift with Current	$\triangle\lambda/\triangle I$	nm/A	-	1	-
Electrical Data	Electrical-to-Optical Efficiency	PE	%	-	48	-
	Operating Current	I_{op}	A	-	10	11
	Threshold Current	I_{th}	A	-	0.9	-
	Operating Voltage	V_{op}	V	-	30.2	36
	Slope Efficiency	η	W/A	-	15	-
Fiber Data(2)	Core diameter	D_{core}	μm	105	106.5	108
	Cladding diameter	D_{clad}	um	124	125	126
	Buffer diameter	D_{buf}	um	230	245	260
	Numerical Aperture	N.A.	-	0.2	0.22	0.24
	Total Fiber Length	L_f	m	-	2	-
	Fiber Loose Tubing Diameter/Length	-	μm	0.9mm PVC 180cm		
	Minimum Static Bending Radius	-	mm	-	50	-
	Minimum Dynamic Bending Radius	-	mm	-	60	-
	Fiber termination	-	-	-	FPT	-
Feedback Isolation(3)	Wavelength Range	λ	nm	1040~1200		
	Isolation	-	dB	-	30	-
Others	ESD	V_{esd}	V	-	500	-
	Storage Temperature (Non-operating) (4)	T_{st}	℃	-20		70
	Lead Soldering Temp	T_{ls}	℃	-	260	-
	Lead Soldering Time	t	sec	-	10	-
	Operating Case Temperature	T_{op}	℃	15	-	35

(1) Data measured under operation output at 158W.

(2) Other fiber type customized according to customers requirements.

(3) Other feedback isolation customized according to customers requirements.

(4) A non-condensing environment is required for operation and storage conditions are from -20 to +70 ℃ with relative humidity between 15 to 75 %.

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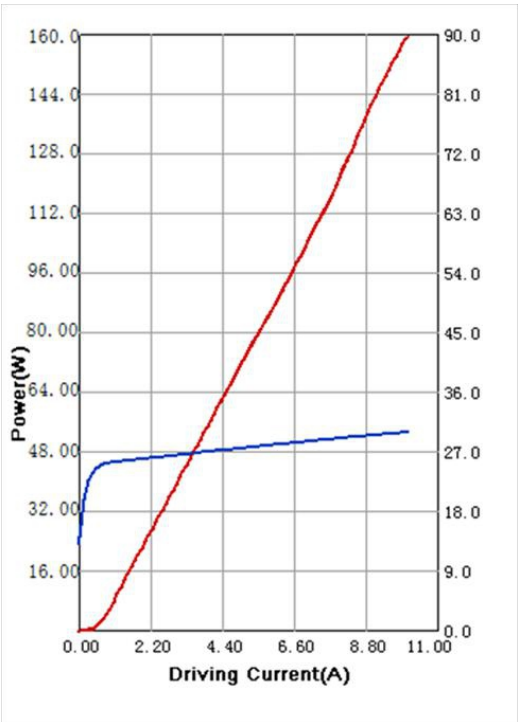
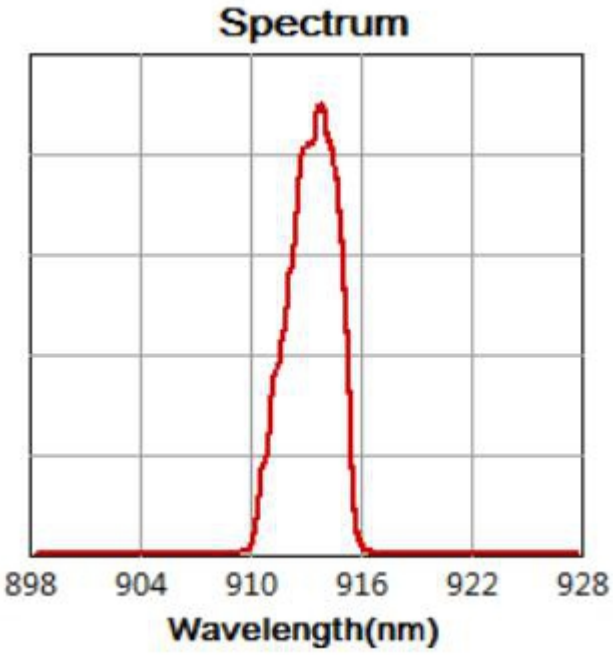
Characteristics





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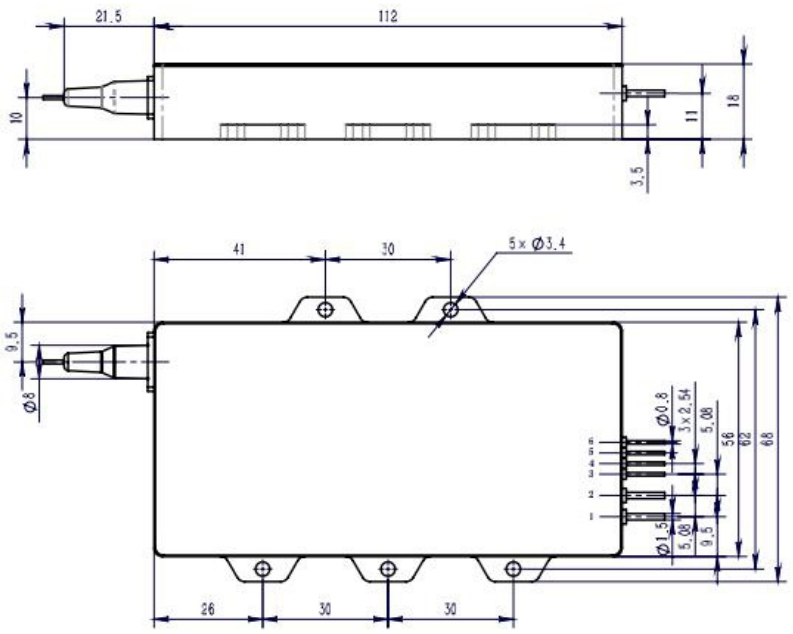
Package Dimensions (mm)



Pins	Function
1	LD (+)
2	LD (-)
3	Thermistor*
4	Thermistor*
5	PD (N) *
6	PD (P) *

*: Optional functions.

OPERATING NOTES

- ◆ Avoid eye exposure to direct or scattered radiation.
- ◆ ESD precautions must be taken.
- ◆ Please connect pins to wires by solder instead of using socket when operation current is higher than 6A.
- ◆ Soldering point should be close to the root of the pins. Soldering temperature should be lower than 260℃ and time shorter than 10 second.
- ◆ Use constant current power supply. Avoid surge current.
- ◆ Laser diode must be used according to the specifications.
- ◆ Laser diode must work with good cooling.
- ◆ Operation temperature is 15℃~ 35℃.
- ◆ Storage: -20℃~ +70℃, all pins short-circuit.

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