

## 445nm Fiber Coupled Blue Diode Laser System

### DS3-L Series



#### Features:

- ◆ 445nm wavelength
- ◆ 100W/150W/200W output power
- ◆ 105 $\mu$ m core diameter
- ◆ 0.22NA

#### Applications:

- ◆ 3D Printing
- ◆ Medical
- ◆ Material processing

BWT, founded in 2003, is committed to the mission of "let the dream drive the light", the vision of becoming the "Global leader in laser solutions", and the value of "Outstanding innovation", providing diode laser, fiber laser, ultra-fast laser products and solutions to global customers.

The company pursues continuous innovation and insists on autonomous and controllable advanced process and technology. With Beijing headquarters as the core, BWT has successively established production and R&D centers in Jiangsu, Shanghai and Shenzhen, and invested in the construction of intelligent and digital production base in Tianjin. In order to build the world's highest level of technical strength and product quality, BWT set up a German subsidiary in 2020, introducing European quality standards, and taking a solid step for the internationalization of R&D, production and technological innovation.

Up to now, BWT has traded more than 10 million lasers worldwide. BWT's products are available in more than 70 countries and regions, applications involving industry, medical, commercial, scientific research, information and many other fields.

Version number	Change content	Change date
1.0	First edition	2021.05.17
1.1	Upgrade optical power	2022.03.31

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Specifications (20°C)		Unit	DS3-L100	DS3-L150	DS3-L200
Optical Data <sup>(1)</sup>	CW Output Power	W	100	150	200
	Center wavelength	nm	445		
	Spectral width(FWHM)	nm	±20		
	Wavelength shift with temperature	nm	≤6		
	Output power instability (20°C)	%	±3 (5 hours)		
	Power Range	%	10-100		
Fiber Data <sup>(1)</sup>	Core diameter	μm	105		
	Numeric aperture	-	0.22		
	Fiber length	m	5/ Customized		
	Fiber termination	-	HP-SMA905 / Customized		
Electrical Data	Power supply	V	100~240 ( 50-60Hz )		
	Power consumption at nom. Power, approx.	kW	<1.2		
	Drive mode	-	Constant current		
	Emission mode	-	CW or Modulated		
	Control mode	-	RS232, I/O		
	Modulation frequency	Hz	1~20K		
	Duty Ratio	%	5~95		
Modulation Rise/Fall Time (Min. Value)	μs	≤10			
Mechanical Parameters	Dimensions (LxWxH/mm)	mm	430*482*130		
	Weight	Kg	<15kg		
Others	Refrigerating method	-	Water-cooling		
	Storage temperature <sup>(2)</sup>	°C	5~50		
	Temperature Ambient in Operation <sup>(3)</sup>	°C	15~30		
	Cooling requirement	-	Quick coupling: Φ 10mm water pipe outside diameter Φ 6.5mm water pipe inner diameter Circulating water flow : ≥5L / min Cooling capacity: ≥ 4 × optical power		
	Relative Humidity	%	5~80		
	Safety class	-	4 (EN 60825-01)		

(1) Data measured under operation output at 100W, 150W or 200W@20°C.

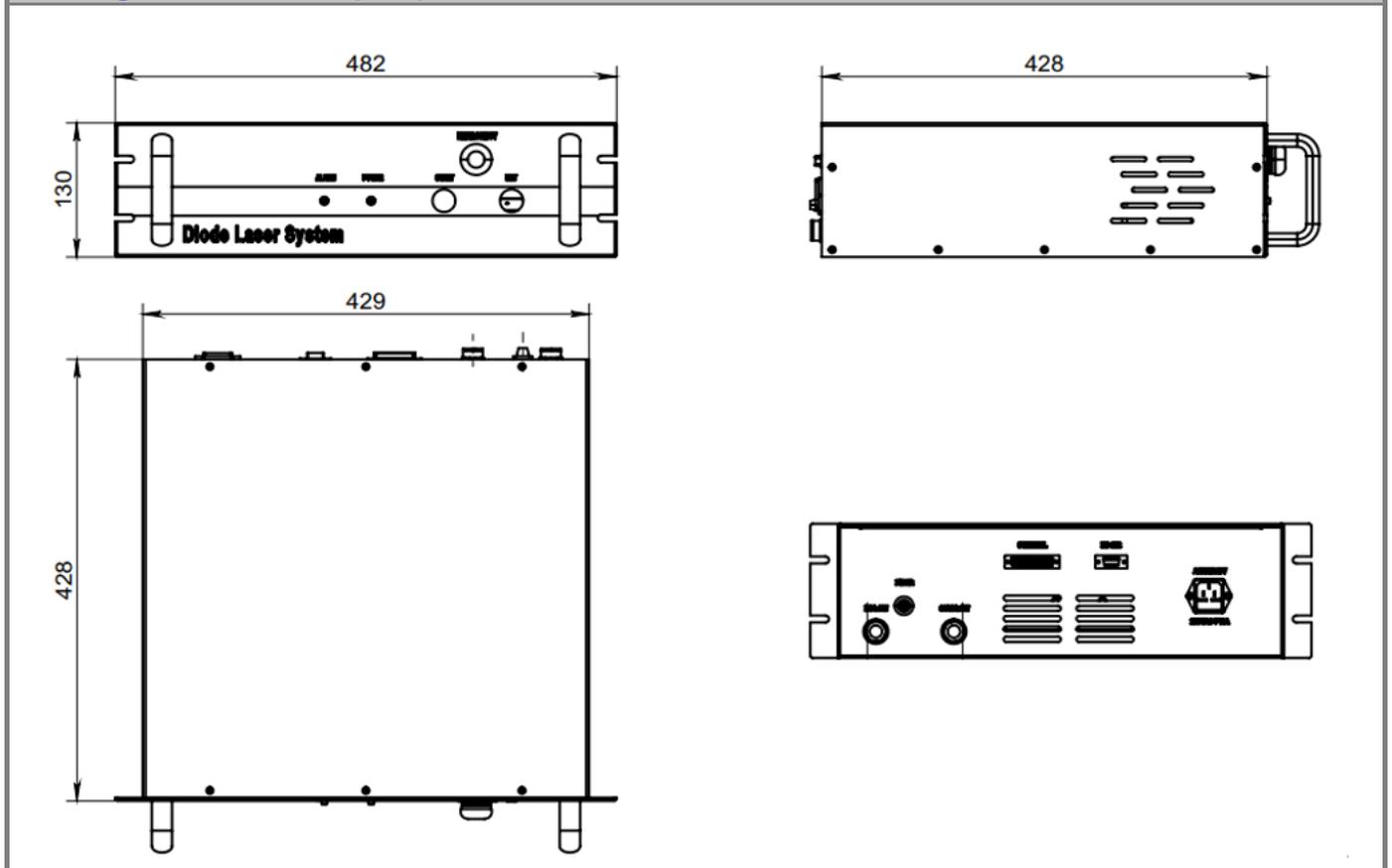
(2) A non-condensing environment is required for operation and storage.

(3) Operating temperature defined by the package case. Acceptable operating range is 15°C~35°C, but performance may vary.

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#### Package Dimensions (mm)



#### OPERATING NOTES

- ◆ Avoid eye and skin exposure to direct radiation during operation.
- ◆ Make sure the fiber output end is properly cleaned before operation of laser. Follow safety protocols to avoid injury when handling and cutting the fiber.
- ◆ Laser diode must be used according to the specifications.
- ◆ Temperature Ambient in Operation ranges from 15°C to 30°C.
- ◆ Storage temperature ranges from 5°C to 50°C.



**Declaration:** information and specifications contained herein are deemed to be reliable and accurate. BWT Beijing reserves the right to change, alter or modify the design and specifications of these products at any time without notice.22-03