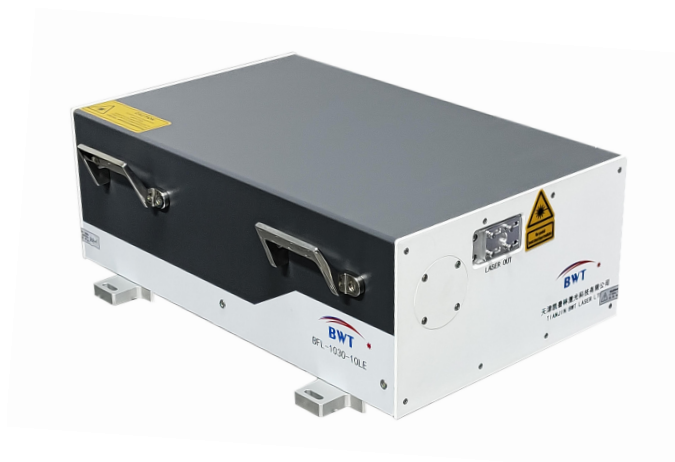


## High Power and Narrow Pulse Width IR Femtosecond Laser

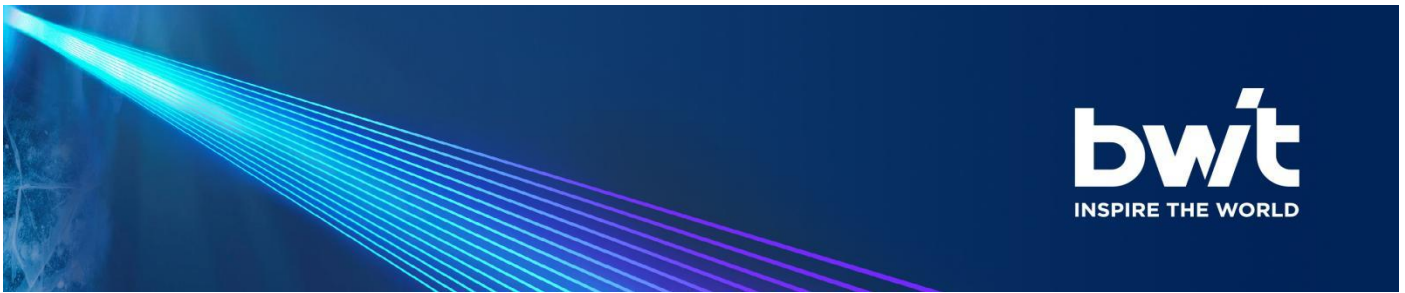


### Features:

- ◆ Dimension : L461.5 x W352.7 x H169.6 (mm)
- ◆ Power: >10W@50MHz
- ◆ Max Energy: >200nJ@50MHz
- ◆ Pulse width: 200fs-1.5ps
- ◆ Beam Quality: TEM00 ( $M^2 < 1.4$ )
- ◆ Beam Roundness: >90%
- ◆ Low-cost; maintenance-free
- ◆ Narrow pulse width; Excellent pulse quality and stability
- ◆ High beam quality; Suitable for precision processing
- ◆ Real-time state monitoring
- ◆ User-friendly interface

### Applications:

- ◆ biological imaging
- ◆ Photogenetic research
- ◆ chemical reaction kinetics
- ◆ ultrafast spectroscopy
- ◆ Micro-nano processing
- ◆ Precision marking
- ◆ Other precision processing and scientific research



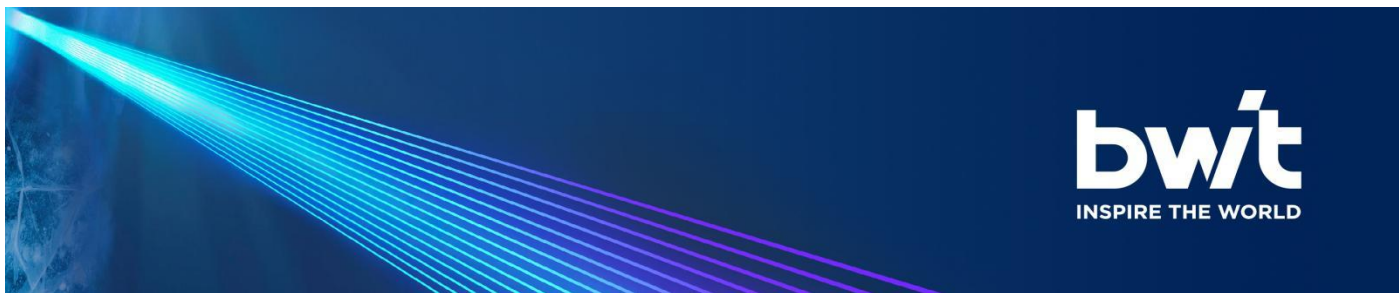
## High Power and Narrow Pulse Width IR Femtosecond Laser

Tianjin BWT Laser Ltd. (hereinafter referred to as BWT Laser) is a holding subsidiary of BWT, established in 2017, is a company dedicated to the development and production of femtosecond, picosecond, and nanosecond lasers enterprises. BWT Laser has a complete talent structure and cooperates with Tianjin University to build a joint laboratory for in-depth talent and technical exchanges. The company adheres to the core concept of "pursuing excellence and high efficiency" internally and "customer-centered and growing with customers" externally and is committed to providing high-end lasers.

Up to now, BWT Laser has mass-produced more than ten types of 10-100W picosecond infrared lasers (energy up to 2mJ), 50W 50 microjoule femtosecond lasers, 10W narrow pulse femtosecond lasers, 30W picosecond ultraviolet lasers, etc. Ultrafast lasers are used in industrial micro-nano processing, precision marking, medical beauty, scientific research, and other application fields.

Version No	Modified items	Date of Modification
00	V 1.0	2021.11.12

Parameters	Unit	BFL-1030-10LE
		Specifications

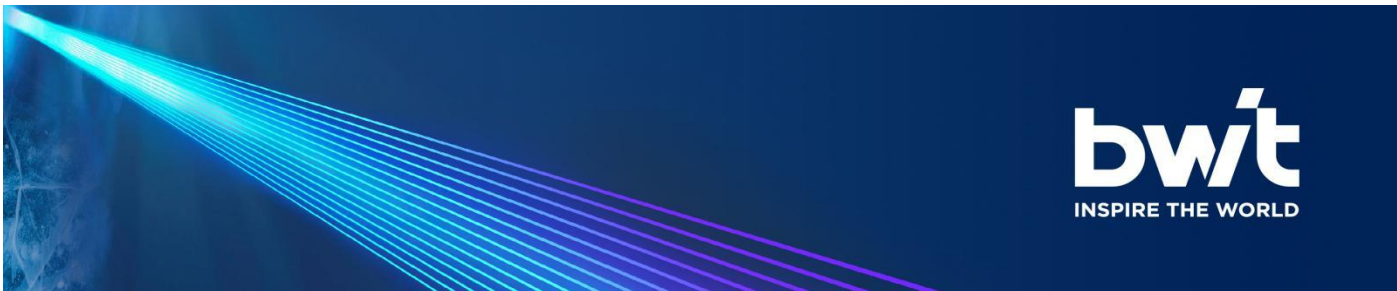


## High Power and Narrow Pulse Width IR Femtosecond Laser

<b>Optical Parameters<sup>(1)</sup></b>	Power	W	10
	Central wavelength	nm	1030
	Pulse Repetition Rate	Hz	50M
	Pulse width	fs	200
	Average Power	W	10
	Maximum Pulse Energy	nJ	200
	Average Power Stability	-	2.0% rms
	Pulse-to-Pulse Instability	-	3.0% rms
	Spatial Mode	-	TEM00 ( $M^2 < 1.40$ )
	Beam Roundness	-	90%
	Beam Divergence	mrad	2.0 (Full Angle)
	Polarization Direction	-	vertical
	Polarization Ratio	-	100:1
<b>Electrical Parameter</b>	Operation Voltage	V	220
<b>Other Parameters</b>	Warm-up Time	min	10
	Ambient Temperature	°C	15-30
	Relative Humidity	-	10%-80%
	Storage Temperature <sup>(2)</sup>	°C	-10-80
	Cooling Approach	-	Air-cooling

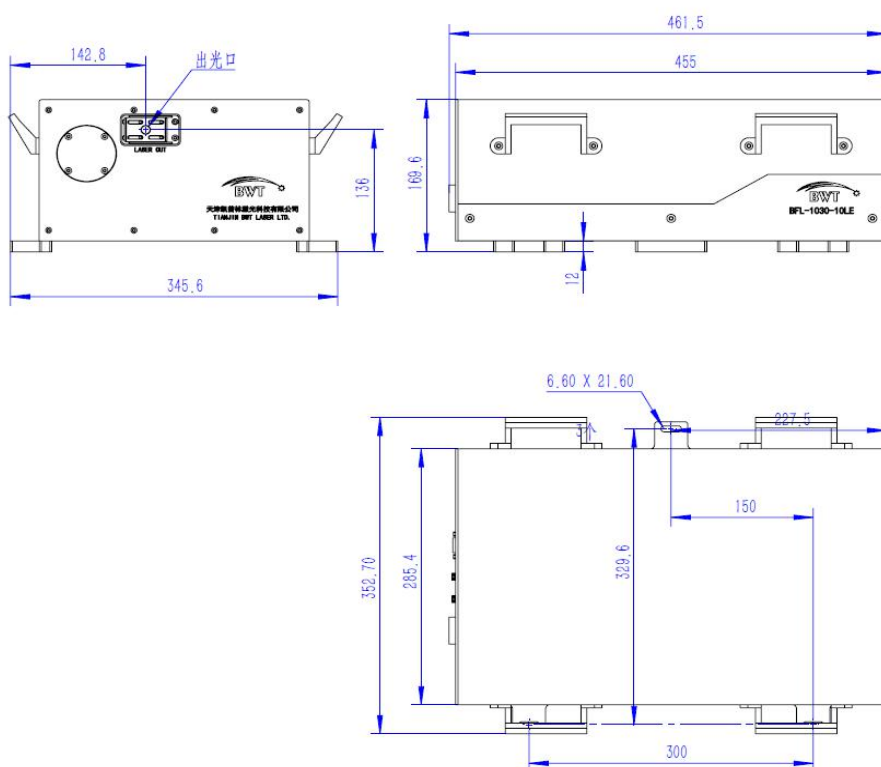
(1) All the parameters are listed corresponding to environment temperature within 25°C±0.1°C

(2) Do not operate or store the laser in environment easy for dew formation



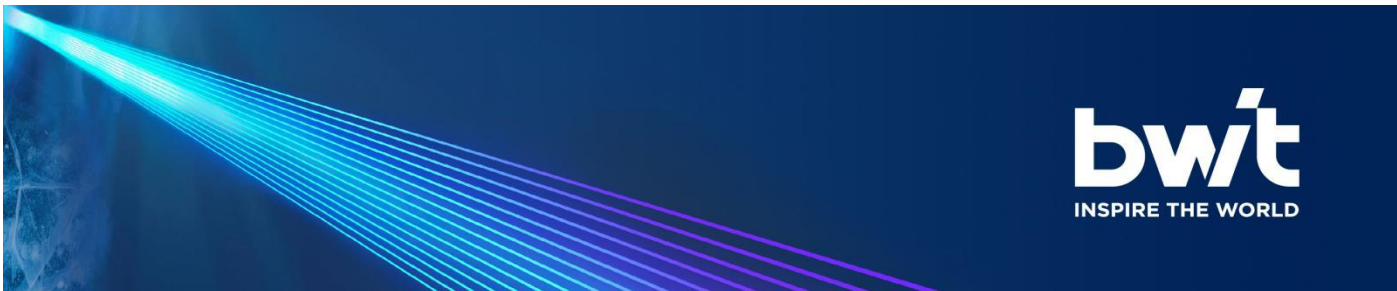
## High Power and Narrow Pulse Width IR Femtosecond Laser

### Outline Drawings (mm)



### Instructions




- ◆ Connect 110V-260V AC power supply for laser operation
- ◆ Place the laser in a clean environment with space for sufficient heat dissipation
- ◆ Set the environment temperature close to 25°C which is the set temperature of chiller (Generally, 25°C is a typical set temperature of chiller. This value may vary for different lasers. Refer to the printed report attached with the laser for the real value. ) Set the environment humidity within 10%~80%. Operation of laser in high/low temperature or high humidity environment is prohibited.
- ◆ Make sure the power supply of the laser is grounded. Operation of the laser in environment with strong electromagnetic interference is not recommended.



## High Power and Narrow Pulse Width IR Femtosecond Laser

- ◆ Always wearing laser goggles when the laser is operating. Staring into the laser output window is strictly prohibited.
- ◆ Regularly examine the cleanness of the distilled water and filter. Replace the filter every month. Make sure the water volume, water quality, flow rate is normal. The laser may be damaged permanently if the water is insufficient in chiller or the water flow is blocked.
- ◆ Always use packing box provided by Tianjin BWT Laser Ltd. for moving or storage of the laser. Always move the laser slowly and steadily and avoid sudden shock. Special fixture may be necessary for moving the laser.
- ◆ Operation Temperature 15-30°C
- ◆ Storage Temperature -10-50°C

### Tips For Safety

Label	Descriptions
	<p><b>Warnings</b></p> <p>Potential danger for human body. Specific procedure needed for operation. Human body may be hurt if the operation is incorrect. Do not violate the requirements following the warning sign, which is important for the safety of the operator.</p>
	<p><b>Notice</b></p> <p>Potential damage for the laser system. Specific procedure needed for operation. Otherwise, some parts or the whole laser system may be damaged. For normal operation of the laser system, do not violate the requirements following the notice sign.</p>
	<p><b>Laser radiation Label</b></p> <p>This label is the sign of laser radiation. Generally, this label is placed near the laser output window.</p>