# **BLAZER** series

Medium-power industrial ps-laser

*BLAZER series provide industrial grade DPSS picoseconds lasers with adjustable repetition rate and high peak power. Rugged and compact design of these lasers has been a versatile tool for a variety of industrial material processing applications.*

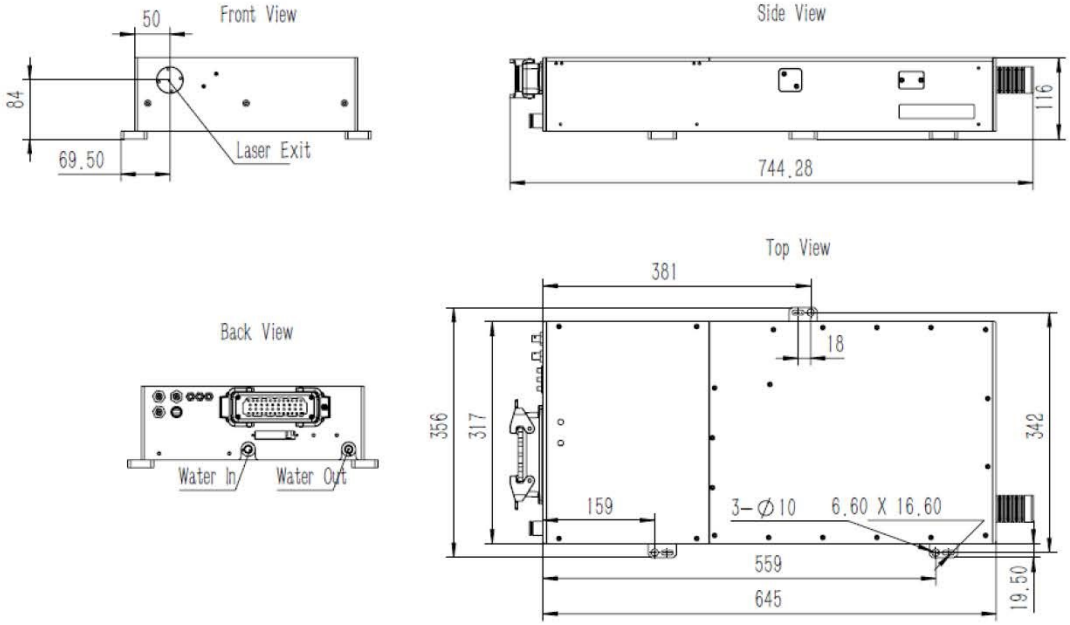
**FEATURES**

- **10-40W** at 1064nm / Harmonics from 532nm to 355nm
- **100-2000 kHz** repetition rate / **10 ps** pulse duration
- High beam quality $M^2 < 1.3$
- Compact, sealed and rugged industrial grade design
- Fully detachable umbilical
- Burst mode
- Integrated process shutter
- PSO

**APPLICATIONS**

- Cutting and drilling for Materials such as glass, sapphire
- Thin film ablation
- Micromachining
- Patterning

BLAZER-20F/40F Laser Head
Mechanical Specifications



# **BLAZER** series Specifications

Medium-power industrial ps-laser

**Beam characteristics**

| Version | BLAZER-20F | | | BLAZER-40F | | |
|---|---|---|---|---|---|---|
| Wavelength（nm） | 1064nm（532/355 option） | | | | | |
| Repetition Rate[1] （kHz） | 100 – 2000 kHz | | | | | |
| Average Power（W） / Wavelength（nm） | Average Power（W）at Different Rep. Rates[2] | | | | | |
| | 100kHz | 500kHz | 800kHz | 400kHz | 600kHz | 800kHz |
| 1064nm | 13 | 24 | 26 | 35 | 40 | 40 |
| 532nm[3] | 8 | 15 | 18 | 20 | 25 | 25 |
| 355nm | 5 | 10 | 10 | 12 | 15 | 15 |
| Pulse Energy（μJ） / Wavelength（nm） | Pulse Energy（μJ）at Different Rep. Rates | | | | | |
| | 100kHz | 500kHz | 800kHz | 400kHz | 600kHz | 800kHz |
| 1064nm | 130 | 48 | 32.5 | 87.5 | 66.6 | 50 |
| 532nm | 80 | 30 | 22.5 | 50 | 41.6 | 31 |
| 355nm | 50 | 20 | 12.5 | 30 | 25 | 18.8 |
| Beam Spatial Profile | $TEM_{00}$（$M^2$＜1.3） | | | | | |
| Pulsewidth FWHM（ps） | ＜10ps@1064nm | | | | | |
| Energy Stability（RMS） | ＜2% | | | | | |
| Power Stability[4]（RMS） | ＜2% | | | | | |
| Polarization Ratio | ＞100:1 | | | | | |
| Beam Circularity（%） | ＞85% | | | | | |
| Pointing Stability[5]（μrad/℃） | ＜50μrad/℃ | | | | | |
| Beam Divergence[6]（mrad） | ＜1mrad | | | | | |
| Beam Diameter[7]（mm） | ~2mm | | | | | |

**General characteristics**

| | |
|---|---|
| AC Input | 220 VAC ±5% 50-60Hz |
| Power Consumption | ＜2.5kW（typical 50W at 500kHz） |
| Cooling Type | Closed-loop water cooling |
| Operating Conditions | Temperature 15-35℃ Humidity ＜65% |
| Warm-Up Time（mins） | ＜40mins |

NOTES

1.All specifications at 1064nm and 500kHz repetition rate unless otherwise noted.
2.Please provide operating Rep. rate for optimum output power.
3.A lower 532nm output power version to be offered if need both 532nm &355nm.
4.Average in 8 hours with room temperature variation δT＜3℃.
5.Maximum deviation from beam mean centroid.
6. Full angle for 86.5% of energy.
7.Output of laser head at 1064nm.