



MPL-S-xxx-HP series (200-300nm)

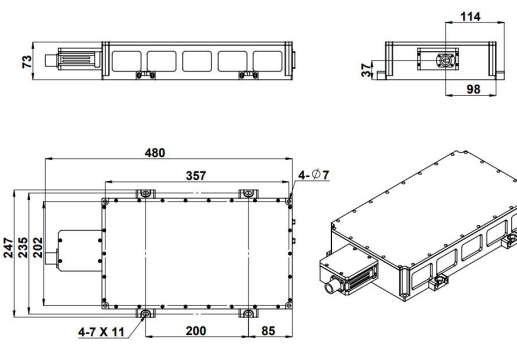
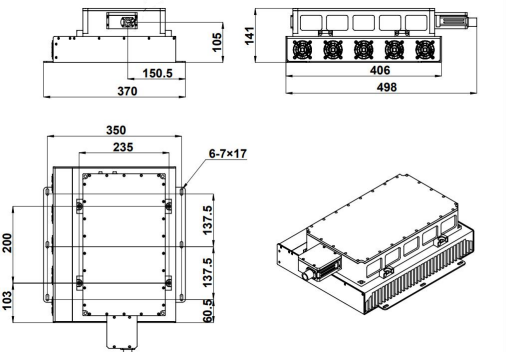
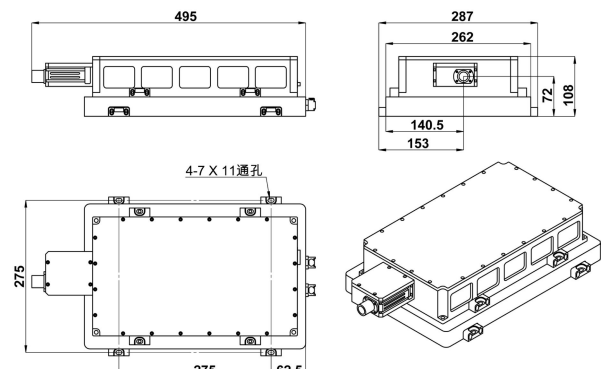
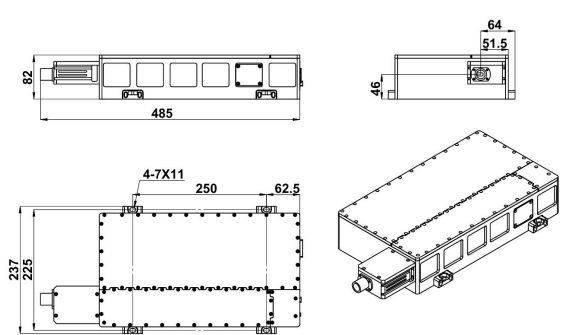
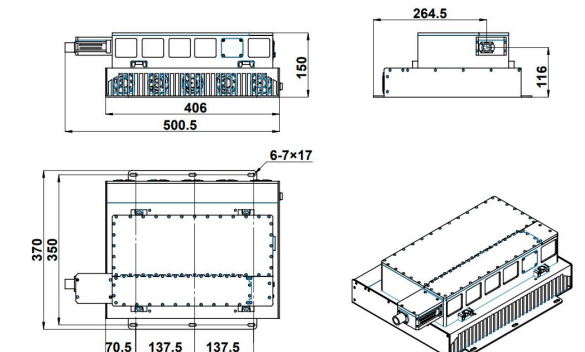
HIGH ENERGY DIODE PUMPED ALL-SOLID-STATE PASSIVELY LASER

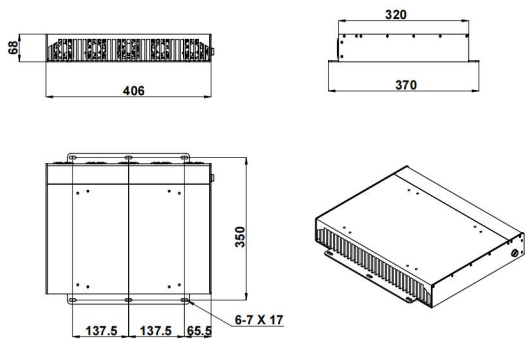
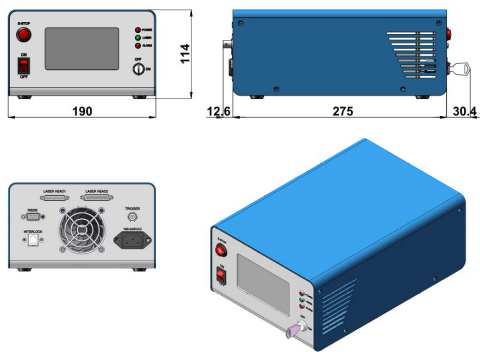
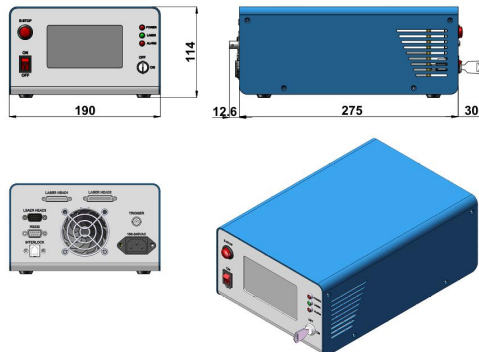
All-solid-state passive lasers, which feature high peak power and short pulse duration, are widely used in scientific research, laser micromachining, lidar ranging, environmental monitoring, laser ultrasonic testing, and LIBS (Laser-Induced Breakdown Spectroscopy).



SPECIFICATIONS

| Wavelength (nm)                     |                  | 213±1                  |      |      |        | 266±1 |      |      |        |              |
|-------------------------------------|------------------|------------------------|------|------|--------|-------|------|------|--------|--------------|
| Operating mode                      |                  | Passively              |      |      |        |       |      |      |        |              |
| Average power (mW) <sup>1</sup>     |                  | ~50                    | ~40  | ~30  | ~20    | ~100  | ~100 | ~100 | ~60    | ~80          |
| Single pulse energy (μJ)            |                  | ~0.5                   | ~1   | ~7.5 | ~20    | ~1    | ~2.5 | ~25  | ~60    | ~80          |
| Pulse duration (ps)                 |                  | ~500                   | ~700 | ~800 | ~400   | ~500  | ~700 | ~800 | ~400   | ~500         |
| Peak power (kW)                     |                  | 1                      | 1.4  | 7.5  | 50     | 2     | 3.5  | 25   | 150    | 160          |
| Rep. rate (kHz)                     | Int <sup>2</sup> | /                      | /    | 1-4  | 0.01-1 | /     | /    | 1-4  | 0.01-1 | 0.01-1       |
|                                     | Ext <sup>3</sup> | /                      | /    | 1-4  | 0.01-1 | /     | /    | 1-4  | 0.01-1 | 0.01-1       |
|                                     | QCW <sup>4</sup> | ~100                   | ~40  | /    | /      | ~100  | ~40  | /    | /      | /            |
| Power stability (rms, 4 hours ±3°C) |                  | <5%, <3%               |      |      |        |       |      |      |        |              |
| Transverse mode                     |                  | Near TEM <sub>00</sub> |      |      |        |       |      |      |        |              |
| Beam diameter at the aperture (mm)  |                  | ~1.5                   |      |      |        |       |      |      |        |              |
| Beam divergence, full angle (mrad)  |                  | <1.5                   |      |      |        |       |      |      |        |              |
| Warm-up time (minutes)              |                  | <5                     |      |      |        |       |      |      |        |              |
| Beam height from base plate (mm)    |                  | 46                     |      | 37   |        | 46    |      | 37   |        |              |
| Cooled method                       |                  | Fan cooled             |      |      |        |       |      |      |        | Water cooled |
| Operating temperature (°C)          |                  | 10-35                  |      |      |        |       |      |      |        |              |
| Power supply (100-240VAC)           |                  | PSU-S-HP               |      |      |        |       |      |      |        |              |
| Expected lifetime (hours)           |                  | >10000                 |      |      |        |       |      |      |        |              |

|                                                                                                                                                                                             |                                                                                                                                                                                                    |                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>LASER HEAD<sup>5</sup></b><br/>(0.01-4kHz)</p>  <p>480(L) × 247(W) × 73(H) mm<sup>3</sup>, 8.5kg</p> | <p><b>LASER HEAD</b><br/>(0.01-4kHz; Fan cooled)</p>  <p>498(L) × 370(W) × 141(H) mm<sup>3</sup>, 19.0kg</p>     | <p><b>LASER HEAD</b><br/>(MPL-S-266-HP@0.01-4kHz; Water cooled)</p>  <p>495(L) × 287(W) × 108(H) mm<sup>3</sup>, 18.0kg</p> |
| <p><b>WATER CHILLER (WCH-580)</b></p>  <p>253.2(L) × 363.8(W) × 240.6(H) mm<sup>3</sup>, 11.0kg</p>       | <p><b>LASER HEAD<sup>5</sup></b><br/>(40&amp;100kHz)</p>  <p>485(L) × 237(W) × 82(H) mm<sup>3</sup>, 11.0kg</p> | <p><b>LASER HEAD</b><br/>(40&amp;100kHz; Fan cooled)</p>  <p>500.5(L) × 370(W) × 150(H) mm<sup>3</sup>, 21.5kg</p>         |

| HEATSINK(TC-HP-FS)                                                                                                                  | POWER SUPPLY (PSU-S-HP@0.01-4kHz) <sup>6</sup>                                                                                       | POWER SUPPLY (PSU-S-HP@40&100kHz) <sup>6</sup>                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|  <p>406(L)×370(W)×68(H) mm<sup>3</sup>, 10.5kg</p> |  <p>318(L)×190(W)×114(H) mm<sup>3</sup>, 3.2kg</p> |  <p>318(L)×190(W)×114(H) mm<sup>3</sup>, 3.2kg</p> |

- 1 Average power (mW)= Single pulse energy (μJ)\* Rep. rate(kHz)
- 2 The frequency is selectable from one or five discrete values within the range.
- 3 External triggered.
- 4 The rep.rate is a free running value.
- 5 The laser head needs to be used on a heat sink with good heat dissipation.
- 6 Output power adjustable 10-100%; RS232 control optional.