

Q-Switched DPSS Laser

Key Features

- Ultra Compact
- High Reliability
- Superior Performance
- Long Lifetime



Superd

AOTK Superd lasers are ultra compact, continuous wave, double thermoelectric (TE) cooled, over-temperature and over-current protection, diode-pumped all-solid-state of Q-switched laser.

All solid state Q-switched laser at 532, 1053, 1064, 1319nm has the features of high peak power, high repetition rate, and short pulse duration, which is widely used in industry (marking on the diamond or stone), teaching of nonlinear Optics, experiments of generating 532nm, 355nm, or 266nm laser, fiber communication, etc.

Superd-S Model Specifications

| Wavelength (nm) | 532 | 1053 | 1064 | 1319 |
|-------------------------------|--|--|-------|-------|
| Operating Mode | Q-switched Pulsed Laser | | | |
| Single Pulse Energy (μJ) | 1-2 | ~15 | ~10 | ~10 |
| Pulse Duration (ns) | ~15 | ~10 | ~10 | ~10 |
| Peak Power (W) | ~100 | ~1500 | ~1000 | ~1000 |
| Rep. Rate (KHz) | Controllable | Specified One rep. rate, such as 1k, 2k, 3k, up to 4kHz, with stable laser pulses emitting (stable pulse energy, peak, duration and period). | | |
| | Uncontrollable | Undefined rep. rate among 5k-20kHz and unstable laser pulse emitting. Suitable for the applications only needing high peak power pulses. | | |
| Average Power (mW) | Average power (mW) = Single pulse energy (μJ) * Rep. rate (kHz) | | | |
| Average Power Stability | <3%, <5% (over 4 hours) | | | |
| Transverse Mode | TEM ₀₀ | | | |
| Warm-up Time (minutes) | <15 | | | |
| Beam Parameters | M ² Factor: <1.2 Divergence: <1.5 mrad Beam Diameter: ~2 mm | | | |
| Dimensions of Laser Head (mm) | 140.8(L) × 73(W) × 46.2(H) | | | |
| Beam Height From Base (mm) | 24.8 | | | |
| Net Weight of Laser Head (kg) | 0.65 | | | |
| Power Supply | 110 or 220 VAC Input Dimensions: 206(L)×137(W)×76(H) Net Weight: 3kg | | | |
| Operating Temperature (°C) | 10-35 | | | |
| Expected Lifetime (hours) | 10000 | | | |
| Warranty Time | 1 year | | | |



Superd -M Model Specifications

| | | | | |
|--------------------------------|----------------|--|------------|----------|
| Wavelength (nm) | | 532 | 1053 | 1064 |
| Operating Mode | | Q-switched Pulsed Laser | | |
| Single Pulse Energy (μ J) | | 3-10 | 30-100 | 3-10 |
| Pulse Duration (ns) | | ~15 | ~10 | ~15 |
| Peak Power (W) | | 300-1000 | 3000-10000 | 300-1000 |
| Rep. Rate (KHz) | Controllable | Specified One rep. rate, such as 1k, 2k, 3k, up to 4kHz, with stable laser pulses emitting (stable pulse energy, peak, duration and period). | | |
| | Uncontrollable | Undefined rep. rate among 5k-20kHz and unstable laser pulse emitting. Suitable for the applications only needing high peak power pulses. | | |
| Average Power (mW) | | Average power (mW) = Single pulse energy (μ J) * Rep. rate (kHz) | | |
| Average Power Stability | | <3%, <5% (over 4 hours) | | |
| Transverse Mode | | Near TEM ₀₀ | | |
| Warm-up Time (minutes) | | <15 | | |
| Beam Parameters | | M ² Factor: <1.5 Divergence: <2.0 mrad Beam Diameter: ~3 mm | | |
| Dimensions of Laser Head (mm) | | 116(L) × 73(W) × 46.2(H) | | |
| Beam Height From Base (mm) | | 25.0 | | |
| Net Weight of Laser Head (kg) | | 0.65 | | |
| Power Supply | | 110 or 220 VAC Input Dimensions: 238(L) × 146 (W) × 94(H) mm ³ Net Weight: 2.9kg | | |
| Operating Temperature (°C) | | 10-35 | | |
| Expected Lifetime (hours) | | 10000 | | |
| Warranty Time | | 1 year | | |

Warranty

AOTK offers a limited warranty for all laser systems. AOTK diode-pumped solid state lasers are warranted to be free of defects in materials and workmanship for 12 months from the date of shipment. For full details of this warranty coverage of further products information, please refer to the Service and Support section at www.AOTK.com, or contact your local Sales or Service representative.

Laser safety and electrical safety:

Caution! Visible and invisible laser radiation is extremely dangerous. Avoid eye or skin exposure to direct radiation or diffuse reflection. Most AOTK laser systems fall into class III or class IV laser classification. Most laser systems utilize different level AC and DC voltage in both laser head and power supply. All AOTK products are designed in a compact package.

NOTES

1. Due to our continuous product improvement program, specifications may change without notice.
2. Specifications apply to operation at the wavelength noted.
3. All statements, technical information and recommendations related to the products herein are based upon information believed to be reliable or accuracy or completeness thereof is not guaranteed, and no responsibility is assumed for any inaccuracies. The user assumes all risks and liability whatsoever in connection with the use of a product or its application, AOTK reserves the right to change at any time of a product offered for sale herein. AOTK makes no representations that the products herein are free from any intellectual property claims of others. Please contact AOTK for more information.