

JEWEL LASER



The Jewel DPSS Lasers

The Jewel Laser
Diode Pumped Q-switch
Nd: YAG laser

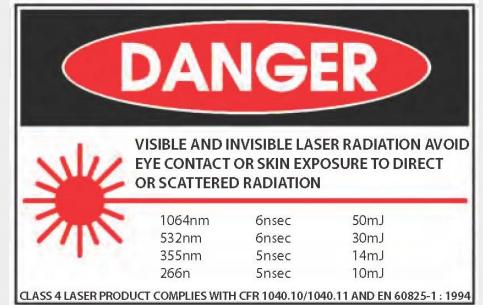
The Jewel is a rugged, monolithic design, air cooled, diode pumped laser, supplying 15mJ energy, with rep rates up to 20Hz. Reliable, light-weight, compact with easy to swap components make the Jewel ideal for commercial and OEM applications.

FEATURES:

- Compact, monolithic resonator
- Efficient, reliable diode pump
- Excellent shot to shot stability
- Integrated electronics and thermal management
- High efficiency pumphead, 20Hz less than 5W
- USB standard with optional Bluetooth

ADDITIONAL INFORMATION

| | |
|--|--------------------------------------|
| Laser Resonator (w/o electronics): | |
| Size | 35mm x 95mm x 25mm |
| Temperature Range | 15/30°C, Conductively cooled |
| Optical Laser (w/ integrated electronics & thermal management) | |
| Size | 82mm x 180mm x 60mm |
| Operational Temperature Range | 15/30°C, Internal thermal management |
| Storage Temperature Range | 10/50°C |
| Power Requirements | 36VDC, 25 to 50 |
| Diode Lifetime | 300,000,000 pulses |



TECHNICAL SPECIFICATIONS

| | Std | HiRate | HiPower |
|--|---------|-----------------------|---------|
| Rep Rate (Hz) | 1 to 10 | 1 to 20 40Hz Burst | 1 to 4 |
| Energy per Pulse (mJ) | | | |
| 1064nm | 15 | 10 | 20 |
| 532nm | 6 | 4 | 10 |
| 355nm | 3 | 2 | 5 |
| 266nm | 2 | 1.5 | 4 |
| Energy Stability (% RMS) | | | |
| 1064nm | <2.0 | <2.5 | <1.5 |
| 532nm | <2.5 | <3.0 | <2.2 |
| 355nm | <3.0 | <3.5 | <2.5 |
| 266nm | <3.0 | <3.5 | <2.5 |
| Energy Variance (% (max-min)/(max+min)) | | | |
| 1064nm | <5.0 | <6.0 | <4.0 |
| 532nm | <7.0 | <8.0 | <6.0 |
| 355nm | <8.0 | <10.0 | <7.5 |
| 266nm | <8.0 | <10.0 | <7.5 |
| Pulse Duration (ns) | | | |
| 1064nm | 12 | 12 | 8 |
| 532nm | 11 | 11 | 7 |
| 355nm | 10 | 10 | 6 |
| 266nm | 10 | 10 | 6 |
| Timing Jitter (±ns) | <2 | | |
| Beam Divergence (mrad) | | | |
| 1064nm | <2.5 | <2.5 | <2.5 |
| 532nm | <2.0 | <2.0 | <2.0 |
| 355nm | <1.8 | <1.8 | <1.8 |
| 266nm | <1.8 | <1.8 | <1.8 |
| Beam Diameter (mm) | 3.2 | 3.2 | 3.2 |