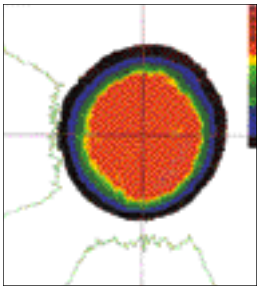
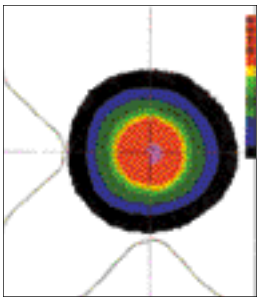
Continuum

Leopard™ High Energy Picosecond Nd:YAG Laser



Relay Imaged 355nm Beam



Oscillator output

Leopard Features & Benefits

Patented Diffraction Filtered Unstable Resonator for Unparalleled Beam Quality US Patent #US5065407

Passive Negative Feedback for Excellent Energy Stability

Fully Solid State Model Available Patent Pending #09/452,661

Serrated Aperture Relay Imaging for Smooth Flat-top Output Beam Designed for Pumping Continuum OPGs

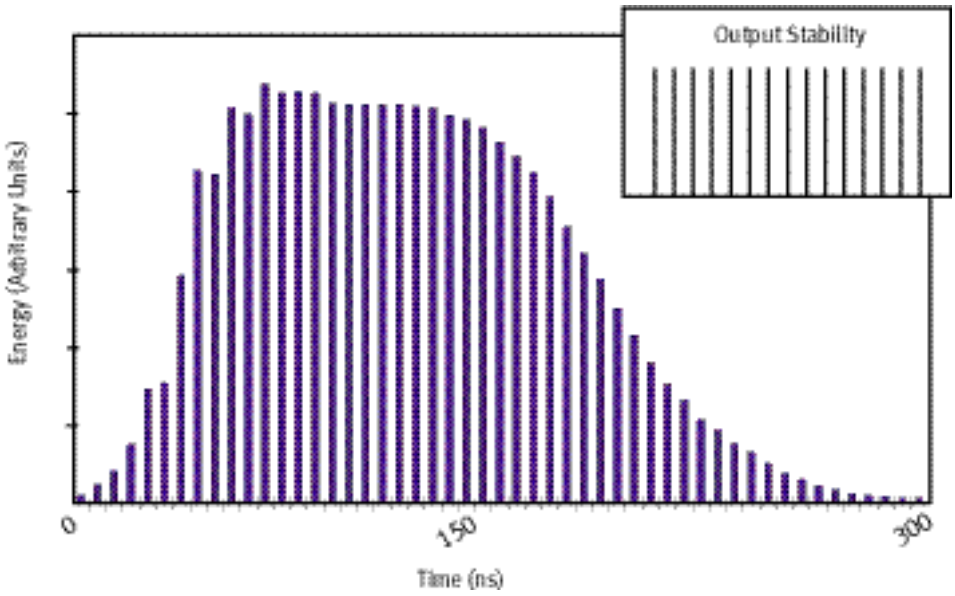
2 Pulse Widths Available

Flashlamp Pumped Nd:YAG

Leopard™ Specifications

DESCRIPTION	Leopard D-10	Leopard D-20	Leopard SS-10	Leopard SS-20
Pulsewidth (psec)[1]	< 20	< 20	120 ±20	120 ±20
Energy (mJ)				
1064 nm	33	30	250	230
532 nm	15	14	125	115
355 nm	11	10	80	70
266 nm	4	3	25	23
Repetition Rate (Hz)	10	20	10	20
Stability (% RMS)[2]	1.5	1.5	2.5	2.5
Beam Diameter (mm)	< 10	< 10	< 10	< 10
Divergence (mrads)[3]	0.4	0.4	0.4	0.4
Contrast Ratio[4]	40:1	30:1	40:1	30:1
Jitter (µs)[5]	± 10	± 10	± 10	± 10
Pretrigger (ns)[6]	> 100	> 100	> 100	> 100
Pretrigger Jitter (ns)	< 1	< 1	< 1	< 1

NON CAVITY DUMPED INTERCAVITY PULSE TRAIN OF THE LEOPARD SS



Leopard Series - High Energy Picosecond Nd:YAG Lasers.

The new Leopard series picosecond lasers from Continuum represents the highest level of technology available in a commercial system. The passive negative feedback employed in the oscillator allows for controlled energy extraction rates from the gain media resulting in exceptionally long and stable pulse trains.

The Leopard D provides the shortest pulses available without the high cost of a regenerative amplifier.

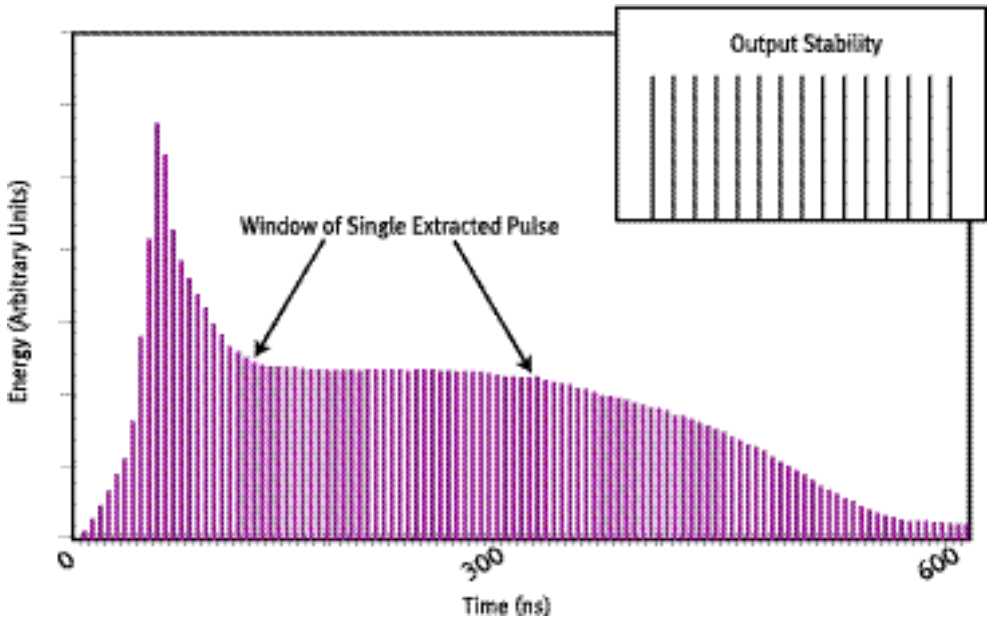
The use of a solid state saturable absorber in the Leopard SS spells the end of messy dangerous dyes resulting in the most turnkey, modestly priced, picosecond laser available.

NOTES

1. FWHM, with better than 5% reproducibility
2. For 1064 nm
3. Full angle for 86% of energy
4. Peak to peak with respect to residual pulses
5. With respect to lamp pulse
6. Time between cavity build up detection to light output

NON CAVITY DUMPED INTERCAVITY PULSE TRAIN OF THE LEOPARD D

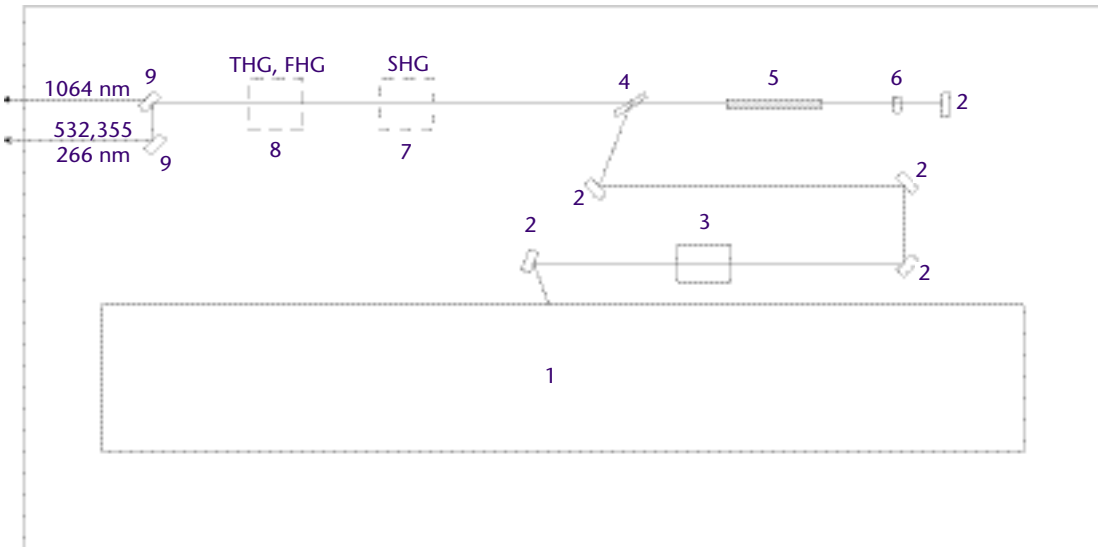
Continuum



Mechanical and Utilities

Size	Optical Head (L x W x H)	1220 x 610 x 364 mm (48 x 24 x 14.3 in.)
	Power Supply (L x W x H)	715 x 621 x 1145 mm (28.2 x 24.5 x 45.1 in.)
Water	Service	1-3 GPM @ 40-60 PSI
	Temperature	22.3 °C (70 °F) Max. (Higher flow for higher temperature)
Electrical Service (Specify on Order)		220 or 240 V, Single Phase, 8-15 A 208 V, 3 Phase, 6-10 A/Phase
Room Temperature		18-30 °C
Umbilical Length		3.8 m (12.5 ft.)

LEOPARD OPTICAL LAYOUT



1. Ultrastable Picosecond Oscillator
2. 1064 nm Turning Mirror
3. Serrated Aperture Relay Imaging
4. Polarizer
5. Amplifier
6. Waveplate or Faraday Rotator
7. Optional SHG
8. Optional THG or FHG
9. Separation Optics

ISO 9001 Certified

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