

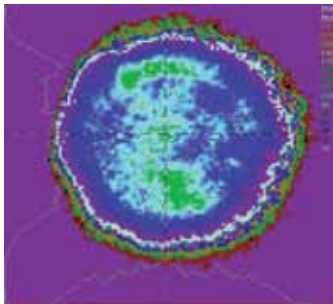
YG980 Series

High energy pulsed Nd:YAG lasers
with excellent beam quality
High stability & brightness

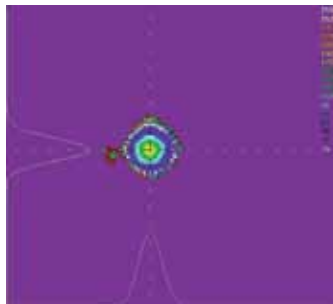


- 1064, 532, 355, 266 and 213 nm available with automatic harmonic selection
- Easy to use
- 1 or 2 amplifiers with birefringence compensation
- Linewidth: 0.003 cm^{-1} with SLM option (Single Longitudinal Mode)
- Temperature stabilized
- 1 ns rise time photodiode for pulse visualization

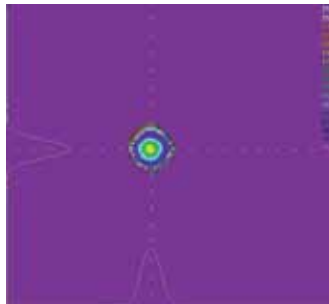
YG981E-10 (1.6 J @ 1064 nm, 10 Hz)



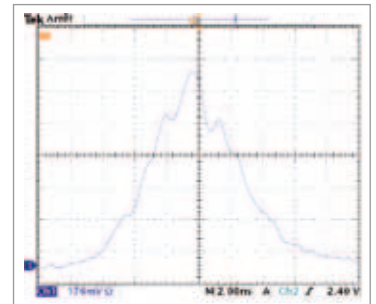
Near field beam profile @ 1064 nm



Far field beam profile @ 1064 nm



Far field beam profile @ 532 nm



Temporal profile @ 1064 nm



* YG982

Specifications

MODEL	YG981	YG981C			YG981E			YG982C	YG982E
REPETITION RATE¹ (Hz)	50	10	20	30	10	20	30	30	10
ENERGY (mJ)									
1064 nm	500	1200	1050	900	1600	1600	1200	1500	2500
532 nm	170	600	520	350	820	780	550	700	1250
355 nm	85	280	240	200	490	420	280/340*	350/420*	850
266 nm	30	130	90	60	150	120	85	105	230
PULSE DURATION² (ns)									
1064 nm	8 - 11		6 - 8			8 - 11		8 - 11	9 - 12
BEAM DIAMETER (mm)									
1064 nm	≤6		≤10			≤10		≤10	≤13
DIVERGENCE³ (mrad)									
1064 nm	≤0.5		≤0.45	≤0.5		≤0.5		≤0.5	≤0.5
POLARIZATION⁴ RATIO (%)									
1064 nm	≥90	≥80	≥75	≥70	≥95	≥90	≥90	≥90	≥90
SPATIAL PROFILE									
Near field ⁵ (fit to Gaussian)	≥0.7		≥0.7			≥0.7		≥0.7	≥0.7
Far field ⁶ (fit to Gaussian)	≥0.9		≥0.9		≥0.95		≥0.9	≥0.9	≥0.9

* HE355: High Energy UV option

¹ Other repetition rates available on request

² Measured at FWHM with fast photodiode and 1 GHz scope ³ Full angle at 1/e² of peak

⁴ Horizontal @ 1064 nm – Vertical @ 532 nm – Horizontal @ 355 nm and @ 266 nm ⁵ Measured at 1 m from laser output

⁶ Measured at focal plane of a 2 m focus lens, least square fit to Gaussian (perfect fit = 1).

POWER DRIFT¹ (%)	1064 nm	± 2
	532 nm	± 4
	355 nm	± 5
	266 nm	± 10
ENERGY STABILITY² (%)	1064 nm	± 2
	532 nm	± 4
	355 nm	± 6
	266 nm	± 8
POINTING STABILITY³ (μrad)	1064 nm	< 50
	532 nm	< 50
	355 nm	< 50
	266 nm	< 50
JITTER⁴ (ns)	Standard	± 0.5
	SLM option	± 1
M², FOCUSABILITY (times diffraction limit)	10 - 20 Hz	≤ 2
	30 - 50 Hz	≤ 3
LINEWIDTH (cm⁻¹)	Standard⁵	≤ 0.7
	LNE⁶ intracavity etalon	≤ 0.1
	SLM⁷ injection seeding 11 ns	≤ 0.003
	SLM⁷ injection seeding 6 ns	≤ 0.005

¹ Over 8 hours for ΔT° ≤ ± 3°C

² Peak-to-peak, 100% of shots

³ Measured with Spiricon LBA-100, rms, on 200 pulses at the focal plane of a 1 m focus lens

⁴ With respect to Q-Switch trigger, at half-width of 500 accumulated shots

⁵ Measured at FWHM with a grating spectrometer with 0.045 cm⁻¹ resolution

⁶ Measured at FWHM with a grating spectrometer with 0.045 cm⁻¹ resolution, ≤ 15% energy reduction @ 1064 nm

⁷ Measured with a slow scan Fabry-Perot Etalon, ≤ 10% energy reduction @ 1064 nm and @ 532 nm, higher energy @ 355 nm.

SERVICE REQUIREMENTS

POWER	240 V (110 V on request) 16 to 20 A 50 - 60 Hz
WATER	12.5 l/mn, 5 - 20°C
PRESSURE IN	≤ 6 bars (88PSI)
PRESSURE OUT	≤ 3 bars (44PSI)
DIFFERENTIAL PRESSURE IN-OUT	≥ 3 bars (44PSI)

For more detailed information please visit
www.quantel-laser.com



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