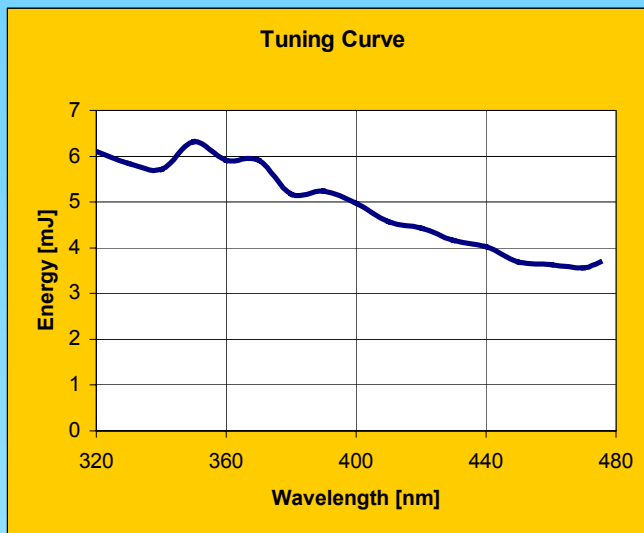




VIBRANT 266 I

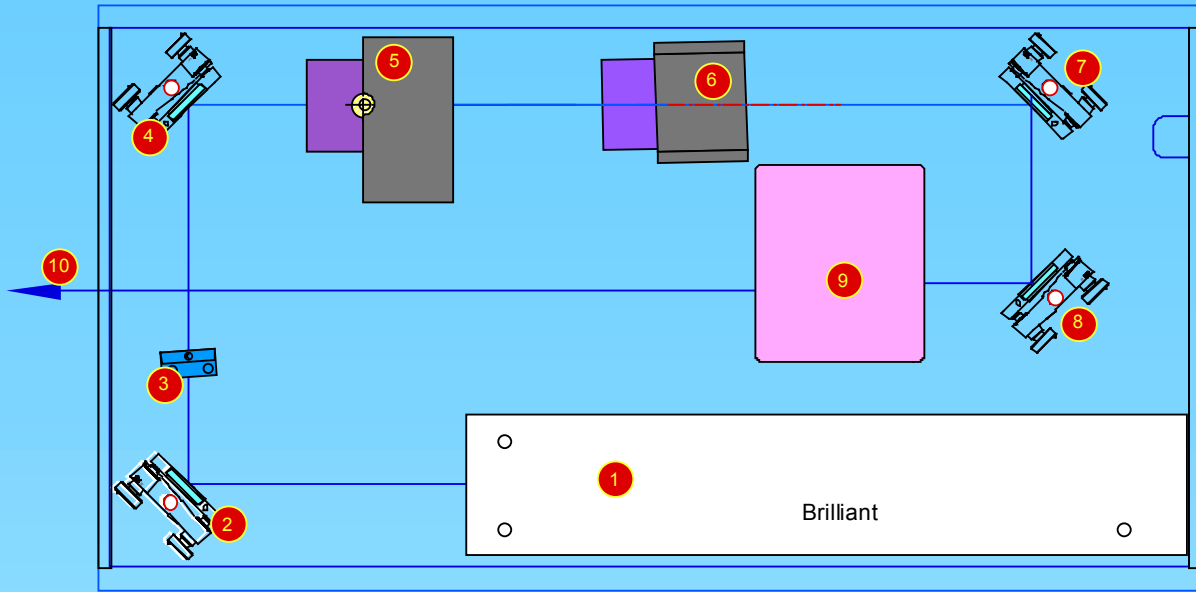
The VIBRANT is an integrated, turn-key Tunable Laser System. All the system components, including the pump laser, the OPO, and the control electronics are mounted on a single optical frame.

The VIBRANT 266 I incorporate a type I OPO pumped by the Fourth harmonics of the Brilliant laser at 266 nm. The patented MagicPrism OPO (US patent # 5276548) is Ring Oscillator resulting in high conversion efficiency. The walkoff and the beam steering are cancelled by the two crystal configuration, and the beam positioning is not affected by wavelength tuning. The Signal beam is separated from the Idler inside the OPO and the Idler is blocked.



VIBRANT 355 II	Specifications	Comments
Pump Laser	Nd:YAG, Q-Switched	Brilliant , by Quantel
Pump Wavelength	266 nm	Nominal Energy 50 mJ
Pulse Repetition Rate (PRR)	10 Hz	Variable, Single pulse to 10 Hz
Pulse length	5 ns	Nominal
Beam Diameter	6 mm	Nominal
External Trigger	Lamp and Q-Switch	Lamp has to operate at designed PRR
OPO Parameters		
Wavelength Tuning Range	320 – 470 nm	Only Signal Beam
OPO Peak Energy	> 5 mJ	See tuning graph
Spectral Linewidth	from 5 cm ⁻¹ @ 320 to >30 cm ⁻¹ @ 470 nm	
Beam Divergence	<10 mRad	Half Angle. Circular beam
Polarization	Horizontal	
Computer Control	All the laser and OPO functions	ON, OFF, Power, Rep-Rate, Tuning

Options	Comments
Access to Laser Wavelengths	532, and 1064 nm
Fiber Delivery	2 m fiber, mounted lenses, polishing kit
Computer controlled Harmonics and polarizer	Automatic selection of tuning range

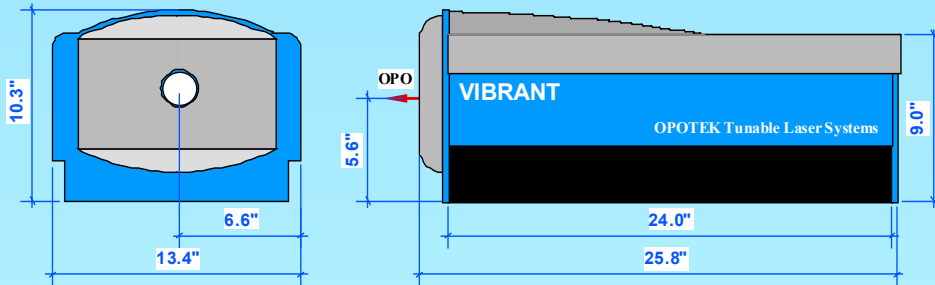


VIBRANT 266 I Schematic Lavout

- | | | | |
|---|---------------------------------|----|---------------------------------|
| 1 | Pump Laser, Brilliant (B) | 6 | Fourth Harmonic Generator (FHG) |
| 2 | Steering Mirror | 7 | Steering Mirror |
| 3 | Waveplate | 8 | Steering Mirror |
| 4 | Steering Mirror | 9 | MagicPrismOPO model UVIS |
| 5 | Second Harmonic Generator (SHG) | 10 | Output beam |

VIBRANT Dimensions

Approx. Weight: 50 lbs



Power Supply & Cooling Unit

Dimensions: 23"(H) x 13"(W) x 23"(L)
 Weight: 95 lbs
 Voltage: Single phase, 100V, 110V, 200V, 230V
 Input power: < 1 kWatt
 Cooling: Internal water to air heat exchanger.

DANGER

INVISIBLE AND OR VISIBLE LASER RADIATION -
 AVOID EYE OR SKIN EXPOSURE TO DIRECT OR
 SCATTERED RADIATION

ENERGY PER PULSE:	2 J MAX
PULSE DURATION:	3 - 20 ns
TUNABLE OUTPUT:	UV, VISIBLE, AND IR

CLASS IV LASER PRODUCT