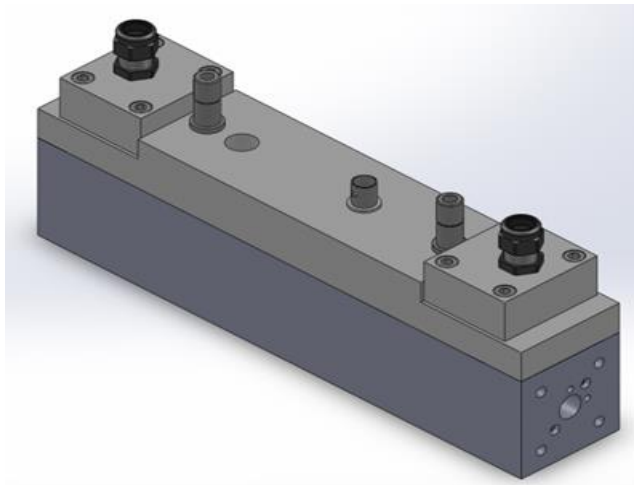


# 40 Watt 2.09 $\mu\text{m}$ SOLID-STATE RESONATOR



<b>Holmium</b>	
67	164.93032
<b>Ho</b>	
[Xe] 4f <sup>11</sup> 6s <sup>2</sup>	
175 pm	581.0 kJ·mol <sup>-1</sup>
3	8790 kg·m <sup>-3</sup>
1.23	1461/2720 °C

## Compact, Room-Temperature Water-Cooled, Flashlamp-Pumped Ho:YAG Resonator Assembly

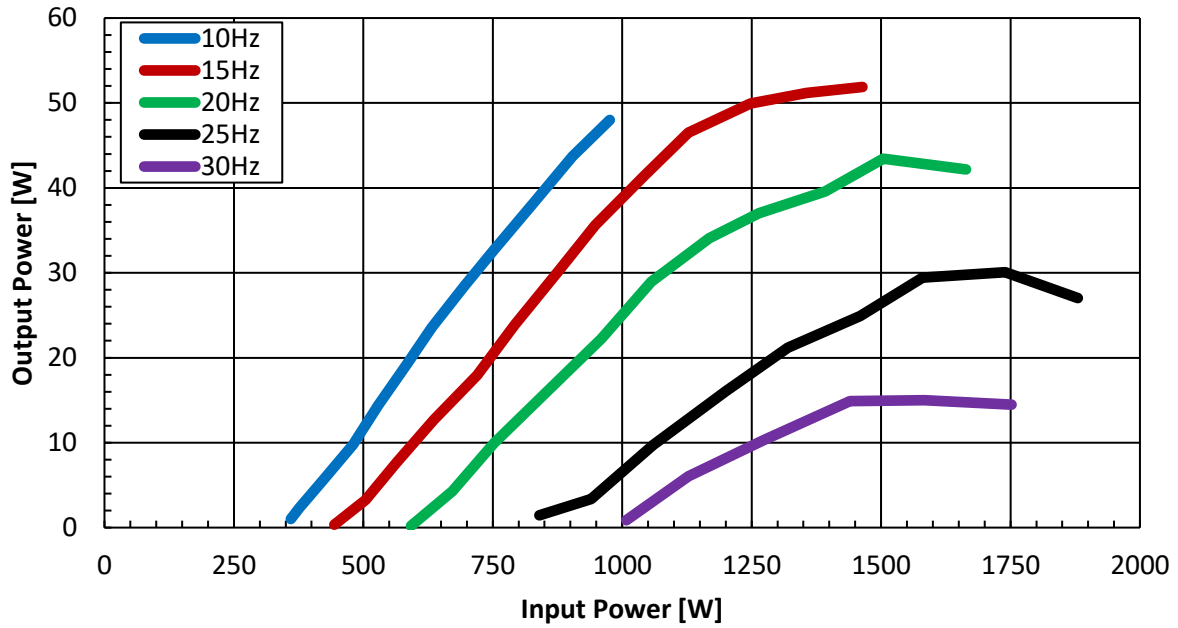
MegaWatt Lasers is pleased to offer off-the-shelf laser resonator assemblies. These resonators are intended for OEM's or R&D applications. Laser assemblies include: pump chamber, flashlamp, laser rod, trigger electronics, and resonator optics tailored for the specific application. This resonator assembly is perfectly suited as a laboratory laser which can easily transform into an OEM design. Also available are resonator assemblies using other solid-state laser media, such as Er:YAG, Er:Glass, Nd:YAG, Nd: Glass, Ruby, and Alexandrite. MegaWatt Lasers also offers custom resonators with average powers up to 60 W (2.09  $\mu\text{m}$ ) and 200 W @ (1.06  $\mu\text{m}$ ) as well as turnkey systems. Our Engineering department has considerable experience assisting OEM customers with custom as well as complete system designs.

**Table of Standard Specifications for R4X125C2-CTH**

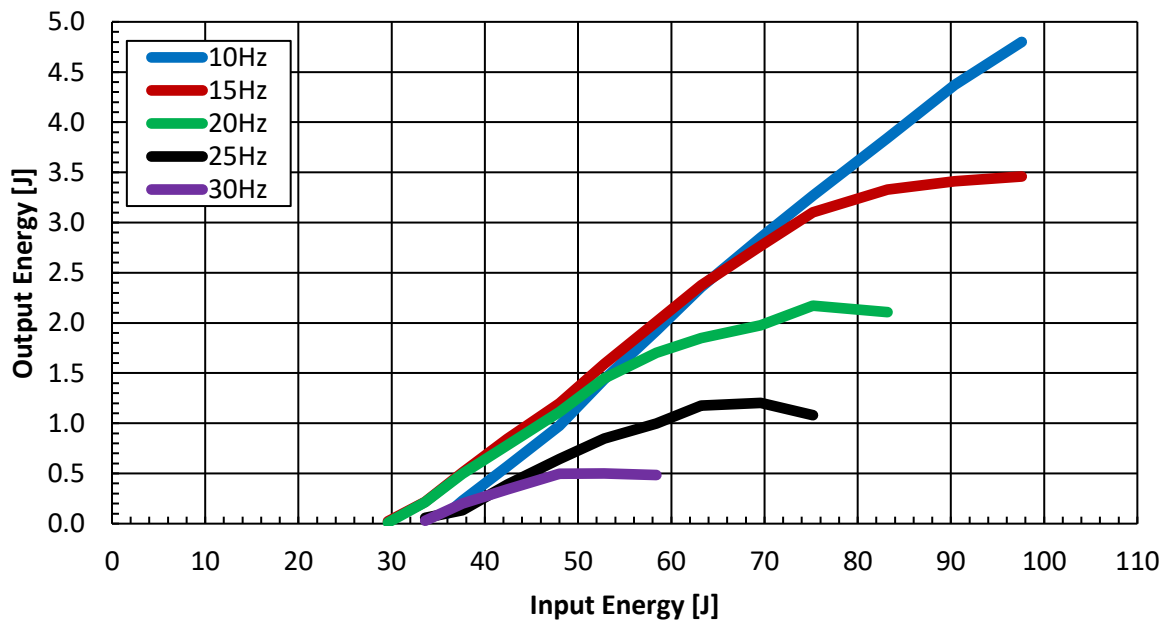
Parameter	Value	Unit	Notes
Wavelength	2.09	$\mu\text{m}$	
Resonator Output	40	W	@ 10 Hz & 500 $\mu\text{s}$
Lamp Voltage	700	V	@ 40 W & 500 $\mu\text{s}$ typical
Pulse Width Range	300 – 800	$\mu\text{s}$	
Coolant Temp	20	°C	Typical (deionized H <sub>2</sub> O)
Coolant Flow Rate	8	Liters/min	
Repetition Rate	5 – 30	Hz	
Dimensions	26.5 X 4.8 X 9.5	cm	
Pump Parameters			
Energy	$\leq 100$	Joules	
Power	$\leq 1800$	Watts	
Peak Power	$\leq 200$	kW	

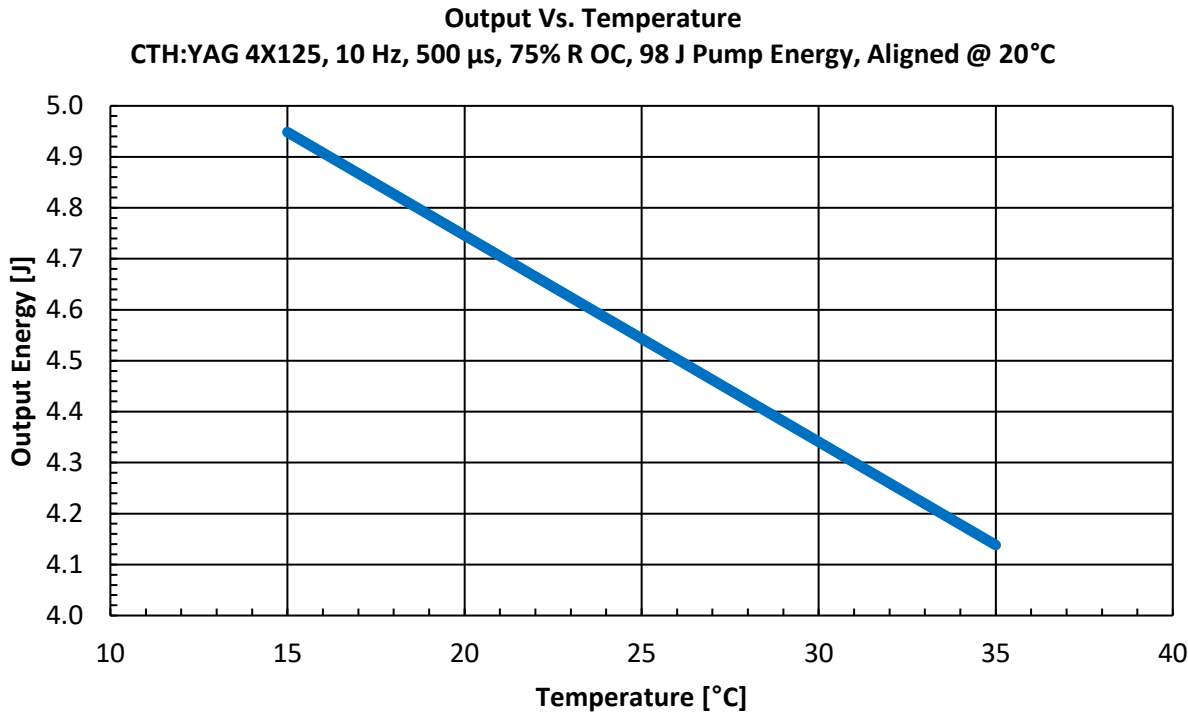
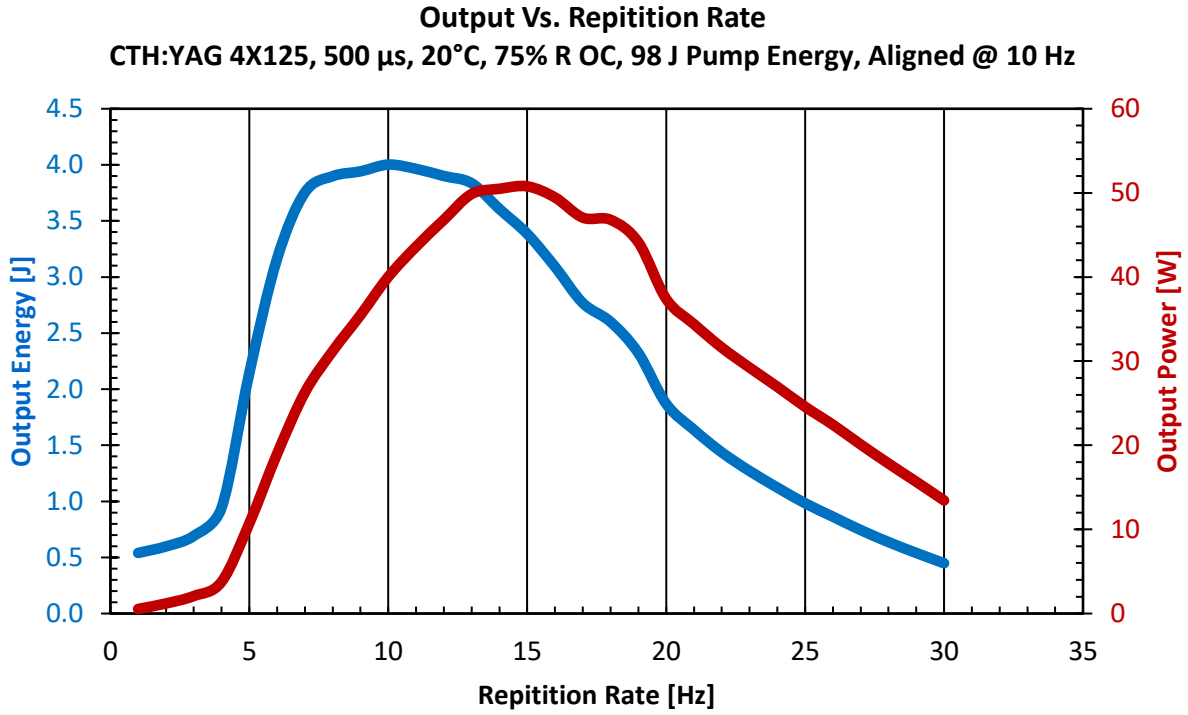


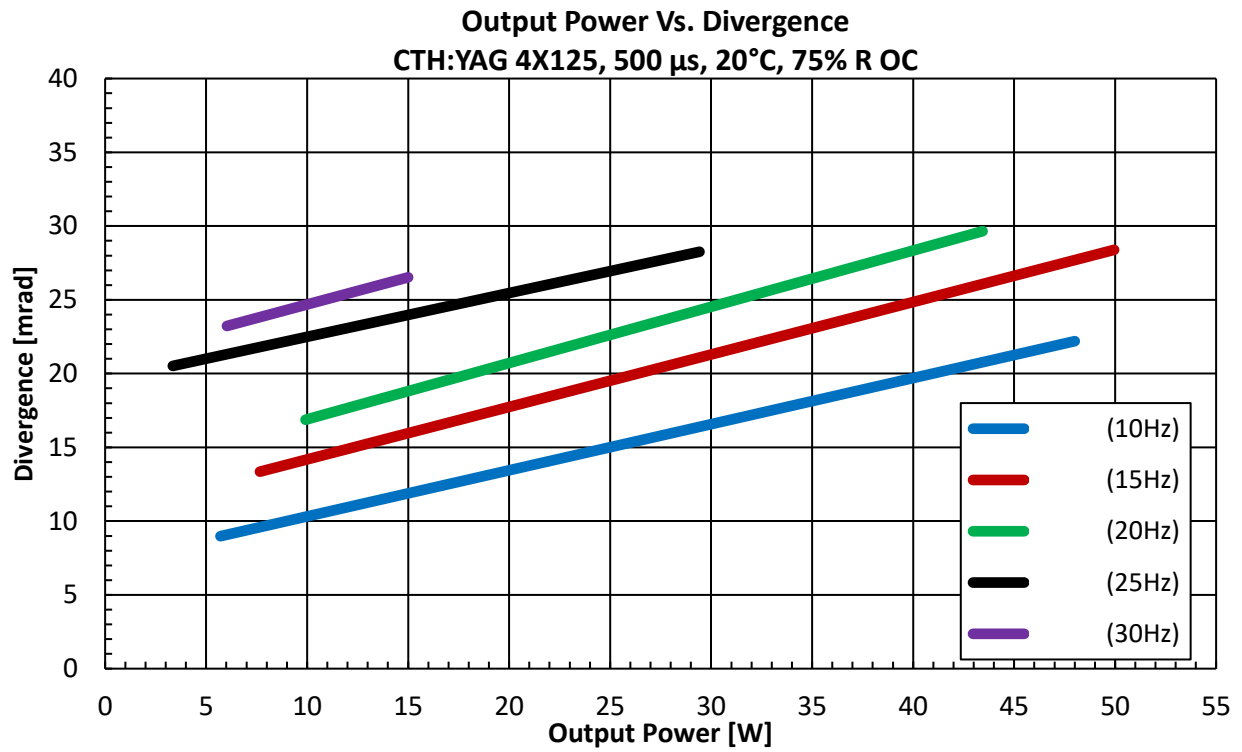
**Input Power Vs. Output Power**  
CTH:YAG 4X125, 500  $\mu$ s, 20°C, 75% R OC



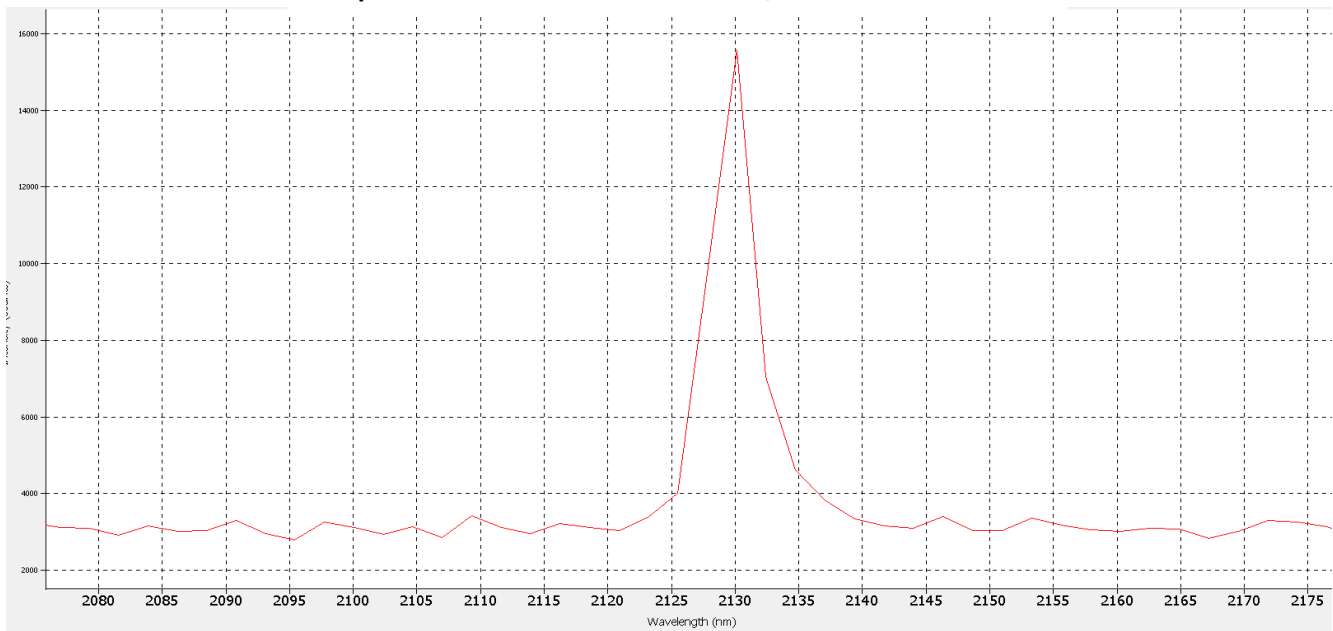
**Input Energy Vs. Output Energy**  
CTH:YAG 4X125, 500  $\mu$ s, 20°C, 75% R OC







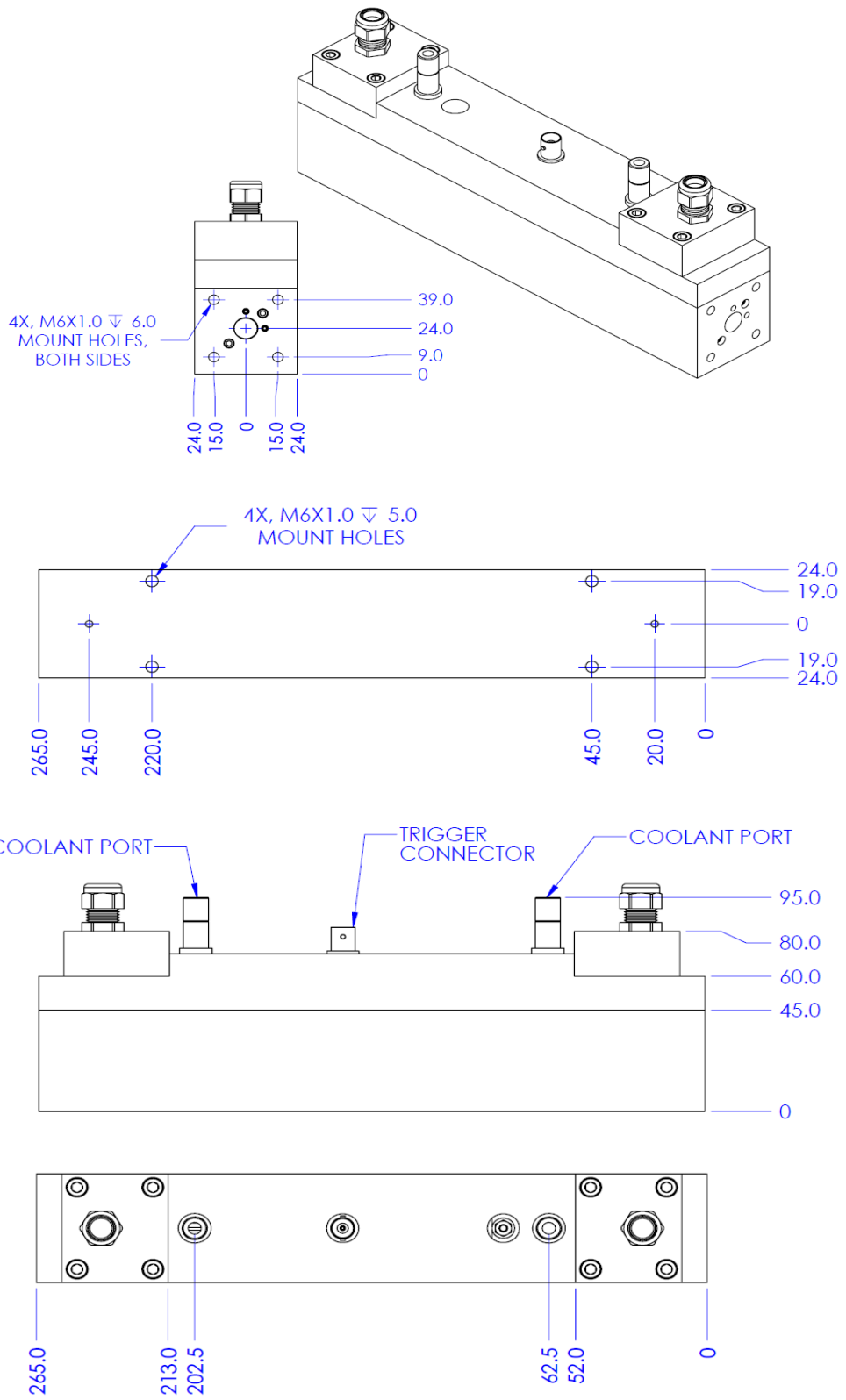
Spectral measurement of CTH:YAG, 4mm diameter rod



Pump Chamber	Output Coupler	Coolant Temperature	Repetition Rate	Pulse Width	Output Power
[Type]	[%]	[°C]	[Hz]	[ $\mu$ s]	[W]
4X125	82.5	18	10	500	33.7



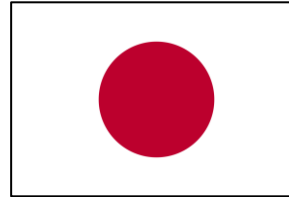
### Mechanical Interface





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