

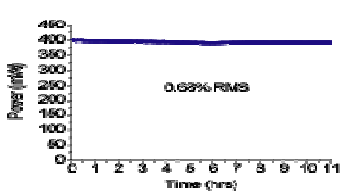
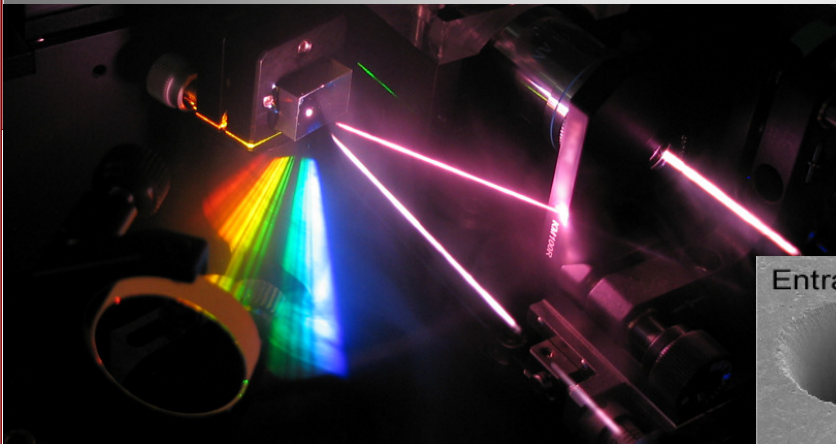
Griffin™/Cascade™/Halcyon™ Series

*Ti:sapphire ultrafast laser oscillators
unmatched value, versatility and turnkey performance*

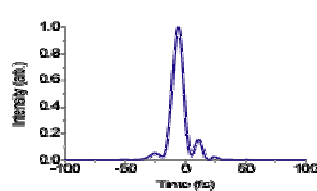
Griffin: Modelocked, 3–10nJ at >70nm, <12fs, 750–840nm (options for 700–900nm)

Cascade: Cavity dumped, 30 nJ at 2 MHz, <15 fs, rep rate 1kHz – 4MHz

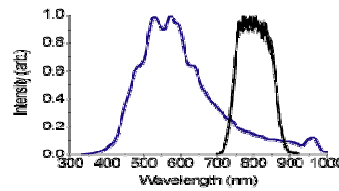
Halcyon: Repetition rate stabilized, <200 fs RMS jitter, <15 fs duration



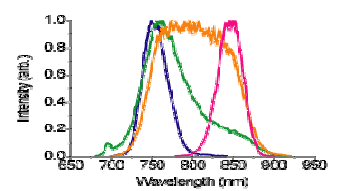
11 hr run with 10min warm-up



10.6fs compressed pulses



White light from Cascade™ Laser at 30nJ (blue) and input (black)



Griffin™ wavelength and bandwidth control

*Spectroscopy • Microscopy • Terahertz • OCT • Harmonic Generation •
Laser Machining • Amplifier Seeding • Continuum Generation*

	Griffin-3	Griffin-5	Griffin-7	Griffin-10	Griffin	Halcyon	Cascade-5	Cascade
	<i>Modelocked Laser</i> 350mW 3.9nJ Output	<i>Modelocked Laser</i> 550mW 6.1nJ Output	<i>Modelocked Laser</i> 750mW 8.3nJ Output	<i>Modelocked Laser</i> 900mW 10nJ Output	<i>Modelocked Laser</i> Pump Laser not included	<i>Repetition Rate Stabilized Laser</i>	<i>Cavity-Dumped Laser</i> Integrated Pump Laser	<i>Cavity-Dumped Laser</i> Pump Laser not included
Pulse Duration:	Sub-12fs* (center wavelength not tunable)						Sub-15fs when centered between 780-810nm	
	Sub-15fs (when centered between 780-810nm)							
	Sub-25fs (when centered between 750-840nm) Longer pulse option also available							
Wavelength Center:	750-840nm, with options for 700-900nm						770-810nm	
Bandwidth at 800nm:	>70nm FWHM guaranteed, >90nm FWHM typical						>65nm FWHM guaranteed >90nm FWHM typical 50nm FWHM minimum	
Avg. Power, 70nm FWHM [Energy]**	Up to 350mW [3.9nJ]	Up to 550mW [6.1nJ]	Up to 750mW [8.3nJ]	Up to 900mW [10.0nJ]	Depends on pump power	Depends on pump power	Up to 350mW [4.3nJ] for non-dumped output	
Avg. Power, >70nm FWHM [Energy]**	Up to 250mW [2.8nJ]	Up to 450mW [5.0nJ]	Up to 650mW [7.2nJ]	Up to 750mW [8.3nJ]				
Repetition Rate:	80 - 100 MHz, customer specified					76MHz to 95MHz specified by user's reference signal	80.5MHz for non-dumped output	
Pump Laser:	Integrated 3W pump	Integrated 5W pump	Integrated 7W pump	Integrated 10W pump	Pump Laser not included	Pump Laser not included	Integrated 5W Pump Laser	Pump Laser not included
Standard Repetition Rates:							40kHz, 80kHz, 200kHz, 400kHz, 800kHz, 2MHz, 4MHz	
Repetition Rates Option 1kHz:							1kHz, 2kHz, 5kHz, 10kHz, 20kHz, 50kHz, 100kHz	
Cavity Dumped Energy:							>30nJ	
Reference Signal:							Between 2,500MHz to 3,000MHz user-supplied harmonic of rep rate	
Jitter:							Less than 200fs rms requires clean reference source (spec. is conservative)	
*Sub-10fs also available **For 90MHz repetition rate								

