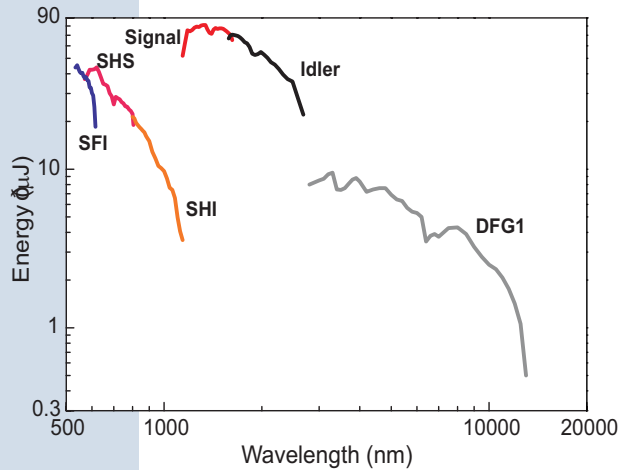


TYPICAL OUTPUT PERFORMANCE OF TOPAS 800-ps PUMPED WITH 0.49 mJ, 800 nm, 2 ps



TOPAS Model 800-ps is pumped by a fundamental harmonic of Ti:sapphire lasers and covers wavelength range from 1150 to 2600 nm. With optional frequency mixers this range can be extended from 189 nm to 20 microns.

**PUMP REQUIREMENTS**

Wavelength	770- 830 nm
Pulse width (FWHM)	1-4 ps
Pulse energy	0.2 to 5 mJ
Maximum average power	2 Watt
Polarization	horizontal
Spectral width	<1.2 times transform limit
Beam divergence	$M^2 < 1.5$
Pulse front tilt	<10% of pulsewidth
Pulse contrast	<5% of output energy in background
Energy instability	<3% peak-to-peak
Pulsewidth instability	<2% pulse-to-pulse
Spatial profile	Gaussian
Intensity modulation	<15%
Beam divergence	<1.2 x (diffraction limit)
Beam pointing instability	<0.1 x (diffraction limit)

**PERFORMANCE SPECIFICATIONS WITH 800nm/1 mJ/ 3 ps/ 6 cm<sup>-1</sup> PUMP PULSES AT 1kHz**

**OUTPUT FROM TOPAS**

Tuning range (signal+idler)	1150-2600 nm
Energy (signal+idler)	> 250 µJ at peak
Pulse duration	(0.7 to 1.0) x pump pulse width
Spectral width	<15 cm <sup>-1</sup>
Polarization	signal wave (1150-1600 nm) vertical idler wave (1600-2600 nm) horizontal
Energy instability	5% rms

**OUTPUT FROM OPTIONAL SECOND-HARMONIC/SUM-FREQUENCY GENERATOR SH OF SIGNAL (SHS) & SH OF IDLER (SHI)**

Tuning range	580-800 nm (SHS)	800-1150 nm (SHI)
Pulse energy	> 50 µJ at peak	
Spectral width	< 20 cm <sup>-1</sup>	
Polarization	horizontal(580-800nm)	vertical (800-1150nm)

