Pulse Compressor

Applications

- Greater than 80 GHz OTDM system
- Investigation of optical nonlinearities

Features

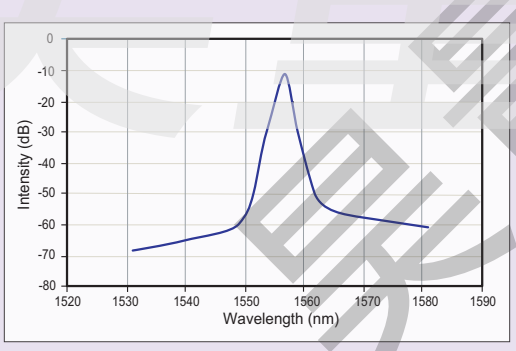
- Wavelength range from 1545 to 1560 nm
- Pulse compression to 300 fs from 3 ps input pulse
- Post compression output powers higher than 100 mW
- Near transform-limited output
- Pedestal after compression less than 3%
- Post-compression spectral width larger than 9 nm

The pulse compressor (PCS) consists of a fiber amplifier unit and a pulse compressor unit. It has excellent stability and reliability with turnkey operation. Along with a portable design, Calmar's advanced simulation software enables us to design PCS according to the end user's laser specification. The pulse width can be compressed from 3 ps to 300 fs with a minimal pedestal. The compressed pulse is near transform-limited or near soliton-like shape. An average output greater than 100 mW is achieved with the built-in amplifier. PCS can also be used as a stand alone Erbium Doped Fiber Amplifier (EDFA) when pulse compression is not required.

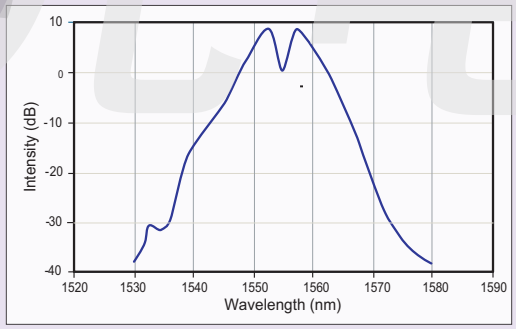
Technical Specifications

Model Number	PCS-1	PCS-2
Pulse Width Pre-Compression (ps)	3.0	1.5
Pulse Width Post-Compression (fs)	300	
Input Signal Power (mW)	1 ~ 10	
Input Wavelength Range (nm)	1545 ~ 1560	
Input Repetition Rate Range (GHz)	2 ~ 20	10 ~ 50
Spectral Width (nm)	>9	
Output Power (mW)	100 @ 20 GHz	100 @ 40 GHz
Pedestal (%)	<3	
Operating Temp (°C)	0 ~ 50	
Operating Voltage (VAC)	85 ~ 264	
Dimensions (cm)	34(w) x 42(d) x 9(h)	

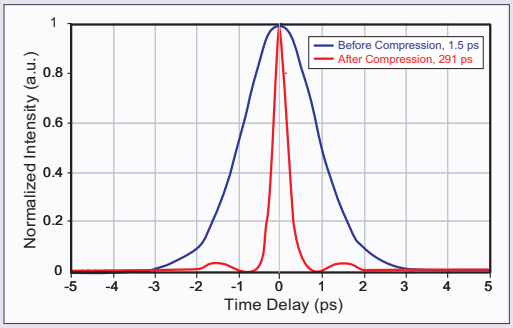
Due to our continuous improvement program, specifications are subject to change without notice.



Pre-Compression Optical Spectrum Trace
Spectral Width 1.2 nm (FWHM)



Post-Compression Optical Spectrum Trace
Spectral Width 9.8 nm (FWHM)



Autocorrelation Trace Corresponding to
Pre- and Post- Compression Pulses