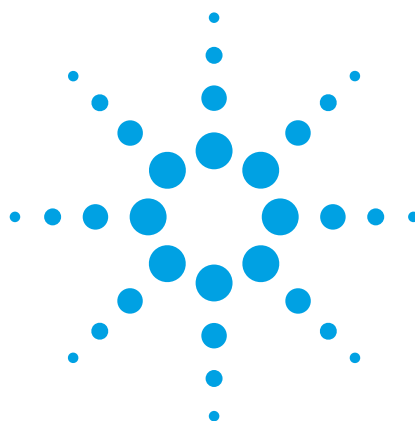
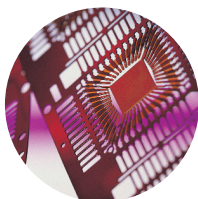




Optical Component Test

Agilent Compact Tunable Lasers



- High optical output power: $> +13$ dBm
- New feature to suppress SBS (Stimulated Brillouin Scattering)
- Compact size and wide tuning range in S-, C- and L-band



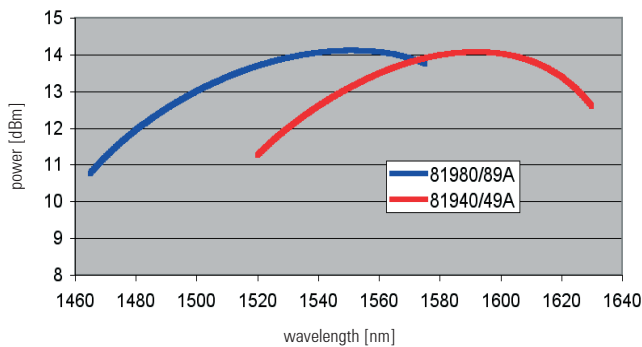
Agilent Technologies

Agilent 81980A/81940A/81989A/81949A

Compact Tunable Laser Sources

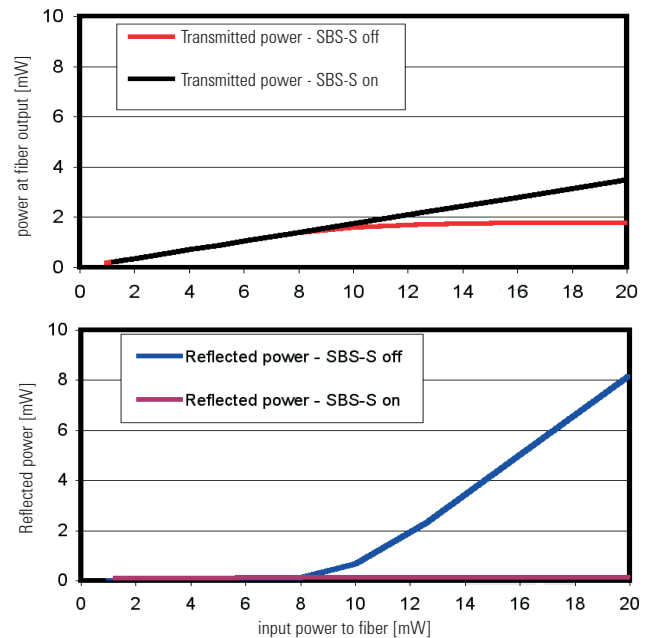
The 819xxA tunable lasers are a family of plug-in modules for Agilent's 8163A/B, 8164A/B and 8166A/B mainframes. Their compact single-slot format makes them a flexible and cost-effective stimulus for single channel, multi-channel DWDM and other general purpose test applications.

High output power of more than +13 dBm



Each module covers a total wavelength range of 110 nm, either in the S+C-band (81980A and 81989A), or in the C+L-band (81940A and 81949A).

SBS suppression



Switching the SBS suppression feature on, the full optical power can be launched into the fiber without reflections induced by the SBS effect.

High output power of more than +13 dBm

Their output power of more than +13 dBm improves the test of all types of optical amplifiers and other active and passive components. It enables testing non-linear effects and helps to characterize next generation devices.

Suppression of Stimulated Brillouin Scattering

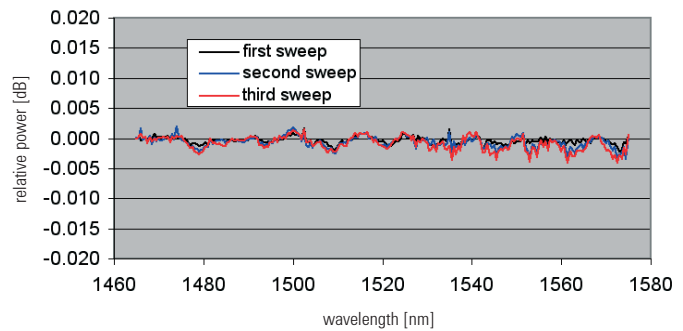
High laser power with a narrow linewidth causes light to be reflected along fiber by the SBS effect (stimulated Brillouin scattering). In fact, when exceeding a certain power, linewidth and fiber type dependent threshold, the power launched into the fiber is increasingly reflected so that the power at the end of the fiber reaches saturation. This limits the power that can be transmitted and makes the signal noisy.

Agilent's new SBS suppression feature modulates the wavelength of the laser, which increases the effective linewidth and thus increases the SBS threshold to higher power levels. This feature provides the full benefit of the high output power also attainable for long fiber applications such as transmission test systems as it enables the full power to be launched into the fiber link. A minimized residual amplitude modulation allows time-domain measurements such as eye-diagram and bit-error rate testing without any impairments induced by the SBS suppression feature.

The compact tunable laser sources 81980A/81940A/81989A/81949A fit into all mainframes of the lightwave solutions platform 8163A/B, 8166A/B and 8164A/B offering flexible and scalable test solutions with small footprint.

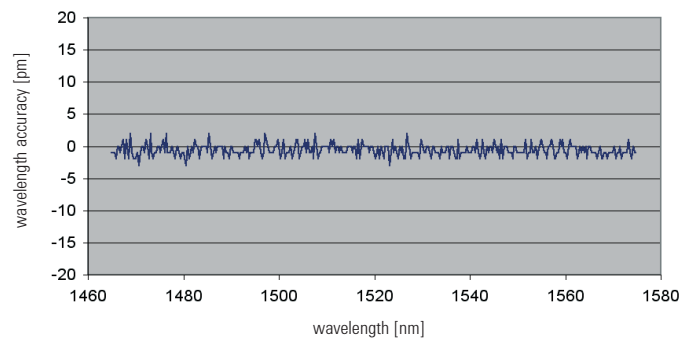


Power reproducibility



When making several swept measurements, the tunable laser reproduces the same power level consistently.

Absolute wavelength accuracy



The wavelength accuracy is determined by comparing the displayed wavelength of the tunable laser with the actual wavelength that is measured with a high performance wavelength standard.

Agilent 81980A/81940A Compact Tunable Laser Sources

Enhanced wavelength accuracy with built-in wavelength meter

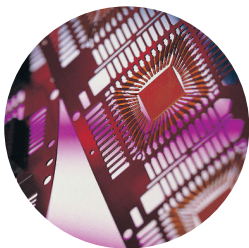
The 81980A and 81940A feature a built-in wavelength meter with a closed feedback loop. The active wavelength control results in enhanced wavelength accuracy. In continuous sweep mode, it allows dynamic wavelength logging to make measurements during the sweep.

Fast measurements in Continuous Sweep Mode

All 819xxA modules can be operated in the stepped mode that is usually used when measurements are carried out at certain wavelengths. The 81980A and 81940A can also be operated in the continuous sweep mode with dynamic wavelength logging to make measurements during the wavelength sweep, synchronized with Agilent's power sensor modules.

Excellent reproducibility with dynamic power control

The integrated dynamic power control loop ensures a high reproduction in power level. This allows highly repeatable measurements to reduce errors when comparing the results of several wavelength sweeps. As all compact tunable laser sources are mode-hop free over their entire tuning range, they achieve highly accurate measurements over wavelength.



Enabling service innovation manufacturing integration test speed, accuracy automation

Optical Component Test

Tunable Laser 81600B, 81480B, 81640B, 81680B	●	●	●		●	●	●	●	●	●	●	●							
Tunable Laser 81672B, 81482B, 81642B, 81682B,					●			●	●	●	●	●	●	●	●				
Compact Tunable Laser 81980A/81940A/81989A/81949A					●			●	●	●	●	●	●	●	●	●	●	●	
Distributed Feedback (DFB) Laser 81662A, 81663A													●	●	●			●	
Fabry-Perot Laser				●	●	●	●	●	●										
Power Meter 8163xB	●	●	●	●	●	●	●			●	●	●	●	●	●		●	●	●
Optical Heads						●		●	●	●	●	●					●	●	●
Return Loss Modules 81610A, 81611A, 81612A 81613A, 81614A			●	●	●	●	●	●	●	●	●	●	●						
Attenuator 81560A/61A,66A, 67A 81570A/71A/73A/76A/77A														●	●	●	●	●	●
Switches 8159x	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Polarization Controller 8169A	●	●	●		●		●	●	●	●	●	●	●	●		●			
Polarization Controller 11896A						●			●	●	●	●	●	●	●				
Digital Communications Analyzer (DCA)																	●	●	●
Bit Error Ratio Tester (BERT)																	●	●	●
SONET/SDH Tester																		●	●
Optical Spectrum Analyzer (OSA)														●	●	●	●	●	●
Mainframes 8163A/B 8164A/B 8166A/B	●	●	●	●	●		●	●	●	●				●	●	●	●	●	●
All Parameter Test	●	●	●						●	●	●	●							
Photonic Foundation Library	●	●	●		●	●	●	●	●	●	●		●						

For related literature please visit www.agilent.com/cm/rdmfg/oct/literature/octselection.pdf

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