

Optical Component Test

Agilent Distributed Feedback (DFB) Lasers



- High-Power test load in R&D and manufacturing for
 - Optical amplifiers
 - DWDM transmission systems
- Improved accuracy by excellent power and wavelength stability
- Reduced cost of test due to compact design and reliability
- Flexibility due to symmetric fine tuning



Optical Component Test

Agilent 81662A/81663A DFB Lasers

DFB Laser Modules for High Channel Count DWDM System Test

Agilent's DFB laser modules, available for C- and L-Band, are best suited to address test requirements of today's DWDM transmission systems. The fine tuning capability provides flexibility for DWDM submarine systems and reduces cost for spare grids. The modularity of Agilent's Lightwave Solution Platform easily allows to

match test setups to the latest requirements of DWDM systems. Most important, it leaves room for future expansions and refinements.

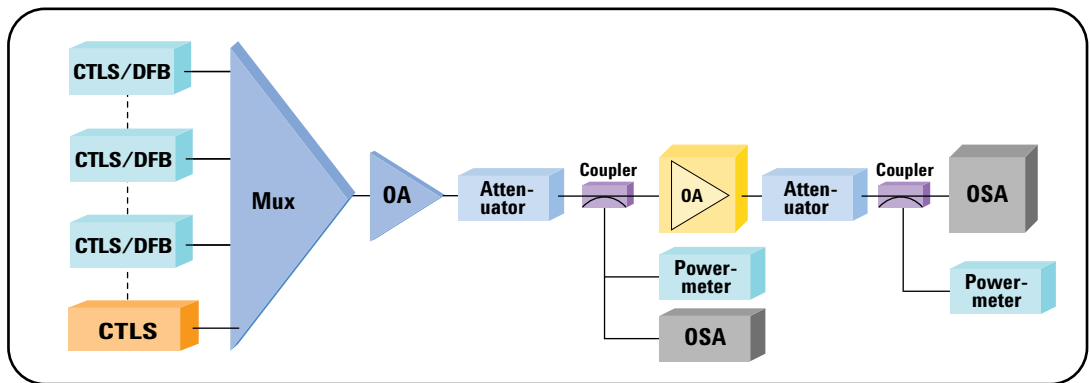
Test of Optical Amplifiers and Integrated Zero Loss Devices

A set of DFB lasers address the ever increasing demand for higher stimulus power, e.g. as required by higher power amplifiers. The migration of amplification to former passive components forms integrated zero loss devi-

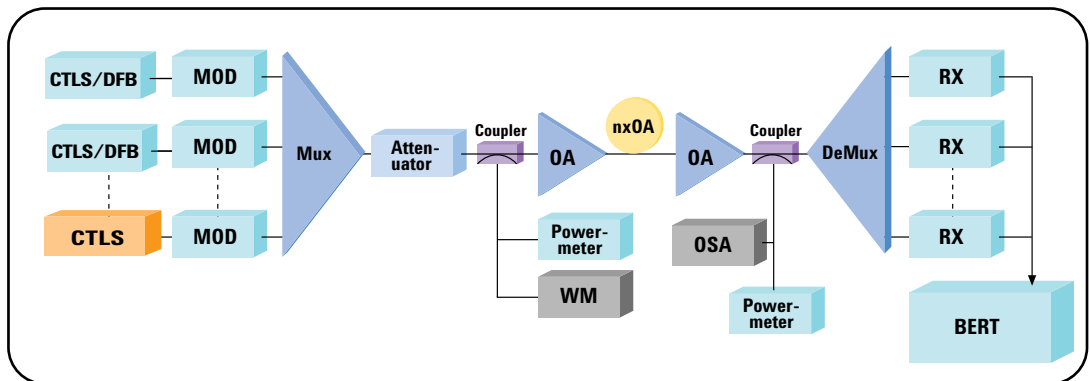
ces. This creates new challenges for the test equipment.

The 81662A and 81663A DFB lasers have a PMF fiber output as a standard, bringing polarization issues under control. This supports the trend towards waveguide based devices and integrated optics.

In amplifier test setups, Agilent's DFBs are the ideal test load due to their high output power and excellent stability



Agilent's DFBs offer highest stability. This in combination with their fine tuning and variable SBS suppression capability results in key advantages for DWDM transmission system test setups



The DFB laser sources 81662A/81663A fit into all mainframes of the optical component test platform 8163A/B, 8166A/B and 8164A/B offering flexible and scalable test solutions with small footprint.



Optical Component Test A Set of Reliable DFB Laser Modules as Test Solution for High Throughput and Cost Reductions

High Output Power

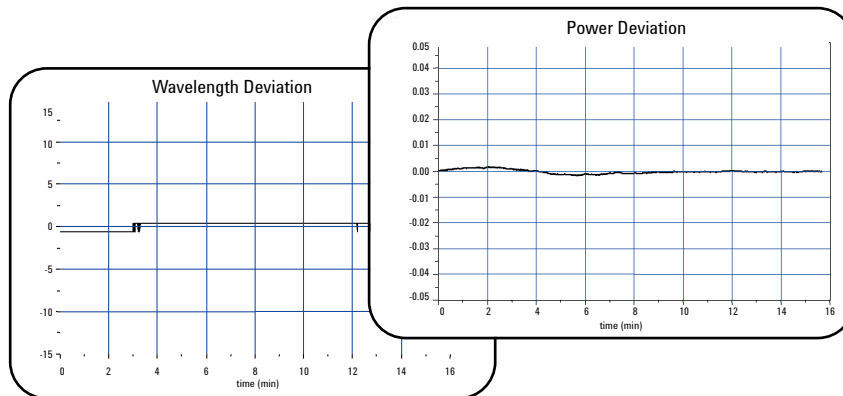
The 81662A modules provide +10dBm output power and the 81663A modules offer +13dBm output power to overcome the power penalties given in today's test setups. Their excellent stability in power and wavelength is key for accurate testing of any kind of optical amplifiers, such as EDFA, TDFA, semiconductor and Raman amplifiers.

Optimized Test Setup

The DFB laser sources are elements of Agilent's optimized test strategy. They are designed to reduce time to market, increase productivity and cut the cost of testing by features such as:

- High output power
- Excellent stability
- Fine tuning capability
- Drift free power attenuation

- PnP drivers support faster automatization
- Variable Linewidth for SBS Suppression
- Up to 17 DFB Laser Modules in a single mainframe
- Combine a virtually unlimited number of mainframes for high-channel count solutions



Excellent Power and Wavelength Stability

Agilent's DFB laser modules 81662A and 81663A are designed for maximum stability.

This is key for highest accuracy when testing optical amplifiers or complete DWDM transmission systems and subsystems.

		Agilent 81662A	Agilent 81663A
Wavelength ITU Grid (100 GHz)	Tuning Range Repeatability Stability (15min.) Stability (24h)	typ. > ±500 pm ± 10 pm (typ. ± 2 pm) ± 5 pm (typ ± 1 pm) typ. ± 10 pm	typ. > ±850 pm ± 5 pm (typ. ± 2 pm) ± 5 pm (typ ± 2 pm) typ. ± 10 pm
Power	Max. Output CW Stability (15min) CW Stability (24 h)	typ. > +10 dBm (10 mW) typ. ±0.005 dB typ. ±0.03 dB	typ. > +13 dBm (20 mW) typ. ±0.003 dB typ. ±0.01 dB
	Side Mode Suppression Ratio (SMSR)	typ. 40 dB	typ. 45 dB
	Polarization Extinction Ratio (PER)	typ. > 16 dB	typ. > 16 dB

81662A +10 dBm
C and L-Band



81663A +13 dBm
C and L-Band



The Agilent DFB Laser modules cover both wavelength transmission bands and are available with two different output powers.



Test Innovations That Improve Your Bottom Line

Optical Component Test	Passive Component Test												Optical Amplifier Test			Bit Error Ratio Test			
	Mux/DeMux/V-Mux	TFF Test	FBG Filter Test	Connector Test	Switch Test	TFF Align-/Adjustment	Fiber to AWG Alignment/AWG Chip Test	Coupler/Splitter/Combiner	Isolator/Circulator	Variable Optical Attenuator	Gain Flattening Filter	Dispersion Compensators	Interleaver	EDFA	Raman Amplifiers	SOA	Rx/Tx	Line Card	System Test
Tunable Laser 81600B, 81480B, 81640B, 81680B	•	•	•		•	•	•	•	•	•	•	•	•						
Tunable Laser 81672B, 81482B, 81642B, 81682B,					•			•	•	•	•	•	•	•	•	•			•
Compact Tunable Laser 81649A, 81689A/B								•	•					•	•	•	•		•
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	•	•	•		•	•	•	•	•	•	•		•						

By internet, phone, or fax, get assistance with all your test & measurement needs
For further information, please visit www.agilent.com/comms/comp-test

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