

# OSA: Characterization of Optical Amplifier Gain and Noise Figure

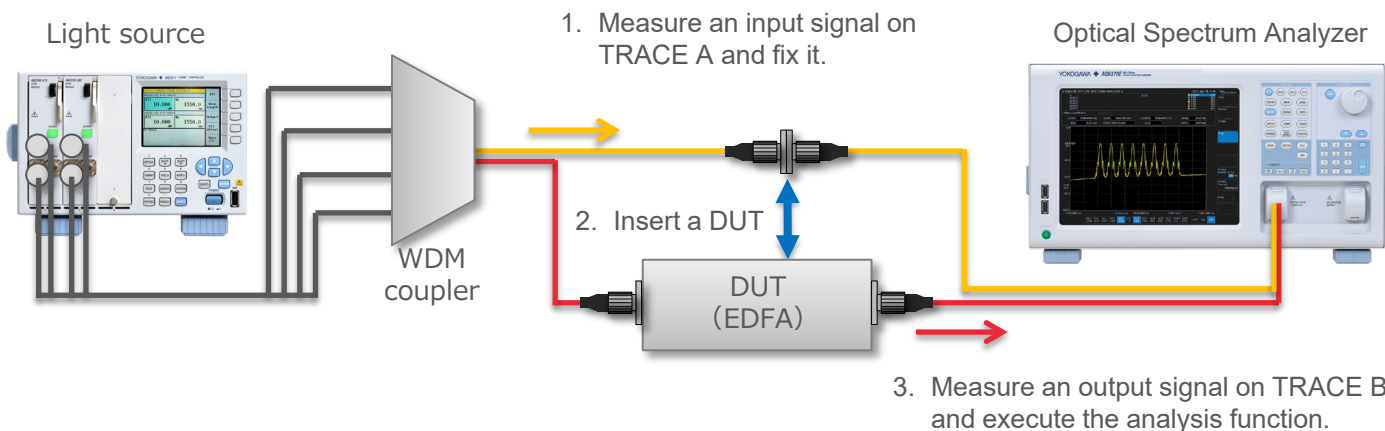
Applicable model\*: AQ6380/AQ6370 series/AQ6360

With the increase in communication traffic, the importance of optical amplifiers such as EDFAs (erbium-doped fiber amplifiers) that can directly amplify optical signals without converting them into electrical signals is increasing in backbone optical transmission networks.

The applicable models are equipped as standard with an optical amplifier analysis function (EDFA-NF) that automatically calculates the gain and noise figure (NF) of the optical amplifier from the input and output optical spectrum of the optical amplifier.

Since the Amplified Spontaneous Emission (ASE) generated by the optical amplifier is superimposed on the output light of the optical amplifier, it is important to measure this noise component separately in optical amplifier evaluation. The optical amplifier analysis function identifies the ASE component by the curve fitting and interpolation method. In addition, the curve fitting method and analysis conditions can be set according to the actual spectrum, so the gain and NF can be obtained accurately.

\* All versions unless otherwise specified.  
AQ6373 family are not applicable.



Optical amplifier analysis function (EDFA-NF)



- Calculate the gain and NF for each channel of the input optical signal. (Compatible with DWDM signals.)
- Analysis results such as wavelength, gain, and NF are displayed in a list or graph for each channel.
- Possible to set analysis parameters such as channel detection and ASE level detection