

# STN6800-OA1N

## Single-stage optical amplifier

### Overview

The OA1N board is a single-stage optical amplification card. It uses the C-band erbium-doped fiber amplifier (EDFA) to achieve amplification of all the optical signals. It can compensate for the insertion loss of optical devices or the attenuation of optical fibers in DWDM system; thereby extending the DWDM system's electrical relay distance.



### Features

- Support high transient response characteristics and transient suppression performance to meet the transmission requirements of large bandwidth and medium and long distance.
- Support built-in VOA adjustable attenuation, and the EDFA's gain can be adjusted by software.
- Support external adjustable VOA attenuator in SFP package.
- Support output monitoring through MON interface.
- Support built-in 1510nm multiplexer / demultiplexer, to realize the add/drop or jump of the monitoring channel (1550nm)
- Support performance monitoring and alarm processing functions, and support active alarm reporting.
- Support two working modes: fixed gain (AGC) and fixed output (APC).
- Support three application modes: booster amplification (BA), pre-amplification (PA) and line amplification (LA).

## Performance parameters

### ■ OA1-16 Technology Parameter

Parameter		16G15V	16G20V	16G25V
Working wavelength range		1529 ~ 1561nm		
Nominal Gain		15dB	20dB	25dB
Receiving optical power		-26 ~ +6dBm	-31 ~ -1dBm	-32 ~ -4dBm
Rated gain		15dB	20dB	25dB
Single Wave input Optical Power Range	40 waves	-32~-10dBm	-32~-15 dBm	-32~-20 dBm
	80 waves	-32~-13 dBm	-32~-18 dBm	-32~-23 dBm
Single Wave output Optical Power Range	40 waves	-16~0 dBm	-16~0 dBm	-12~0 dBm
	80 waves	-16~-3 dBm	-16~-3 dBm	-12~-3 dBm
Maximum output optical power		16dBm		
Noise Figure (NF)		<6.5dB	<5.5dB	<5.5dB
Channel Gain		10~20 dB	15~25 dB	20~30dB
Gain flatness		<1.5dB		
Polarization Dependent Loss dB		<0.5dB		
Gain Response Time		<10ms		
Input Pump Leakage		< -30dBm		
Output Pump Leakage		< -30dBm		
Maximum power consumption		15W		
Optical port type		LC/UPC		

**OA1-20 Technology Parameter**

Parameter		OA1-20/G15V	OA1-20/G20V	OA1-20/G25V
Working wavelength		1529 ~ 1561nm		
Nominal Gain		15dB	20dB	25dB
Receiving optical power range		-22 ~ +10dBm	-27 ~ +5dBm	-32 ~ +0dBm
Single Wave input Optical Power Range	40 waves	-32 ~ -6dBm	-32 ~ -11 dBm	-32 ~ -16 dBm
	80 waves	-32 ~ -9 dBm	-32 ~ -14 dBm	-32 ~ -19 dBm
Single Wave output Optical Power Range	40 waves	-12 ~ +4 dBm		
	80 waves	-12~ +1 dBm		
Maximum output optical power		20dBm		
Noise Figure (NF)		<6.5dB	<5.5dB	<5.5dB
Channel Gain		10~20 dB	15~25 dB	20~30dB
Gain flatness		<1.5dB		
Polarization Dependent Loss dB		<0.5dB		
Gain Response Time		<10ms		
Input Pump Leakage		< -30dBm		
Output Pump Leakage		< -30dBm		
Maximum power consumption		15W		
Optical port type		LC/UPC		