

By using with a network analyzer,

**OTR series allow to measure the bandwidth of multimode optical fiber.**

## OTR-850 (850nm)

## OTR-1300 (1300nm)

Each OTR-850 and OTR-1300 equips E/O and O/E converters, the following functions are equipped respectively.

### (1) E/O converter

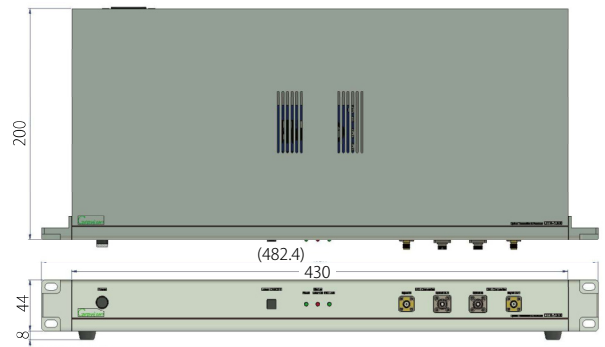
- Receives electric signal from network analyzer to convert optical modulation signal and sends it into multimode optical fiber as DUT.
- Equips high-speed modulation method to balance the most of both APC control to stabilize the optical output power and high-speed modulation up to GHz bandwidth.
- Equips temperature control circuit to stabilize output optical wavelength.

### (2) O/E converter

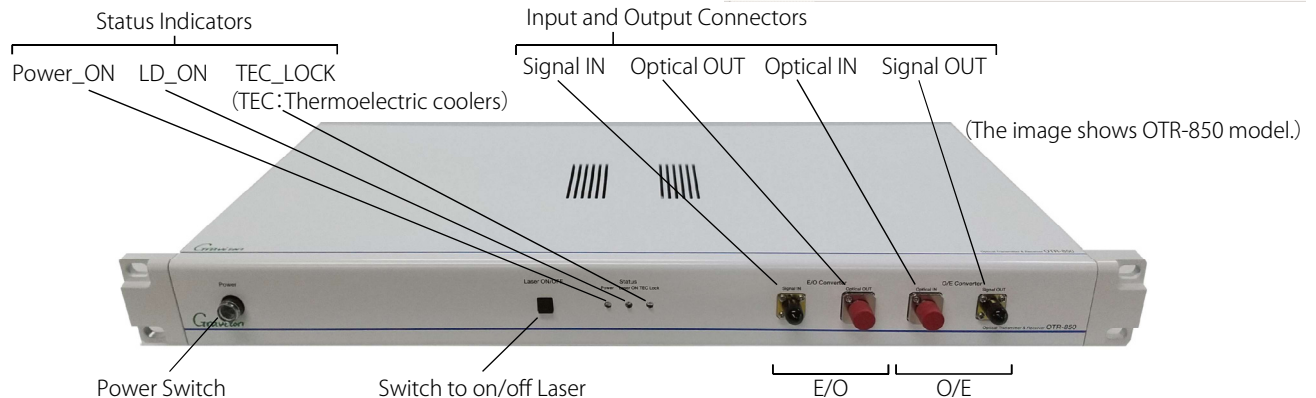
- Converts optical signal from DUT optical fiber to electric signal and returns to network analyzer.
- Enables to obtain wide bandwidth optical signal up to GHz area corresponding to wide bandwidth characteristic of fiber.
- Equips low noise TIA and cable driver enabling the fully detection of optical signal which is attenuated during propagating through optical fiber.

Item \ Model	OTR-850	OTR-1300
E/O modulation bandwidth	10KHz ~ 1GHz	10KHz ~ 1GHz
O/E bandwidth	10KHz ~ 1GHz	10KHz ~ 1GHz
E/O optical output	Ave 400 $\mu$ W	Ave 400 $\mu$ W

EIA-1U size [mm]



### Appearance and Name of each Part

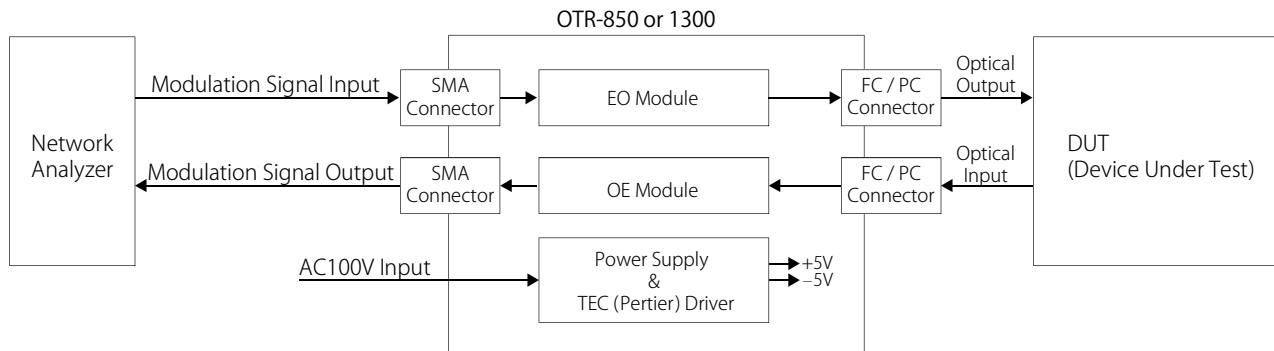


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Measure the bandwidth of multimode optical fiber

## Device Connection Example in OTR series Bandwidth Measurement of Multimodo Optical Fiber



### Specifications

Item \ Model	OTR-850	OTR-1300	Note
Function	E/O and O/E converter unit to measure the bandwidth of multi-mode optical fiber		
Light Emitting Element	FP type semiconductor laser	DFB type semiconductor laser	
Emission Wavelength	850nm	1300nm	
Number of Light Emitting Element	One		
Optical Output	Average 400uW when modulating or non-modulating		When using 50G1
Applicable Optical Fiber for E/O	Optical fiber with core-diameter of 50 um or more		
Optical Output Connector	FC receptacle on the front panel		
Light Intensity Modulation method	High-speed APC modulation, Analog modulation		
Modulation Frequency Bandwidth	10KHz to 1GHz		
Modulation Input Connector	SMA receptacle on the front panel		
Reference Level of Modulation Input	0dBm (632.4mVp-p)		
Modulation Input Impedance	50Ω, 0[V] Termination, AC coupling		
E/O Modulation Sensitivity	When modulated signal level to input the E/O converter is 0dBm, the amplitude of optical output signal is 330uWp-p.	When modulated signal level to input the E/O converter is 0dBm, the amplitude of optical output signal is 360uWp-p.	When using 50G1
Temperature Stabilization of LD	Feedback control method using the Peltier module which is attached to the mount material of the LD and Thermistor.		
Temperature of LD	30°C		
Light Receiving Element	Si PIN photodiode	InGaAs Pin photodiode	
Applicable Optical Fiber for O/E	Multimode optical fiber with 50um core-diameter		
Optical Input Connector	FC receptacle on the front panel		
O/E Conversion Method	Low noise TIA and a cable driver		
O/E Conversion Sensitivity	When the optical signal of 850nm with 330uWp-p is input to the O/E coverter, the power of output electrical signal is +1dBm.	When the optical signal of 1300nm with 360uWp-p is input to the O/E coverter, the power of output electrical signal is +1dBm.	
O/E Conversion Bandwidth	10KHz to 1GHz		
O/E Output Connector	SMA receptacle on the front panel		
O/E Output Impedance	50Ω、 AC coupling		
Power-supply Voltage and Current	AC100V、 0.2A max		
Dimension	430 mm(W) x 200 mm (L) x 44 mm(H) EIA-IU		Protrusions not included

※The above mentioned specifications are subjected to change without prior notice.