

# BENCHMARK **OFT-BER** *Module*

## OFT – BIT ERROR RATE Module



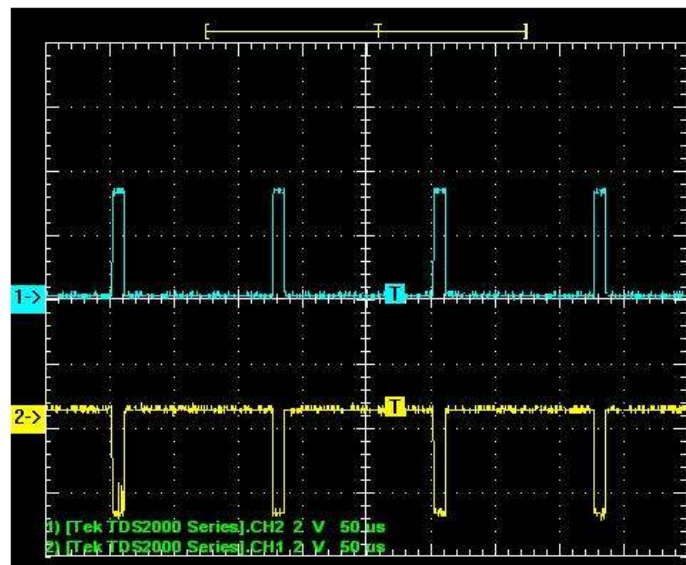
Bit Error rate value gives an insight into the health of any digital communication link. Bit error measurement tells us the details of how many bits are received in error out of the total number of bits transmitted. This error varies with different communication links. Whenever a communication link is designed it is important to make bit-error-rate measurement which gives the end to end performance of the link.

Benchmark OFT-BER Module teaches the concepts and key parameters related to Bit error rate measurement. All suggested experiments give an in-depth understanding of the sources of error in Benchmark Optical Fiber Trainer and their measurements. There are two modes available in this module viz the study mode and the measurement mode. The study mode gives a basic understanding of how bit error rate can be measured by feeding in a known data. The measurement mode is used for actual measurement of the Bit errors in Benchmark OFT. The block diagram shown on the top of the module clearly indicates

the various blocks required for BER measurement. The transmitted data, received data and the error between them can be monitored using an oscilloscope

## List of Topics

- Understanding BER measurement concept
- Measuring the BER of Electrical Link in OFT
- Measuring the BER of Optical Link in OFT
- Effect of Fiber Bending and coupling loss on BER
- Effect of Pulse Broadening on BER



## Specification

Operating Mode	: Study and Measurement Mode (Selectable through Mode switch )
Range	: Selectable between X1, X10, X100, X1000 (Measurement from BER of $10^{-2}$ )
Data & Clock Input	: TTL (from OFT)
Display type	: 7 Segment (Display can be frozen using Hold Switch)
Interface connector	: TTL Input : OFT-Patch cord TTL Output : BNC
Supply voltage	: +5V DC (Supplied from OFT-PS)

## **Ordering Information**

### **Benchmark OFT-BER**

#### **Comprising of:**

- OFT-BER Module
- OFT-BER Experiment Manual
- OFT-BER technical manual CD

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# **BENCHMARK**

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