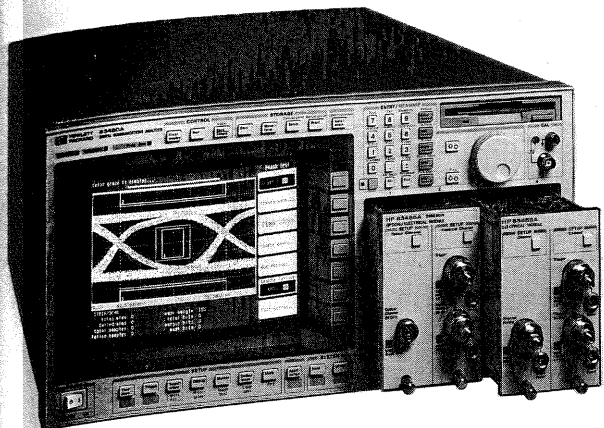


- Automated mask and template measurements
- Integrated optical channels for accuracy and ease of use
- High-measurement throughput

- Filtered measurements for compliance test or full bandwidth for waveform analysis
- Fast statistical waveform analysis
- Wide range of standard telecom and datacom masks and templates



HP 83480A

## HP 83480A Digital Communications Analyzer HP 83475B Lightwave Communications Analyzer

The HP 83480A and 83475B represent a significant advancement in the instrumentation used to view waveforms in high-speed digital communications. Industry-standard tests including mask and template tests as well as eye-diagram analysis including extinction ratio are made using easy-to-use, built-in measurements. For measuring optical signals, lightwave receivers are integrated into the instruments to provide highest accuracy and waveform fidelity.

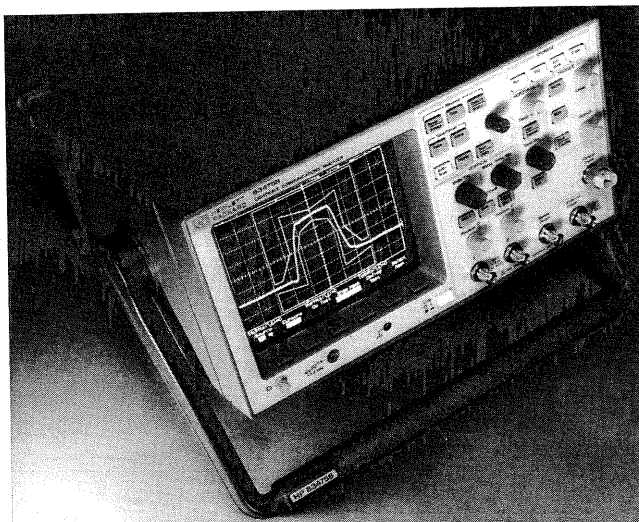
With up to 50 GHz of bandwidth, the HP 83480A can be used on low-rate tributary signals through 10 Gb/s optical waveforms. At 500 MHz bandwidth, the HP 83475B provides a lightweight, economical measurement tool for optical waveforms at rates up to 155 Mb/s as well as electrical tributary signals.

### Industry Standard Masks and Templates

Achieve high-throughput waveform testing with both optical and electrical masks and templates including SDH, SONET, and Fibre Channel standards. For guardband testing, use mask margins. Custom/user-defined masks can also be generated. Masks are automatically aligned and scaled.

### Integrated Optical Receivers

The HP 83475B has a built-in photodiode receiver with 1 GHz bandwidth and sensitivity from 780 nm through 1600 nm. Filtered measurements are achieved with a variety of calibrated hardware filters. The HP 83480A is a modular platform with a family of optical receivers with very high-speed internal photodiodes (2 GHz, 20 GHz, or 30 GHz bandwidths). For filtered measurements, filters are switched in with a simple keystroke to produce a calibrated reference receiver, or switched out for full bandwidth waveform analysis.



HP 83475B

The HP 83480A can accept one or two plug-in modules for up to four measurement channels. Modules have two electrical channels or one optical channel and one electrical channel. The HP 83485A has a 20 GHz electrical channel and 20 GHz optical channel with a 155, 622 or 2488 Mb/s switchable filter. The HP 83481A has a 20 GHz electrical channel and a 2.5 GHz optical channel with 155 and 622 Mb/s switchable filters. The HP 83485B provides a 40 GHz electrical channel and a 10 Gb/s optical filtered channel. The HP 83482A provides a 40 GHz electrical channel and 30 GHz optical channel. The HP 83483A provides two 20 GHz electrical channels, the HP 83484A has two 50 GHz electrical channels. The HP 83475B has one optical input and two electrical channels.

### Accurate Eye-Diagram Analysis

Integrated optical receivers are the key to accurate eye-diagram analysis of lightwave signals. Internal photodiodes have well-behaved frequency responses which are not degraded by external cabling and adapters. This yields the highest in waveform fidelity and measurement accuracy. Extinction ratio measurements are accurate and repeatable.

### General Purpose Oscilloscopes

In addition to digital communication analysis, the HP 83475B and 83480A can be used as general-purpose, high-speed sampling oscilloscopes. Add TDR capability to the HP 83480A with the HP 54753/4/5A.

*For more complete information, order the Lightwave Test and Measurement catalog. See detailed description on page 428.*