DTS-100

Discontinuity Test System

Product Overview

The Discontinuity Test System, DTS-100, provides a method for testing a broad variety of passive or active fiber optic components for susceptibility to discontinuities (signal dropouts, transient outputs or transmittance fluctuations) during application of an external stimulus such as temperature, vibration or physical shock.

The DTS-100 allows you to capture short optical power interruptions and dropouts every 0.8 µs to 1 second. The free and easy-to-operate software logs all of the events into a spreadsheet for analysis in accordance with EIA/TIA-FOTP-32A.

Features

- Single-mode and multi-mode
- Input power range of -40 dBm to -2 dBm
- Selectable dropout detection range of 0.8 µs to 1 s
- Selectable loss threshold of 0.5 dB to 3 dB
- Bundled application that records data directly into a spreadsheet
- USB interface for seamless remote control
- Support of most common connector options (FC, ST, SC, etc…)

Applications

- Optical component qualification and validation
- Stress and reliability testing
- Compliance testing such as EIA/TIA-FOTP-32A or similar

Single-mode and Multi-mode Compatible

The DTS-100 supports both single-mode and multi-mode applications. Depending on the fiber size and numerical aperture, the proper detector must be selected.

Input Power Range of -40 dBm to 0 dBm

The wide operating range of the DTS-100 allows it to be used with various source types. It can accommodate 1 mW single-mode lasers or lower power LED source options.

Selectable Dropout Detection Range

The DTS-100 allows for a variable sampling rate, which gives a wider flexibility in monitoring for discontinuities. Select anywhere from 0.4 µs timebase up to 6.4 ms time base to monitor for a wide range of discontinuities.

Selectable Loss Threshold as Low as 0.5 dB

In software, one can define the loss threshold from a range of 0.5 dB to as high as 10 dB of loss.

Bundled HS-DISC Software Included

HS-DISC allows the user to configure the drop threshold and time base specifically for certain applications and testing. The software outputs discontinuity data into an Excel formatted report.

Universal Adapter Versions Available

The standard DTS-100 system comes with fixed adapter detectors, but universal detector adapter versions are available, when selecting 1 mm, 3 mm InGaAs, or 3 mm Silicon detectors.

DTS Optical / Electrical Specifications

Parameter	Specification
Detector Type	300 µm InGaAs
Wavelength Range (nm)	830 to 1650
Power Range (dBm)	-2 to -40
Receiver Bandwidth (MHz)	> 2
Linear Amplifier Output	0 to 2.5 V
Event Duration	0.8 µs to 1 s
Event Amplitude (dB)	0.5 to 3 (selectable)
Sampling Interval	0.4 µs
Event Trace	750 samples
Data Interface	USB
Power Supply	US or European Standard

Mechanical / Environmental Specifications

Parameter	Specification
Unit Dimension W x H x D (cm)	42.5 x 9.7 x 25.4
Operating Temperature (°C)	0 to 50

In the Box

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