

# Optical Measuring Instruments and Optical Device Test Systems

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Far-End and Near-End Measurement Chromatic Dispersion Analyzer

Q7770



Q7770

## Opposed-Type Chromatic Dispersion Analyzer

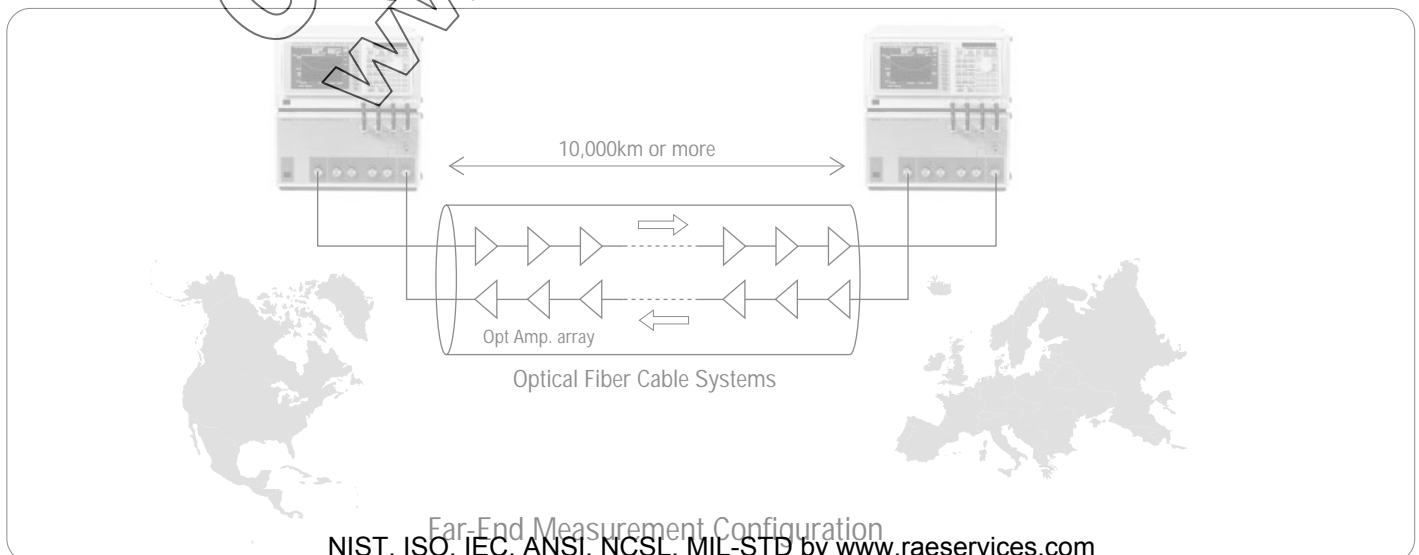
### ■ Overview

Optical long-distance wavelength division multiplexing (WDM) Communication systems are increasingly being used in industrial applications, chromatic dispersion (CD) in optical devices or fibers must be managed. Demand is greater than ever for instruments able to measure chromatic dispersion in not only near-end (optical devices) measurement but also far-end (installed optical fiber transmission systems) measurement. ADVANTEST has developed the new "Q7770 far-End CD Analyzer" which is based on the Q7750 Optical Network Analyzer.

### ■ Features

- Capable of far-end and near-end measurements :  
Max. fibre distance  
Far-end : 10,000km or more  
Near-end : 20,000km or more
- Wide Measurement Wavelength Range : 1530 to 1600nm
- Optical Frequency Resolution : 0.001nm(step span) / 50MHz(sweep span)
- Group Delay Fitting method : Quadratic fit / 5 term Sellmeier fit / 3 term Sellmeier fit
- Compact and Simple Operation : 45kg or less, and easy to move

### ■ Far-End Measurement Configuration



Far-End Measurement Configuration  
NIST, ISO, IEC, ANSI, NCSL, MIL-STD by [www.raeservices.com](http://www.raeservices.com)

Developed in cooperation with DDI CORPORATION and KDD Submarine Cable Systems Inc. (KDD-SCS).

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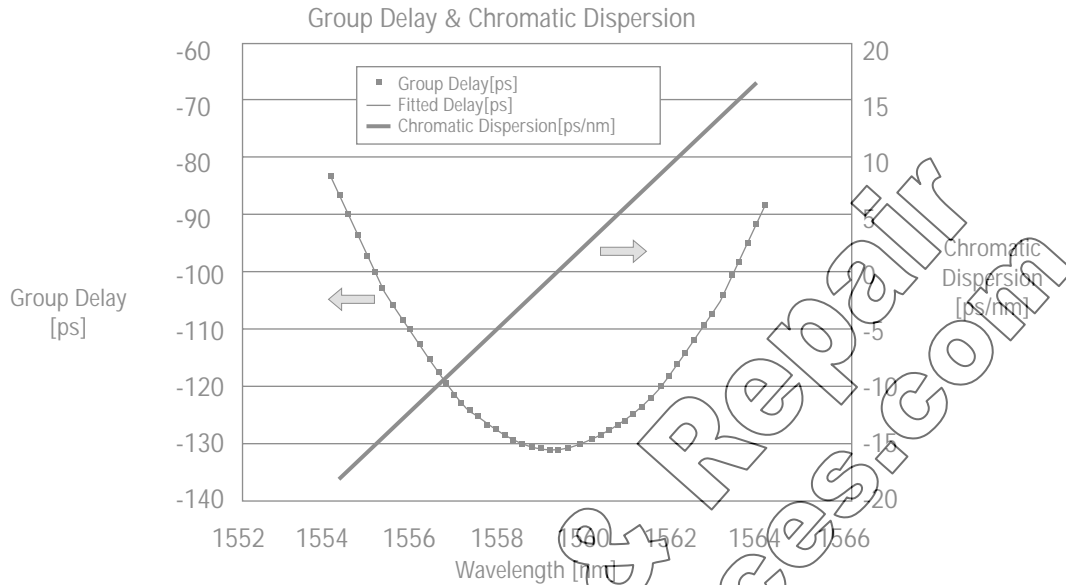
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## Example of Measured Result



## Major Specifications of Q7770

Items	Specifications
Measurement functions	Magnitude
	Group delay
	Chromatic dispersion
	Chromatic dispersion slope
	Fiber length measurement
Measurement wavelength range	1530nm to 1600nm
Absolute wavelength accuracy	±25pm (without wavelength meter)
	±2ppm ±1pm (with optical wavelength meter Q8326 ADVANTEST)
Optical output power level	-15dBm or more
Modulation frequency range	40MHz to 3GHz
Group delay time resolution	0.1ps
Fiber length measurement range	0.2m to 10,000km
Fiber length measurement resolution	0.02mm or 0.01% of measured length
Operating environment	15°C to 35°C
	Relative humidity 85% or less
Power	AC100V to 120V, 220V to 240V
	50Hz/60Hz, 610VA or less
Dimensions	approx. 424(W) × 440(H) × 500(D)
Mass	45kg or less