



GFT7031

2.5 GS/s Optical Waveform Generator

Features

- Generate optical arbitrary waveforms
- Vertical resolution: 11 bits
- Rise/fall time: 300ps
- Jitter: <30 ps RMS
- optical wavelength: 1,06 μm (other wavelengths upon request)
- Non-linearity compensation

Applications

- High power lasers with gain saturation
- Inertial confinement fusion
- Laser plasma interaction
- Optical marking
- Automatic Test Equipment
- Arbitrary RF Signal Generation
- Pulse Generation



Description

The GFT7031 is a PC controlled Optical Waveform Generator. It allows to provide temporally shape optical laser pulses with up to 2.5GS/s resolution.

There are three trigger modes for generating optical waveform.

- ✓ External: One input is used to trigger Waveform Generator with low jitter. Rate can be repetitive or single.
- ✓ Internal: Trigger to Waveform Generator is from frequency programmable generator provide a repetitive Trigger source

This generator is well suited for laser facilities requiring shape flexibility and non-linearity compensation (gain saturation, ...).

All the settings are controlled via Ethernet network. A powerful control panel Web page, from embedded server, provides a simple method to configure settings, download the waveform data and control the state of the instrument.

The GFT7031 is Rackable and has a compact packaging of only 1U, 19", 300 mm



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Specifications

Optical Input/output	
Wavelength	1,06 μm (+/- 0.08), (other wavelengths upon request)
Optical power input	10 mW typical
Min. insertion loss	5dB (typ.)
Input/output fiber	PM
Connectors	FC/APC
External trigger	
Trigger threshold	< 1V
Input level typ.	5V
Input max. level	ADU
Internal termination	50 Ω
Width	< 100 ns
Repetition rate	< 50kHz
Connector	BNC
Internal trigger	
Repetition rate	Internal generator adjustable from 1Hz to 10KHz in step of 1Hz
Arbitrary optical Output	
Waveform	Arbitrary upon software request
Sample rate	2.5GS/s
Record length	1600 ns (4000 points)
Vertical resolution	11 bits
Extinction ratio	> 27 dB (30 dB typ.)
Rise/fall time (20/80%)	~ 300 ps
Jitter RMS	< 30ps (External Input)
Electrical monitoring	
Pulse shape	Arbitrary (without optical non-linearity compensation)
Amplitude	About 400mV
External load	50 Ω
Rise/fall time	~ 300 ps
Pulse Width (FWHM)	Image of electrical output +/- 20ps
Jitter RMS	< 30ps
Connector	BNC
General specification	
Size	19" – 1U – 300 mm (AC)
Power	V/A 220/110V, < 35VA