

Electrical to Optical Module

Features

- +2.5 V to +10 V input pulse
- 1310 nm output wavelength
- < 1 ns output rise time
- < 10 ps RMS jitter
- > 50 MHz repetition rate
- Compact and rugged module



Applications

- Long distance pulse/trigger transmission
- High EMI environments transmission
- Laser research
- High-energy physics
- Picosecond timing
- Instrument Triggering



Description

The GFT102 module is designed to convert fast electrical pulses to fast optical pulses of 1 mW (@ 10V IN).

This module combined with GFT201 (Optical to Electrical Converter) is ideal to transmit pulses/triggers to remote location up to 1 km and when the critical pulse has high common voltage with respect to the measurement equipment.



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Specifications

Input	
Pulse polarity	Positive
Level	+2.5 V to +10 V (+5 V continuous maximum)
Impedance	50 Ω \pm 5 %
Rise time	< 1 ns
Min. width (FWHM)	10 ns
Max. Frequency	> 50 MHz
Connector	BNC
Output	
Pulse polarity	Positive
Power	50 μ W min @ +2.5 V
Rise time	< 1 ns
Wavelength	1310 nm \pm 20 nm
Min. width (FWHM)	10 ns
Max. insertion delay	5 ns
Jitter	< 10 ps RMS
Connector	FC/PC
General	
Size	42 x 30 x 30 mm (w/o connectors) 62 x 30 x 30 (w/ connectors)
Operating temp.	15 to 35 $^{\circ}$ C
Options	
Option 1	-13: 1310 nm wavelength (Base version, FC connector) -85: 850 nm wavelength (ST connector)
Option 2	- \emptyset : no adapter -FSC: Adapter FC/UPC Male to SC/UPC Female, single mode -FST: Adapter FC/UPC Male to ST/UPC Female, single mode -FLC: Adapter FC/UPC Male to LC/UPC Female, single mode -SSC: Adapter ST/UPC Male to SC/UPC Female, single mode -SFC: Adapter ST/UPC Male to FC/UPC Female, single mode -SLC: Adapter ST/UPC Male to LC/UPC Female, single mode
Option 3	- \emptyset : base version -NP: Narrow pulse (FMHW = 1 ns \pm 0.5 ns / Power > 1 mW)

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Product Interface

Front and rear panel



Interface

Front panel			Rear Panel		
Connector			Connector		
1	INPUT 50Ω	BNC electrical input connector	2	OUTPUT	FC/PC optical trigger output

Ordering Information

Model	Description
GFT102	Base version: Electrical to Optical Module
-1	Select the wavelength
-2	Adds and adapter
-3	Select the narrow pulse

Ordering example: GFT102-13-FSC (model GFT102 with 1310 nm wavelength and adapter FC/UPC Male to SC/UPC Female)