

GFT201

Optical to Electrical Module



Features

- 1260 nm to 1650 nm wavelength
- 20 μ W (-17 dBm) optical threshold
- FC/PC connector
- < 30 ps RMS jitter
- 10 V output level on 50 Ω load
- Width shaping and Frequency limitation or same as input
- Compact and rugged module
- 5 V - 5 W, AC/DC adapter (US, EU, UK, Australia, and China blade included) & 2 m USB A to C Cable

Applications

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



Description

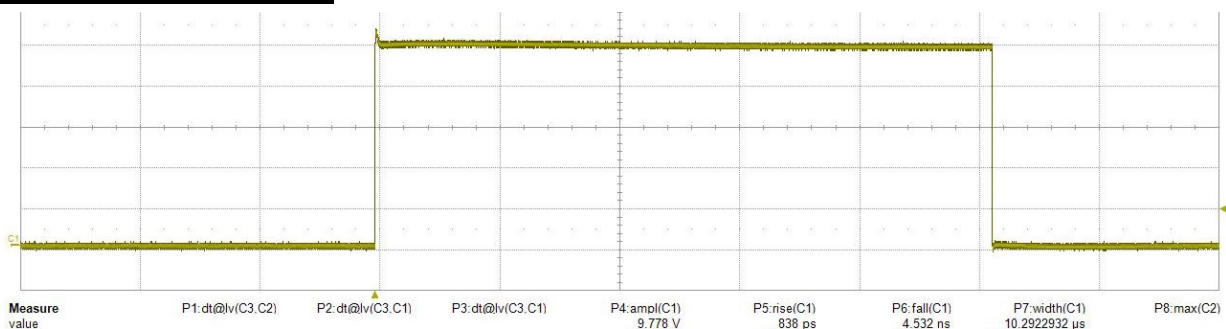
The GFT201 module converts an optical pulse into a fast electrical pulse of 10 V (or +5 V in option) under 50 Ω .

The output pulse can be configured to be a fixed width or a copy of the optical input width.

This module combined with GFT102 (Electrical to Optical 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.



Channel output pulse



(2 V/div, 2 μ s/div)
Output Pulse under 50 Ω

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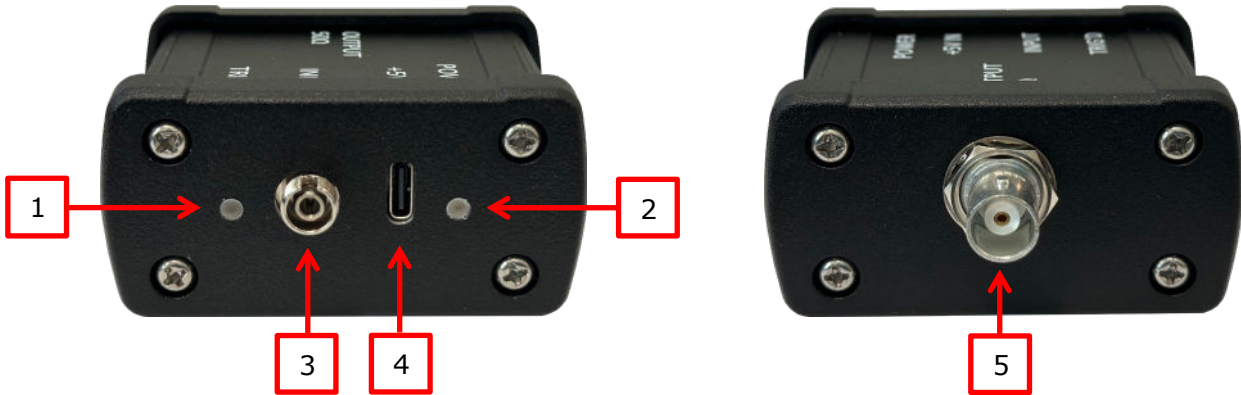
Specifications

| Input | |
|---------------------|--|
| Max. Optical Power | 1 mW |
| Optical Threshold | 20 μ W \pm 10 μ W (-17 dBm) |
| Wavelength | 1260 nm to 1650 nm |
| Max. Frequency | 100 kHz |
| Connector | FC/PC |
| Output pulse | |
| Level | + 10 V \pm 0.5 V |
| External load | 50 Ω |
| Rise time | < 1 ns |
| Width (FWHM) | 200 ns \pm 50 ns |
| Jitter | < 30 ps RMS |
| Connector | BNC |
| General | |
| Size | 50 x 70 x 35 mm (w/o connectors) 70 x 70 x 35 mm (w/ connectors) |
| Operating temp. | 15 to 35 $^{\circ}$ C |
| Power input | +5 V / 120 mA max., USB-C connector |
| Options | |
| Option 1 | -FC: Base version -SC: Adapter FC to SC -ST: Adapter FC to ST -LC: Adapter FC to LC |
| Option 2 | -200n: 200ns output width (base version) -xxxx: Customized output width: fixed, 100 ns to 1 ms \pm 5 % |
| Option 3 | -100k: Retrigger limited to 100kHz (base version) -xxxx: Customized maximum retrigger frequency: fixed, 1 Hz to 100 kHz |
| Option 4 | -LIM: Width and frequency limited (base version) -COP: Copy of input width and frequency (Duty cycle < 33 %, max 100 kHz) |
| Option 5 | -10V: +10 V output level (base version) -5V: + 5 V output level |
| Option 6 | -13: 1310 nm wavelength (Base version) -85: 850 nm wavelength |

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Front & Rear Panel



Connector, Switch, Indicators

| Front panel | | |
|-------------|-------------|--------------------------------------|
| Indicators | | |
| 1 | TRIG'D | Lighted up blue at trigger frequency |
| 2 | POWER | Fixed green when power ON |
| Connectors | | |
| 3 | INPUT | FC/PC optical trigger input |
| 4 | +5V IN | USB type C power supply input |
| Rear panel | | |
| Connectors | | |
| 5 | OUTPUT 50 Ω | BNC electrical output connector |