

# GFT400

## 500 ps Pulse Generator

### Features

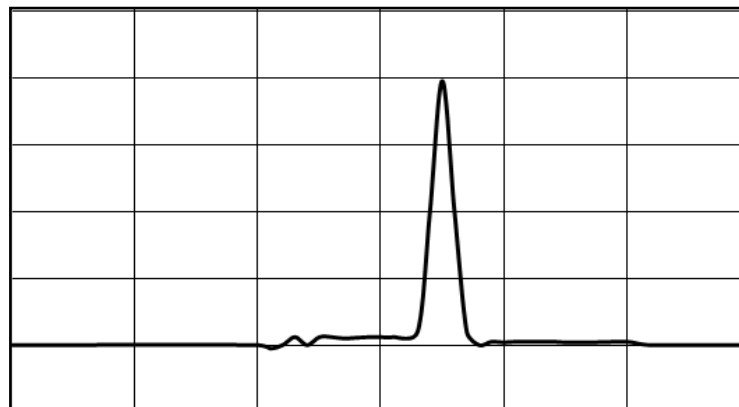
- Output pulse
  - Gaussian shape
  - 500 ps (FWHM) width
  - 2 V amplitude under 50  $\Omega$
  - <5 ps RMS jitter
- External Trigger input
- Operate from standard AC (90 - 240 V) to DC (+12 V) adapter furnished
- Option: Output width from 400 ps to 1000 ps



*GFT400 Module*

### Applications

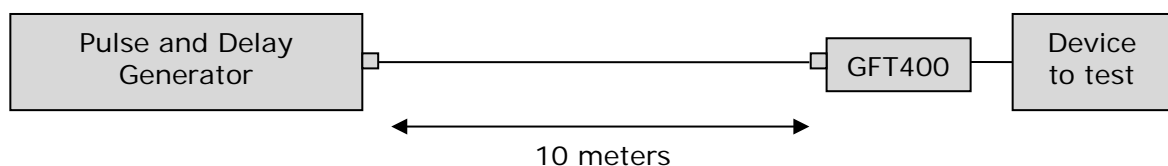
- Fast trigger
- Component test
- Jitter transfer and tolerance testing



*0.5 V/div, 2 ns/div  
Output Gaussian pulse and input trigger*

### Description

The GFT400 module is an external triggered narrow Gaussian Pulse Generator. This compact module produces 2 V under 50  $\Omega$ , narrow 500 ps width pulses. The output width can be adjusted in factory from 400 to 1000 ps. The GFT400 can be used with Greenfield Technology Pulse and Delay Generator (GFT1004 or GFT1020...) to provide a fast narrow pulse. In this way the module can be at 10 meters from the delay generator and near the device to test.



*Application example*



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### Specifications

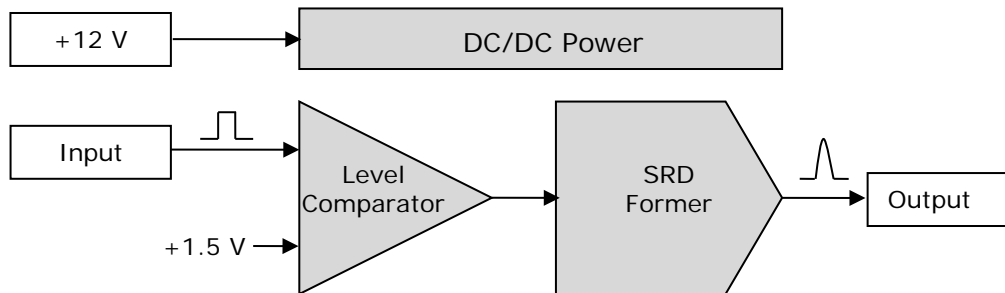
| <b>Input</b>   |   |
|--|---|
| Amplitude  | Positive >2 V                                     |
| Internal terminaison   | 50 $\Omega$                                       |
| Threshold  | +1.5 V  |
| Rise time  | <5 ns   |
| Width  | >10 ns  |
| Repetitive rate  | 10 KHz (max.)                                     |
| Connector  | SMA   |
| <b>Output</b>  |   |
| Pulse shape  | Gaussian  |
| Amplitude  | 2 V +/-0.5 V                                      |
| External load  | 50 $\Omega$                                       |
| Rise / Fall time   | 400 ps  |
| Width (FWHM)   | 500 ps +/- 100 ps (can be adjusted: see option)   |
| Jitter   | <5 ps RMS (from input)                            |
| Ringing  | <5 %  |
| Connector  | SMA   |
| <b>General</b>   |   |
| Size   | 47 x 34 x 17 mm                                   |
| Power V/A  | 12 V / 300 mA                                     |
| Power connector  | MCX   |
| Power Adapter  | External AC (90 to 240 V) to DC (+12 V) furnished |
| <b>Options</b>   |   |
| <u>Option 1</u> : Output Width: 400 ps to 1000 ps (ask to factory) |   |



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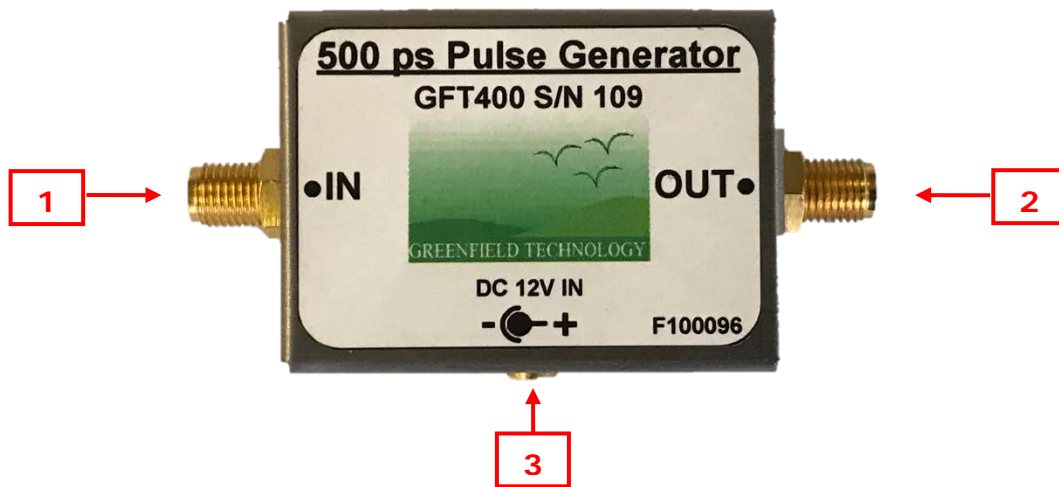
### Functional overview



#### *Block diagram*

The "Level Comparator" allows to detect the rising edge of the input pulse to start the Former. The "SRD Former" calibrates the shape of the output pulse. In option the width can be adjusted from 400 ps to 1000 ps. This Former is specially designed to drive an external 50  $\Omega$  load.

### Input / Output



| REF | Description                      |
|-----|----------------------------------|
| 1   | Input signal: SMA connector      |
| 2   | Output signal: SMA connector     |
| 3   | Power +12 V input: MCX connector |

### Ordering information

GFT400 module part numbering is:  
GFT400-X (Where "X" is option number)