



## Ultra-Fast Laser Pulse Picker for Timing and Synchronization

**ADVANCED PERFORMANCE**  
**DIGITAL DELAY / PULSE**  
**DELAY GENERATOR**

Ultra-fast laser pulse picking  
Laser timing control  
Laser system synchronization

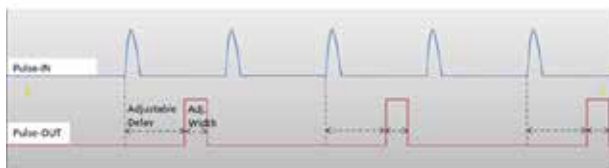
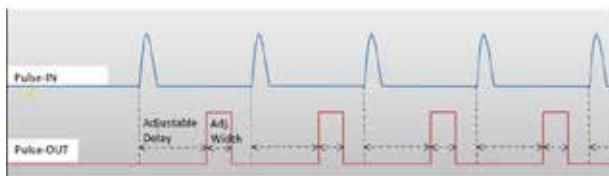
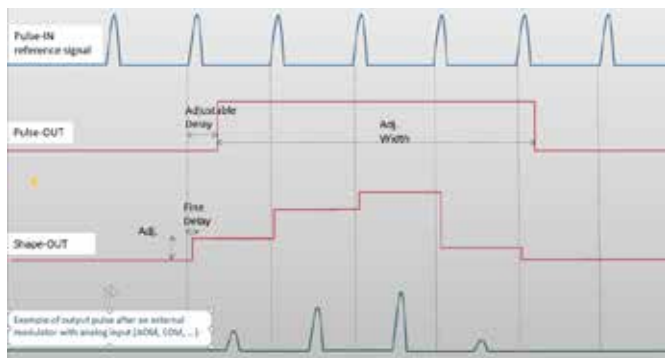


### **TOMBAK / LASER-PULSE-PICKER**

- o Optimized for Laser Pulse-Picking, Timing & Control Systems
- o Laser Pulse-Picking up to 200 MHz Input & 20 MHz Output
- o Stand Alone 20 MHz Pulse Generator
- o 2 Nanosecond Pulse Resolution
- o 150 MHz Voltage Level Converter
- o USB Interface with Control Software

## DIGITAL DELAY GENERATOR FOR LASER AND ELECTRONICS TIMING AND SYNCHRONIZATION SYSTEMS

These laser pulse pickers are precision, multi-functional synchronization modules for timing control of lasers and electronic systems. The TOMBAK enables the user to consolidate multiple functions into one affordable compact device. They can be used as an ultra-fast laser pulse-picker, a stand-alone laser diode pulse driver, or as a pulse delay generator for digital synchronization of laser timing systems. This unit is an ideal choice for generating high frequency pulses, delays and bursts in laser timing and control applications. These units can be used as a stand-alone laboratory testing product or for OEM integration into your product.



Applications of these pulse delay generators include component testing, laser timing control, laser pulse-picking and laser diode pulsing.

The TOMBAK series modules provide precise delays for synchronizing, triggering and delaying precisely timed events. These modules deliver less than 80 picoseconds of RMS jitter and are used in applications that require processes and controls based on precision electronic timing. A 150 MHz voltage level converter and 20 MHz standalone generator with a USB interface are backed by a two year standard product warranty.

### GRAPHICAL USER INTERFACE INCLUDED

Configuration and operation of the controller is streamlined and simplified by providing control over the critical operating parameters of the controller: peak pulse current, pulse width, frequency, triggering, and other driver parameters are available.



GUI control software

Stack TOMBAK's to add channels



The GUI also provides control over laser diode temperature, and includes operational safety limits to help protect the laser diode from damage.

In addition to providing real-time control over the laser diode, the GUI displays real-time operating status of the controller and laser diode operating parameters.



## TOMBAK / LASER-PULSE-PICKER Performance Specifications

### PULSE DELAY GENERATOR OUTPUT (SMA CONNECTOR)

- Pulse Delay Resolution: 100 psec
- Pulse Width Resolution: 2 nsec
- Adjustable Pulse Delay Range: 10 picoseconds to 1000 seconds
- Adjustable Pulse Width Range: 5 nanoseconds to 1000 seconds
- Coupling Impedance: 50  $\Omega$
- Adjustable Output Level: 1V, 3.3V, 5 V TTL
- Rise Time: 1 nsec (typical)
- Jitter: <80 psec RMS (up to 100 nsec)

### PULSE DELAY GENERATOR INPUT (SMA CONNECTOR)

- Input Voltage: 0V to 3.3V
- Threshold: 0 to 3.3 VDC software adjustable (Pulse-In)
- Max Input Rate: 200 MHz
- Insertion Delay: 70 nsec

### SYNC EXTERNAL / GATE INPUT (SMA CONNECTOR)

- Input Voltage: 0 to 3.3 V
- Threshold: 1.2 V
- Max Input Rate: 20 MHz

### STAND-ALONE PULSE GENERATOR OUTPUT

- Repetition Rate: 0 to 20 MHz
- Programmable Duty Cycle

### GENERAL

- Small Form Factor: 104mm x 89mm x 27mm
- Power Adapter: +5 VDC/500 mA (included)
- USB 2.0: Cable Included, Software & GUI Included
- Multi-Channel: Multiple Units Can be Controlled from a Single USB, Single Power Supply, and Single Synchronization Input Signal



Offered by  
**LASER LAB SOURCE**



LASER  
DIODE  
CONTROLLERS



## PRODUCT SALES AND SERVICE:

Unlimited phone and email support is provided for products purchased through Laser Lab Source. Orders for this product are fulfilled by Laser Lab Source in North America and select international regions. It is manufactured by AeroDIODE, Talence, France.

## PRODUCT WARRANTY:

This product is sold with a full one-year warranty. It is warranted to be free from defects in material and/or workmanship for a period of one year from the date of shipment. The warranty does not cover damage to the product due to mishandling or use of the product outside of its specified maximum ratings.



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