

# TRIGGER ON DEMAND OPTION

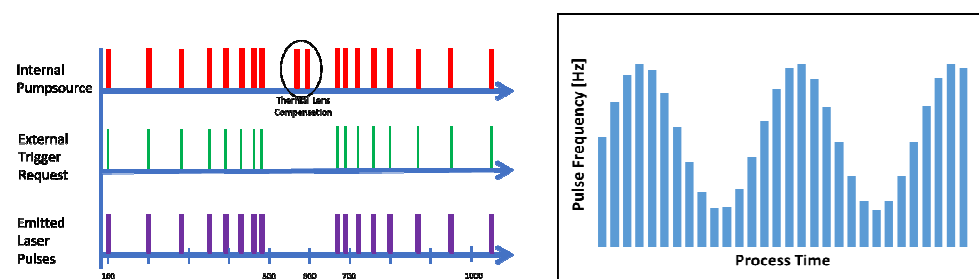
## Fully variable pulse frequency



### Special

The new Trigger on Demand option allows to trigger the laser whenever a pulse is needed. For example, the laser can be triggered in bursts or with gradually varying pulse spacing, allowing to deliver the light pulses to your target in any complex timing scheme.

Almost all other laser systems have a fixed pulse spacing (e.g. 10 Hz), given by the pump source frequency. With this new option, an intelligent algorithm makes sure that thermal lensing of the laser system is stabilized dynamically. The average frequency (pulses per second) is still defined by your choice of laser model. But how these pulses are distributed is completely variable: short bursts of up to 1000 Hz, or pulse patterns with flexible timing, the laser will follow your requirements.



### Applications Examples

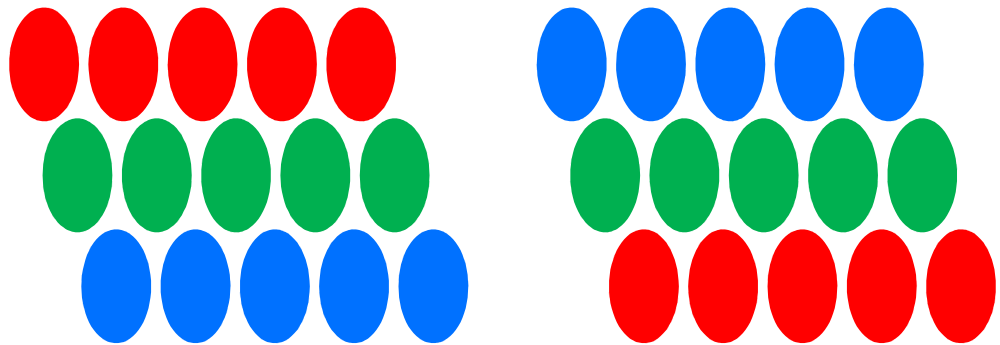
that can benefit from this new degree of freedom in laser timing:

- LIF measurements of engines running at dynamic RPM
- Marking of products on conveyor lines with variable speed
- Adaptive pulse timing in LIBS/LIPS (e.g. material sorting)

Contact us with your requirements!

# BURST OPTION

Pulse trains with up to 4 kHz frequency



## Features

With our new Burst option, up to 10 pulses with full energy specification can be delivered with down to 250  $\mu$ s separation time from one single laser. This very economic solution addresses experiments where high pulse frequencies are only required for a short time, but demands for high pulse energy, best beam quality and short pulse width cannot be compromised.

Typically, nanosecond pulses with up to 2.5 Joule pulse energy are only available with low repetition rates of 10-30 Hz. Applications that require a limited number of pulses, but at much higher frequency, usually utilize multiple laser systems to deliver these pulse trains to the target.

With this new option, one laser can be enough!

## Key Facts:

- Available for both Flashlamp and DPSS laser systems
- Down to 250  $\mu$ s pulse separation time (= 4 kHz)
- Up to 10 pulses
- Full pulse energy as specified for our standard models
- Energy Stability within Burst < 5% RMS
- Available pulses per second depend on laser model repetition rate

**Applications** that can benefit from these pulse bursts include:

- High-speed Laser-Induced Fluorescence (LIF)
  - transient combustion processes (ignition)
- High-speed Particle Image Velocimetry (PIV)
  - Supersonic flow measurement
- Flow imaging of gas jets

Contact us with your requirements!

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