

OPTIMEX 8

OPTICAL ANALYZER OF EXPLOSIVE PROCESSES

The **OPTIMEX™ 8** a multipurpose portable instrument designed for the measurement of detonation velocity and other parameters using 8 fiber optic probes with the continuous recording of light signal intensity.

The **OPTIMEX 8** is the next generation of the **VOD 815** tester with a completely redesigned optoelectronic acquisition system and advanced data evaluation features based on the extensive research of explosives' light output. The instrument retains all abilities of its predecessor while offering several others.



APPLICATIONS

The **OPTIMEX 8** is primarily designed for measurements of detonation velocity of energetic materials in research, industrial, military, educational or engineering applications.

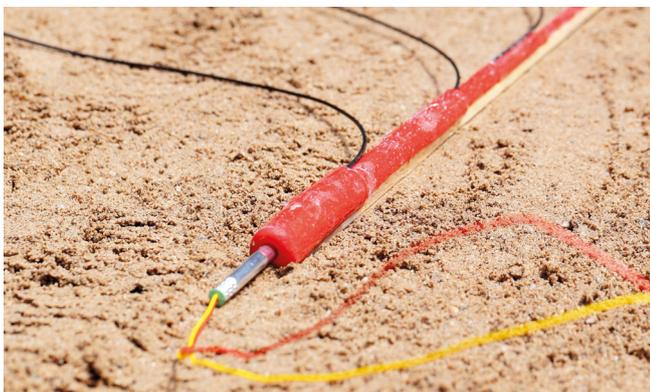
The instrument records full light intensity-time profiles at specific places within an explosive charge which allows to track detonation or shock waves. Analysis of light intensity profiles makes evaluation of such signals robust and reliable for all existing samples including non-ideal explosives. Explosive's translucency, low light emissivity, afterburning, etc. no longer spoil the measurement results.

Tasks for **OPTIMEX 8** may include determination of:

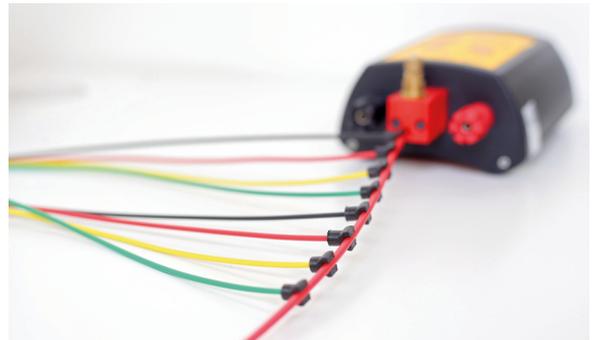
- ▶ Detonation velocity, a basic parameter of all explosives
- ▶ Detonation wave curvature, a measure of the ideality of detonation
- ▶ Shock velocities in inert materials, useful for the estimation of detonation pressure

ADVANTAGES & FEATURES

- ▶ 8 passive optical probes (either plastic or glass fibers)
- ▶ Light intensity-time profiles recording
- ▶ Immune to stray currents and EM disturbances
- ▶ Controlled via tablet PC
- ▶ Automated data evaluation routines
- ▶ Battery powered, 8 hours of operation
- ▶ **NEW** Adjustable light signal generator



Detonation velocity measurement using Perforated Fiber Probe



Deflagration to detonation transition tracking in a shocktube

COMPLIANCE

- **EN 13630-11** Explosives for Civil Uses – Detonating cords and safety fuses - Part 11: Determination of velocity of detonation of detonating cords
- **EN 13631-14** Explosives for Civil Uses – High explosives, Part 14: Determination of Velocity of Detonation
- **EN 13763-23** Explosives for Civil Uses – Detonators and relays – Part 23: Determination of the shock-wave velocity of shock tube



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