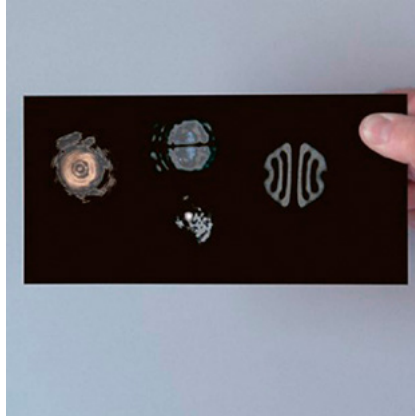


## LASER-ALIGNMENT-PAPER LDT-LP



### INDUSTRY STANDARD LASER ALIGNMENT THERMAL-SENSITIVE PAPER

- / Simple
- / Quick
- / Affordable laser beam alignment

### LDT-LP DOCUMENTS

- / Beam shape
- / Mode
- / Intensity
- / Divergence
- / Energy distribution

### SPECIFICATIONS

Pulse width range	1 ns to 30 ms
Power level range	5 mJ/cm <sup>2</sup> to 20 J/cm <sup>2</sup>
Min. beam diameter [mm]	6.5
Sheets per box	50 pieces
Sheet size [mm]	127 x 57

Caution:  
Always wear laser protective eyewear

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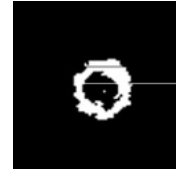
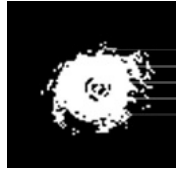

## HOW TO HANDLE THE LDT-LP

- / LDT-LP is sensitive over a broad spectrum from ultraviolet to infrared, it is used to align external accessories to the laser beam axis, such as beam expanders, lenses, apertures, attenuators, and power measuring equipment.
- / LDT-LP is simple to use. Hold or fasten it in the beam path at the point where the beam imprint is to be recorded. Pulse the laser and a permanent visual record is produced, corresponding to the energy distribution within the laser beam. If the laser being used in continuous wave (CW), you can create a short pulse by Q-switch, mechanical chopper, or by physically turning the laser on and off rapidly.
- / For laser with a beam diameter of less than 6.5 mm, please use a diverging lens to enlarge the beam diameter and to achieve a better resolution with the LDT-LP.  
Position a positive lens in the beam path and take a picture with the LDT-LP at a distance of >2.5 times the focal length of the lens.
- / Please remove fiber optic systems before you take a picture with LDT-LP. In a fiber a mix of modes can occur and you will receive a homogenous image which does not allow conclusions about the irregularities in the beam path.
- / Increase or decrease the power of your laser until details of the laser beam are visible on the LDT-LP. Not all lasers have enough power to leave an image on the paper. As a guide: you will get a good image with a pulsed laser, femto to 50 msec., with at least 10 mJ output. If necessary please fire several pulses on the paper.

## THE IMPRINT ON LDT-LP PAPER PROVIDES INFORMATION ABOUT

- / Mirror alignment accuracy
- / Energy distribution, mode quality and edge definition
- / Vignetting
- / Secondary emissions due to uncoated or mis-placed optics
- / Divergence
- / Optical damage in the beam path
- / Save LDT-LP burns for historical evaluation and comparison of alignment and beam quality. OEMs and field service personnel commonly use previous burn patterns for quick performance checks.

## SPECIFICATIONS

Misaligned / Aligned		What your laser beam should look like			
					
3 ms Pulse	3 ms Pulse	7 ns Pulse	70 ns Pulse	70 ns Pulse	10 ms Pulse
0.1 Joules	5.0 Joules	3 mJoules	90 mJoules	310 mJoules	20 Joules

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