

# Laser Protection Device

LPD™ are Laser Protection Device exclusively developed based on Kent Optronics innovative tunable notch filters with the FPGA implemented electronics for fully automated operation. KOI offers three series of LPD products:

- Manually operated LPD™
- Computer interfaced LDP™
- Stand-alone Fully automated LDP™

Each series of LPD™ products further consists of three (3) sub-series, depending on the filter equipped, i.e., switchable-tunable notch filter (S-TNF), binned notch filter (B-NF) and polarizer-free tunable notch filter (NP-TNF).

The manually operated LPD™ comes with a tunable notch filter and a calibrated power supply. The user simply dials the digital number of the wavelength via the control knob on the power supply to tune the LPD™ to the user pre-determined wavelength. For the LPD™ equipped with either S-TNF or B-NF, the user also has the option to switch the LPD™ between blocking active and completely transparent (non-blocking) states via a toggle switch.

The computer interfaced LPD™ comes with a tunable notch filter, a power supply, a software disc containing the look-up table for wavelength tuning, and a USB or RS-232 cable to interface to a host computer. The filter and the power supply are connected together and interfaced with the host computer via USB or RS-232 interface. The user keys in the digital number of the wavelength to tune the LPD™ to the user pre-determined wavelength. Similarly, for the LPD™ equipped with either S-TNF or B-NF, the user can switch the LPD™ between blocking active and transparent (non-blocking) states via the windows-supported graphic-user-interface (GUI).

The stand-alone fully automated LPD™ comes with a tunable notch filter, an optical detection and discrimination assembly [including a wide field of view (FOV) optical detector head and a spectral analyzer], a controlling electronics package including power supply, a software package containing the look-up table for wavelength tuning and system operation, and an optional host computer. The filter is connected to the controlling electronics which, together with the optical detection and discrimination assembly, is further interfaced to the host computer via USB or RS-232 interface.

## Contact Info:

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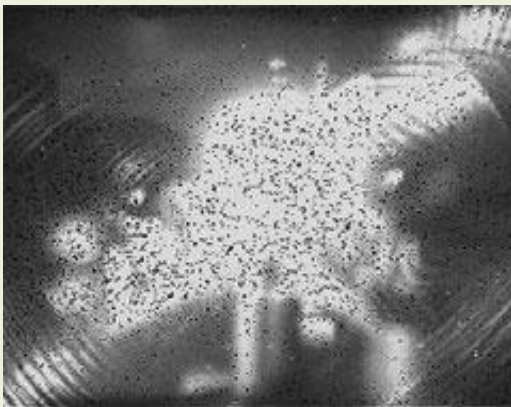
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The user positions the tunable filter as well as the detector head facing to the possible incoming laser beam and then inputs the activation light intensity threshold through the keyboard. The LPD™ automatically detects, discriminates, thresholds, and blocks the harmful incoming laser if the laser intensity is above the pre-set threshold. If the LPD™ is equipped with either S-TNF or B-NF, the user has the option to switch the LPD™ between blocking active and non-blocking states via the windows-supported graphic-user-interface (GUI). All the actions are completed within 100's milliseconds to 10's seconds. The LPD™ products provide the customers with a highly efficient means for laser protection with the following main performance specifications:

- Wide protection spectrum range from 400 to 3,000 nm
- >3 optical density (OD) at the notch
- >80% out notch transmittance (or <1dB insertion loss)
- 50 to 300 nm notch bandwidth
- 100's ms to 10's seconds total action time

Customers have the options to choose the filter type, aperture, and operation mode. All products are offered at a competitive price. Contact us for a price quote with your specific application requirements.

## Sensors are laser jammed



Both 1330 and 1523 nm  
laser jamming



Green laser jamming

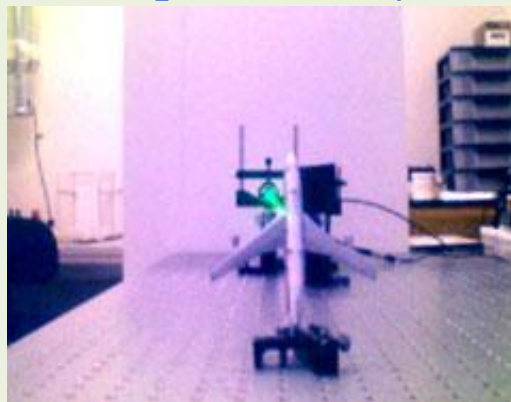


Red laser jamming

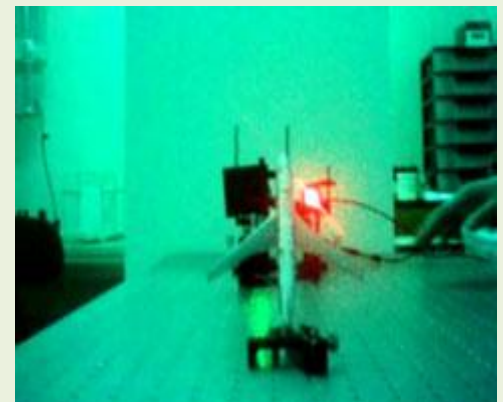
## Sensors are protected by LaPD™



Both 1330 and 1523 nm  
laser blocked



Green laser blocked



Red laser blocked