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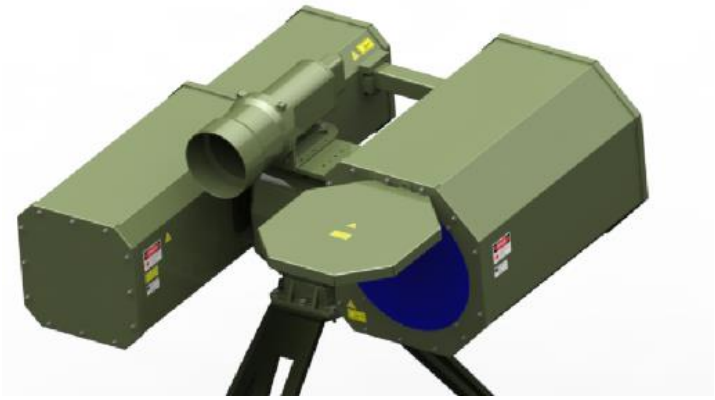
LAD-01 Anti UAV Stage (Laser Interceptor +Rotation stage)



Laser Kill Eyesafe Laser Interceptor is a compact 1kW single mode LWIR laser designed for defense applications. The laser includes up to 500 mm diameter reflective telescope, focusing, tracking and steering optics. The laser is accomplished with a compact laser driver and a chiller. The interceptor is mounted on a precise fast 2 axis tracking stage for rotation of the laser towards targets.

The interceptor prototype is live tested to shoot balloons at distance of 1000 meters in conditions of high humidity. Typical distances for shooting balloons are up to 2000m, and for shooting quadcopters are up to 1000m. High power LWIR/NIR radiation is effective for burning and jamming of thermal sensors and cameras of hostile drones, missiles etc.

High power LWIR laser has low absorption in atmosphere, and it is less sensitive to atmosphere turbulence. It has good absorption in materials of the targets. As a result, the LWIR laser interceptor is more effective than a fiber laser interceptor.

FEATURES	APPLICATIONS
• Eyesafe at short range of 4km • Affordable cost. • Cost effective • Low Maintenance. • Water cooled • Automatic track of airborne objects • Laser burner • Mobile • Video and Data Backlog of events • Withstands field environmental conditions	Protection of power stations, airports, locations of national events, government buildings, state borders, stadiums and convention centers against hostile quadcopters, mini UAVs and incinerating balloons.

*The system shall include an external panoramic warning system for detection of targets.

ANTI UAV LASER INTERCEPTOR MAIN PARAMETERS, MODEL: LAS-01	
Laser Burner Type	Single Mode CW LWIR laser
Laser Burner Power	1kW (up to 3 kW optional)
Laser Output Aperture Diameter	400mm (500mm optional)
Laser Output Divergence, full angle	0.05÷0.08 mrad
Steering mirror diameter, Max Slew and Bandwidth	< 50mm, <±1 deg, <10Hz
Rotation stage Travel Range Azimuth / Elevation	360° (+/-180°) / 60° (+50°/-10°)
Rotation stage Travel Rate / Follow Aim Rate	90 / 30 (°/sec)
Rotation stage Pointing error, Bandwidth, Acceleration	1mrad / < 2 Hz / 100 °/s²
Laser Burner Eye safety category	Class 4 IEC 825-1 2001-08
Laser Safety Distance	4 km
Working distance	100m to 2000m
Internal Tracking Camera VIS/NIR	Low Light 2Mpx 30FPS, FOV <5 deg
Warm-up time (min)	< 2
Environmental	-20°C … +50°C
Weight (kg) Optical head / Rotation stage Power Supply / Chiller	80 / 20 60 / 60
Dimensions (m) Optical head / Rotation stage (WxLxH) Power Supply / Chiller	1.5 x 1.5 x 0.5 m^3 / 0.25 x 0.25 x 0.5 m^3 0.4 x 1 x 0.25 m^3 / 1.2 x 1 x 0.8 m^3
Power input	3 Phases AC 15kW
Optional:	
Rangefinder (-LRF)	3km, 1pps, Eyesafe
Laser illumination module for active vision (-LIXXXX)	NIR (700nm±900nm, 100W up to 1000W
Internal Tracking Camera LWIR (-TCLWIR)	Uncooled 640x480px 30FPS, FOV <5 deg

Specifications in this document are subject to change without notice.

Part Number examples for ordering:

Line	Part Number for ordering	Includes
1	LAS-01-1kW-400mm	Laser Interceptor 1kW d400mm, Power Supply and Chiller
2	LAS-01-2kW-500mm	Laser Interceptor 2kW d500mm, Power Supply and Chiller
3	LAS-01-3kW-500mm	Laser Interceptor 3kW d500mm, Power Supply and Chiller
4	-LRF	As lines 1,2,3 +LRF
5	-LIXXXX	As lines 1,2,3 +Laser illumination module for active vision, XXXX represents power from 100W to 1000W
6	-TCLWIR	As lines 1,2,3 + uncooled LWIR camera