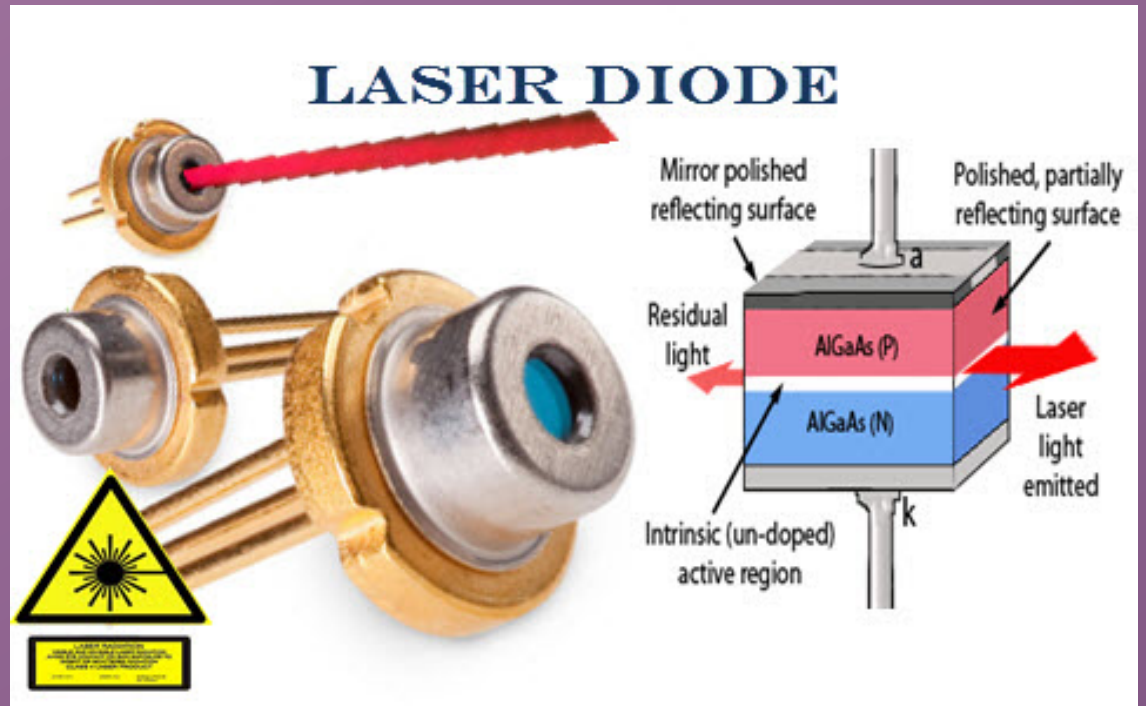


Open Elective-A

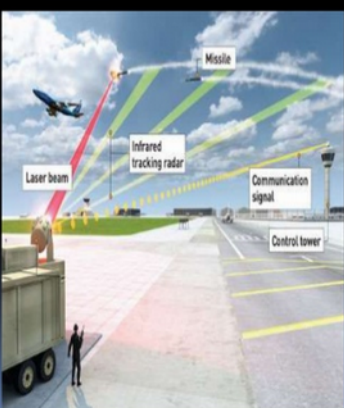
Subject Code: 18PHY651

Subject Name: LASER PHYSICS AND NON-LINEAR OPTICS

Department of Basic Sciences Engineering & Humanities



MILITARY DEFENCE



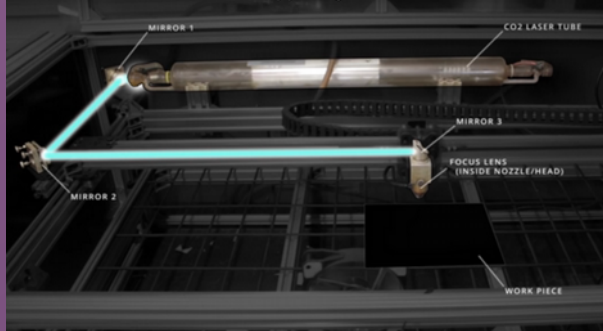
- 1. Find Target**
An infrared camera on the laser continuously scans a 6 to 10-mile radius around the airport for suspicious heat emissions. When it finds a plume, it relays the coordinates to an identification and tracking system, which is also on the unit.
- 2. Confirm Threat**
The onboard computer checks the object's heat signature against a data bank, confirms that it's a missile (and not a bird or a plane), and activates the laser.
- 3. Prepare to Fire**
Reactive gases in the laser's fuel tanks are funneled through a vacuum tube to heat up atoms and send them cascading through resonator mirrors. This produces a tightly focused, high-energy beam.
- 4. Destroy Missile**
The laser-beam cannon emits a burst of intense light aimed at the missile's most vulnerable spot, usually the explosives compartment. Simultaneously, it sends a signal to airport control tower to give authorities a fix on the origin of the rocket.

India on 22nd September 2020, successfully test-fired the laser guided anti-tank guided missile (ATGM) in the country.

It has been prepared jointly by three DRDO institutions. The test fire of ATGM took place in the KK range of Ahmednagar on Tuesday, it targeted the target three km away. High Explosive Anti-Tank (HEAT) War Head is used in ATGM, it can also destroy armored tanks.



How CO2 Laser Cutters work and ...Why you might want to build one!



Engraving Metal With A CO2 Laser

