



# Laser Technology

Laser technology is something in our lives that we use every day,  
But don't even think about it. It has been used to make huge  
Scientific findings, that can help us in many ways.

On 1958 Charles Townes and Arthur Schawlow had papers published. They said about a laser invention that would show visible spectrum light. They didn't continue with the research until year 1959 came. Charles and Arthur were granted with a patent for a maser. A maser was created in 1954 by Charles Townes and Arthur, which stands for Microwave Amplification by Stimulated Emission of Radiation. The maser was ammonia gas and microwave radiation, invented before the (optical) laser.

There are a lot of lasers. Some used for medical surgery like sightedness in vision, or a laser that could remove small amounts of tissue. However, the Ruby laser is a laser that creates red light. There would be about eight parts to/inside the laser. The power supply, switch, 100%-reflective mirror, Quartz flash tube, Ruby crystal, polished aluminum, reflecting cylinder, 95%-reflected mirror and Laser beam. These parts make the laser shoot a red light that is visible to see. The red light would form in a cylinder, one reflecting mirror placed on one end then a partially reflecting mirror on the other. Next, there's a high-intensity lamp that is spiraled around the ruby cylinder that provides a flash of white light which triggers laser action. A process happens of which a green and blue wavelengths and emit to red. This is when the light reflects on the mirrors making the red brighter. Last, its shoots out making the laser light.

Lasers were used for many things besides for fun. They were used for taking measurement's, medicine, research and environment. The very FIRST laser being used for research in in laboratories on 1960, May 16. But now lasers are used for many things. In 2013 new lasers were made that the military aircrafts could use to identify dangers far below such as weapon arsenals. It uses infrared light, that cannot been seen by a human eye, but packs a lot of 'information'.

Besides laser being used for medicine or environmental research, laser can be used just for fun! The basic laser pointer is fun itself. Usually the laser pointer is used for pets. Cats and dogs chase after the laser when you shine it anywhere they can reach. Laser are also used in the dark, shinning around the room and seeing different colored beams of bright light! It fun at parties the most or night clubs.

Lasers can also be used for education! Some teachers have a TV like controller with a few buttons on it. These go to the next slide on power points they show in class, but also have a laser pointer on it! Teachers can use this laser to point out anything on the board if it doesn't

come clearly to the student at first. It make it easier for the teacher instead of getting up and stepping in front of the board to point out anything.

The laser and the maser are often confused with each other. The main, or most know, difference between the laser and the maser is that the maser uses microwaves. Also the laser stands for Light Amplification by Stimulated Emission of Radiation. The maser stands for Molecular Amplification by Stimulated Emission of Radiation. The difference is clear when lasers are light/Molecular amplification by simulated emission of radiation. Last, the laser uses just microwaves, when the maser uses microwaves and other wavelengths.

Laser technology has a huge impact on the world. The laser has helped us in many was that people can't solve alone without it we'd have a lot more problems to solve. Lasers are used to help us AND be there just for fun sometimes!

