

HOLOGRAPHIC SIGHT



INTRODUCTION

The holographic sight is an aiming device where a projected holographic reticle is used for fast and accurate aiming. It is a unit magnification sight with large (practically unlimited) field of view, because of shooting with both eyes open. When a holographic sight is mounted on a weapon (a rifle or carbine), it offers an advantage of quick engagement with the weapon.

The viewing window of this sight is a combiner for see-through target image and a projected reticle recorded.

IRDE has designed and developed holographic sight for INSAS rifle based on the army requirement.

SPECIFICATIONS

- Weight - < 350 gm
- Range - up to 200 mt
- Magnification - 1X
- Window size - 30 mm x 25 mm
- Field of View - Practically unlimited (Because of both eyes open shooting)

FEATURES

- Reticle pattern embedded in display window
- Brightness Control of reticle
- Low Battery indicator
- Auto shutdown
- Night Vision Compatible
- Powered by two 1.5 V AAA cells

TECHNOLOGIES INVOLVED

The development of indigenous holographic sight involves the development of following technologies –

1. **Recording and reconstruction of Reticle Hologram** - It involves the preparation of high resolution reticle masks, novel recording schemes, suitable recording material and their processing optimization.
2. **Recording and reconstruction of Holographic Lens** - This holographic lens replaces the conventional collimator and a compensation grating and makes the device compact.
3. **Sealing of holographic components for their environmental stability** - This is essential for maintaining their performance in extreme conditions on operation.
4. **Power variation of laser**– This electronics is used to provide the desired features like brightness control, auto shutdown and low battery indicator in the device.
5. **Mechanical design of holographic Sight** – This is for delivering a rugged structure to sustain recoil of gun with all desired functional requirements like reticle movement in horizontal and vertical direction, female dovetail for fitment of sight on the weapon.

All the above technologies successfully developed at IRDE (DRDO) Dehradun.

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