

Night Vision Generations

Generation 3 is the most sophisticated night vision technology available. The photocathode is coated with sensitive gallium arsenide, which allows for a more efficient conversion of light to electrical energy at extremely low levels of light.

Before the innovations of Generation 3, there was **Generation 2**. Generation 2 marked the development of a microchannel plate, which multiplies the number of electrons by the thousands. This produces a clear image in nighttime situations without the distortion of Gen 0 and Gen 1.

Generation 1 has problems with distortion and short-lived intensifier tubes. It uses materials that are better than Gen 0 to convert light to electrons. These units were able to operate at lower light levels than the Gen 0 and became known as "starlight scopes." Imported night vision viewers usually use Gen 1 image intensifiers even though they may be advertised as Gen 2.

Generation 0 technology depended on external light to increase available light energy. After the light was converted to electrons, electrical components focused these electrons through a cone-shaped device (anode) and accelerated them so they hit the phosphor screen with greater energy, creating the visible image. Unfortunately, accelerating the electrons in this manner caused distortion in the image and decreased the tube's life.

All Generation 3 products sold internationally require an export license from the US Department of State, Office of Defense Trade Controls, in accordance with International Traffic in Arms (ITAR), Title 22, Code of Federal Regulation. Most Generation 2 products are controlled by the US Department of Commerce, Bureau of Export Administration, Commodity List Number 6A002.