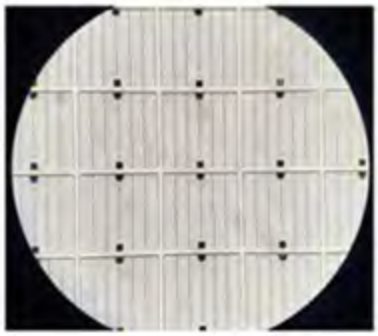
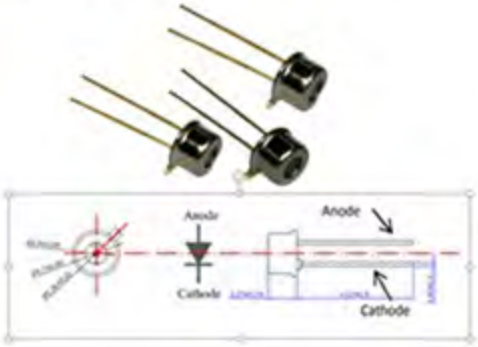
**Electro Optical Components, Inc.**
5464 Skylane Boulevard, Suite D, Santa Rosa, CA 95403
Toll Free: 855-EOC-6300
www.eoc-inc.com | info@eoc-inc.com

Click to go to Product Selector

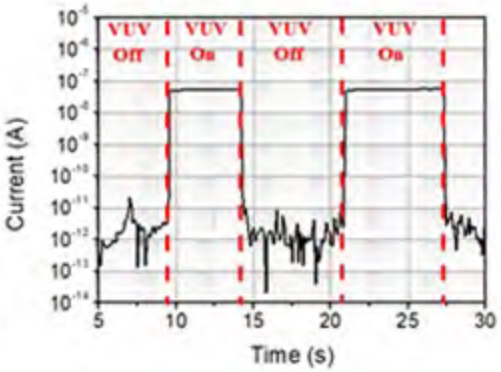
# Far-UV, Vacuum Ultraviolet measure sensor



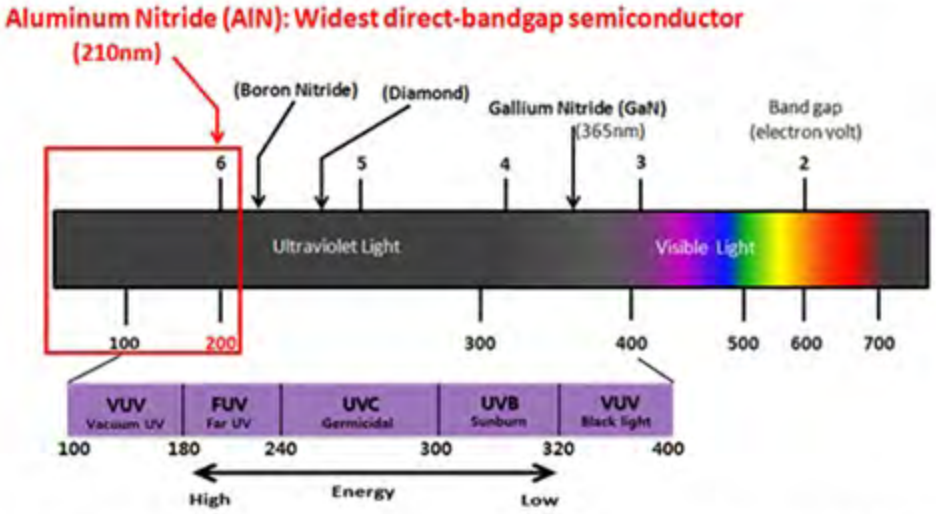
microscopic photograph of Chip




Package photos, Outline Diagrams and Dimensions




172nm VUV lamp Photo current reaction




The COVID-19 pandemic is an ongoing challenge of emerging and re-emerging infectious pathogens. Ultraviolet (UV) has high energy in the wavelength range of 100 ~ 400nm and is used for sterilization, air purification, medical treatment, etc. by breaking the bond of microorganisms, bacteria, oxygen, etc.

Unfortunately conventional germicidal UV light is a safety hazard, as it causes skin cancer and eye problems. There has been a breakthrough, far-UV light ("far-UVC" light with a wavelength around 220 nm) cannot penetrate the dead-cell layer at the surface of our skin, nor can it penetrate into our eyes. So it can't reach or damage any living cells in our body. In short, exposure to far-UVC light is safe for people, but potentially lethal for viruses in the air. Also, Vacuum ultraviolet (VUV) range of 100~200nm is actively used in semiconductor fields such as photolithography and surface reforming cleaning.

Due to the increase of necessity of sensor which can exactly sense the special wavelength range of Far UV and VUV as we mentioned before, we are now developing, releasing, and selling the senor and the measuring instrument for our customers' private use.

## UV Sensor for Far-UV

**GFUV-T10GD-L**

TO-CAN Type UV Sensor (TO-46)
Detection range : ~240nm (FarUV)
Photovoltaic Mode Operation
Visible Blindness / High Sensitivity

## Far-UV Detecting Portable Meter

**GFUV-T10GS7.1-LA9**

Detection range : ~222nm
Simple, Easy and Convenient Measure

Genicom UV sensor Laboratory has developed a Far UV & VUV-dedicated optical sensor that can measure only the Far UV or VUV light by the AlN III-V compound semiconductor Epitaxial growth technology using high-temperature(>1300℃) Metal Organic Chemical Vapor Deposition(MOCVD)

Different from conventional Si-based sensors, the VUV sensor developed by Genicom use the nitride semiconductor with Ultra-wide band gap AlN epitaxy. It has perfect Solar-blind characteristics that are not reactive at wavelengths above 240 or 210nm due to the high crystal quality. In addition, the developed optical sensor has Photovoltaic characteristics that can detect the intensity of light source at 0V by utilizing the Schottky characteristics caused by work function difference between the light absorption layer AlN and the transparent Ni electrode. Due to the photovoltaic characteristics, our self-powered optical sensor does not require a voltage module.

The sensor consists of the TO-46 package, and the area of the absorption layer is 1.96mm2, which has a low noise characteristic with a dark current of 10pA or less.