

SEMI- GUIDANTS AND THIN LAYER FILMS.

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Annotation. In this article, we have examined methods for creating an optical radiation primer (OPI) based on a core AFN film with enhanced light sensitivity and reliability of operation.

Key words : AFN film , photo printing , photosensitive layer , light stream

Introduction. It is known that the technological mode of obtaining AFN - film depends on many parameters, such as the temperature of the floor and the rate of evaporation, the amount of nylon, the fiber film, the composition and pressure of residual gas in the vacuum chamber, the conditions of thermal processing of the film after nylon, etc. When the reverse side of the AFN film is cooled by a light source with an intensity of $\sim 8 \cdot 10^2 \text{ W/cm}^2$, AFNs are generated up to 300 V/cm^2 . This means that AFN is also generated when light is reflected. If the reverse side of the glass or quartz substrate is covered with a reflecting Ag coating, the magnitude of the AFN effect must change. The coating on the anti-pollution side of the glass floor with a reflective layer of silver is produced at a pressure of 10^{-4} mm Hg . The temperature and temperature of the substrate are $250 \div 600^\circ\text{C}$ to reduce the oxidation of the silver reflecting layer. The manufacture of such a pinka is carried out in the following sequence: on one side of the glass floor, located at an angle of 45° to the direction of the molecular beam, at a temperature of $420 \div 600^\circ\text{C}$ and a pressure of 10^{-5} mm Hg . St. cadmium $0.2 \mu\text{m}$ nanowire layer on tellurium, then on the anti-pollution side of the glass substrate nanowire reflective layer silver $1 \mu\text{m}$ thick thermal insulation at a temperature of $250 \div 300^\circ\text{C}$ and a temperature of 10^{-4} mm Hg . St.

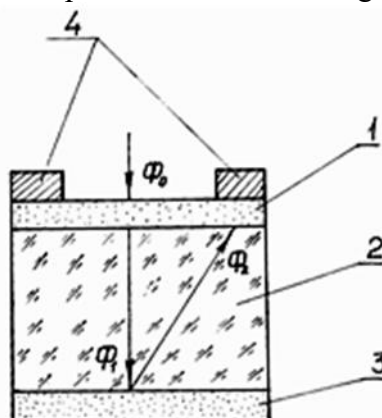


Fig. 1. AFN film with protective cerebral sloem

On one side of the glass floor, located at an angle of 45° to the direction of the molecular beam, at a temperature of $420-600^\circ\text{C}$ and a pressure of 10^{-5} mm rt . St. $0.2 \mu\text{m}$ nanowire layer of tellurium with cadmium thickness, then on the anti-pollution side of the glass substrate nanowire reflective layer of $1 \mu\text{m}$ silver thickness with thermal insulation at temperature of $250-300^\circ\text{C}$ and at a temperature of 10^{-4} mm rt . St. Primer: Photoabsorbing layer of thermally vaporized crystalline telluride cadmium nanosate at a temperature of 400°C and vacuum of 10^{-4} mm Hg . St. on a glass substrate positioned at an angle of 45° to the direction of the molecular beam, up to the size of the film $0.2 \mu\text{m}$. Then, on the anti-clogging side of the glass floor, the nanowire protective layer is coated with thermal vaporization of silver at a temperature of 250°C and a

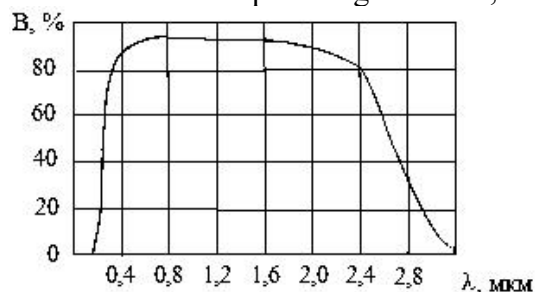
vacuum of 10^{-4} mm Hg. St. The thickness of the film should be approximately 1 μm . The magnitude of the anomalous photovoltage in this case will be 215 V at a luminosity of 104 lx.

The AFN-receiver body must perform two functions. The first function is the sealing of the AFN film, i.e., the light-sensitive element in the environment, to protect against atmospheric pollution and prevent instability of the device's parameters. The second function is to ensure the illumination of the necessary areas of the sensory element. Therefore, the body of the AFN-receiver is not only hermetically sealed, but also does not allow for the detection of long-range, long-range, and spectrally characteristic devices [3].

Based on this, the first type of AFN receiver housing is a continuous glass housing. Glass housing has long been widely used for photodetectors, for example, for FT-3G series phototransistors, as they are the most hermetically sealed.

With this technology, their production is simple, which ensures low cost. The spectral characteristic of lead glass transmission is shown in Fig. 2. As can be seen, it transmits radiation with wavelengths up to 2.8 μm . From this point of view, a glass housing can be rationally used for AFN-premnikovs. I will review the technology and manufacturing of the AFN receiver's glass body, which is presented here. 3.

It consists of three parts: a glass hook, fibers with glass beads, and a sensitive element.



Ris. 2. Spectrum transmission lead glass

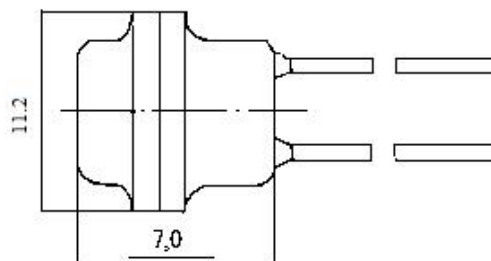


Fig. 3. Vneshniy vid AFN-priemnika

The glass with a diameter of 8 mm is hermetically sealed and the lid has a diameter of 11.2 mm. Copper wire made of an alloy of Fe N and Cu with a diameter of 0.25 mm, bent in the shape of the letter "G" and covered with two pieces of pipe made of lead glass. 2. Then, they are melted in a gas-chloride burner to form two buses through which dense outlets pass.

After preparation, this wire rod is opened by boiling in citric acid and immersion in a 25% aqueous solution of nitric acid. Purified extracts are coated with gold or nickel-plated by an electrolytic method to protect against corrosion. After cutting to the required size (42 mm), the cable is ready for mounting the sensor element. The metallic contacts of the AFN receiver are created by an oat alloy with a 1% antimony or 1% gallium mixture. After creating metallic contacts on the outer areas of the diaper, it is mounted on the mandrel. Then the body is sealed with a soldering iron, the glass lid is placed on top in dry air. Autonomous receiver of optical isolation AF-4M [5].

Basic technical data

Sensitivity at $I V = 1 \text{ lx}$, B 5.

Internal resistance, Ohm. 10. 14.

Bystrodeystvie, s..... 1.

Dolgovechnost, ch, ne mene..... 10,000

Dimensions, mm..... 11×11×49

Mass, g, ne bolee..... 2.0

AFN-receivers are manufactured by GaR, GaAs, CdSe, CdTe, CdTe:Ag, as described above. A 4-2 mm film was used as the light-sensitive element of the autonomous receiver.

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