

## EFFECT OF $\gamma$ -n-PULSE ON AlGaAs LEDs\*

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The results of studying the effect of a  $\gamma$ -n-pulse on IR LEDs based on AlGaAs heterostructures are presented. The LEDs were tested in active and passive power modes. During the irradiation of LEDs in the active power mode after exposure to a  $\gamma$ -n - pulse (indicate  $D$  gamma and neutron flux), the LED radiation power is restored by  $\Delta P$ . The regularity of LED power decrease in active and passive power supply modes is determined. It has been suggested that the restoration of the radiation power  $\Delta P$  during irradiation with a  $\gamma$ -n-pulse in the active power supply mode of the LED is due to radiation-stimulated and/or electrically stimulated annealing of local mechanical stresses in the LED.

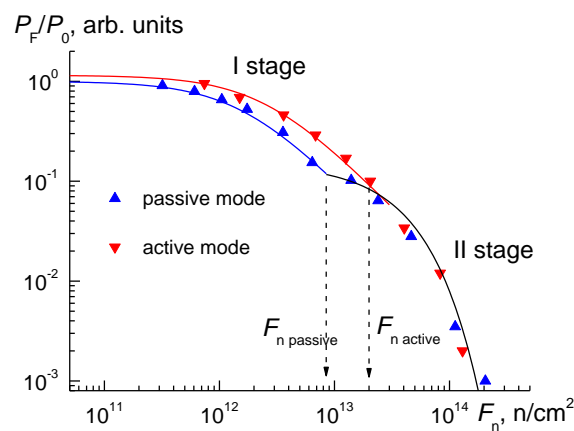


Fig.1. Variation of LED emission power (of 50 mA operating current) when exposed to  $\gamma$ -n-pulse in active and passive power modes: symbols – measurement results; lines – determined regularities (1-3); stage I, stage II – common stages of radiation power reduction;  $F_{n\ passive}$   $F_{n\ active}$  – threshold values of neutron fluences at the boundary between selected stages for the respective irradiation modes

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