

OPTICAL PROPERTIES  
OF IRRADIATED EPITAXIAL GaN FILMS

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S u m m a r y

The influence of a microwave treatment (MWT) on the optical properties of hexagonal GaN films has been studied. To estimate the internal mechanical strains and the degree of structural perfection in a thin near-surface layer of the film, the electroreflectance (ER) method is used. The ER spectra are measured in the interval of the first direct interband transitions. It has been shown that the MWT results in the relaxation of internal mechanical strains in the irradiated films. In addition, the structural perfection in the thin near-surface layer of the irradiated film became higher. A mechanism that includes resonance effects and the local heating of the film defect regions is proposed to explain the effects observed.