

## Influence of flash ignition mechanism of high-current pulsed xenon discharge on the optical degradation of the quartz shell in the UV region of the spectrum

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*The study results of the influence of the discharge ignition on the flash lamp lifetime in the spectral range of 200–300 nm are presented. With a sequential ignition scheme, the radiation energy of the lamp decreases by 50 % of the initial value for 600 thousand pulses. It is explained by the development of a low-current discharge along the generatrix of the discharge bulb, facing the ground surface of the unit, and the effect on it of increased heat and radiation fluxes at the stage of formation high-current discharge. By maintaining a low-current arc discharge, stabilized along the axis of the lamp, a decrease in the optical degradation rate of the lamp bulb by a factor of 8–10 with an operating time of 1 million pulses was obtained.*

*Keywords:* flash lamp, quartz, radiation, lifetime, UV, flash lamp ignition.

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