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Single-layer diffractive elements for cameras and video cameras of mobile communication devices 3

***Abstract***

***In the report, conditions that guarantee the absence of a visually observed halo in the image formed by the camera of a mobile communication device containing a diffractive lens with a single-layer saw tooth phase microrelief are corrected. The feasibility and effectiveness of using the diffractive lens with a single-layer microstructure, which does not lead to the emergence of a visually observable halo, are demonstrated by the example of a plastic objective lens for the smartphone. It is noted that the payment for a simple technology of forming of the diffractive lens’s microstructure may be the need of the digital color correction.***

***Keywords: Diffraction efficiency, Relief-phase diffraction microstructure, Halo, Diffractive lens, Refractive-diffractive objective.***

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