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## Transfer matrix and transfer function analysis for grating-type dielectric laser accelerators

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The question of suitability of transfer matrix description of electrons traversing grating-type dielectric laser acceleration (DLA) structures is addressed. It is shown that although matrix considerations lead to interesting insights, the basic transfer properties of DLA cells cannot be described by a matrix. A more general notion of a transfer function is shown to be a simple and useful tool for formulating problems of particle dynamics in DLA. As an example, a focusing structure is proposed which works simultaneously for all electron phases.

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