Abstracts

An Analytical Study of the Echelette Grating with Application to Open Resonators

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Reflection coefficients of various order diffracted waves are calculated for an echelette grating which finds important use as a component of suboptical resonators. The classical optics approach has been found to be inadequate for deriving reliable results for this configuration. Accurate solution of the boundary value problem associated with the echelette grating is derived by a new method. The results are useful for the design of suboptical resonators which use the echelette grating as a coupling mirror to achieve a single wavelength operation.

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