Abstracts

Further Investigations with an Optical Beam Waveguide for Long Distance Transmission

J.R. Christian, G. Goubau and J.W. Mink. "Further Investigations with an Optical Beam Waveguide for Long Distance Transmission." 1967 Transactions on Microwave Theory and Techniques 15.4 (Apr. 1967 [T-MTT]): 216-219.

Measurements made with an optical beam waveguide employing quartz lenses for the beam iteration demonstrate that a transmission loss of 0.5 dB/km is readily obtainable, and that this loss is solely determined by the absorption, scatter, and reflection losses of the lenses. The transmission loss and its variation depends on the air pressure along the light path. Photometric measurements of the energy distribution of the transmitted beam illustrate that distortions in the mode pattern of the laser are the major cause of the launching loss which for the available laser was measured to be approximately 0.4 dB.

❑ Return to main document.