Abstracts

Noise Temperature Data on Cataphoretically Pumped F13T5 Lamps (Correspondence)

R.E. Guentzler. "Noise Temperature Data on Cataphoretically Pumped F13T5 Lamps (Correspondence)." 1971 Transactions on Microwave Theory and Techniques 19.3 (Mar. 1971 [T-MTT]): 339-341.

Hg was removed from most of the positive column of an F13T5 lamp by cataphoresis; the Hg was trapped in the cathode region by cooling the bulb with ice. Noise temperatures were measured in the region of the lamp in which only an Ar discharge at 4.5 mmHg was taking place. The excess noise of the Ar discharge is given as a function of the dc discharge current from 60 to 2510 mA. An excessively large amount of noise that increased with discharge current was found to exist in the Hg portion of the discharge in the cathode region of some of the lamps. In some cases, this noise was coupled into the Ar discharge region and caused an apparent increase in the Ar noise temperature.

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