

ABSTRACT

A lighting device emits light by releasing electrons to an anode from a Joule-heated cathode and causes the electrons to collide against a phosphor on the anode side. A method of driving the lighting device repeats, at a predetermined lighting cycle, a heating period (t_h) in which the cathode is heated by conduction, a lighting period (t_{on}) in which the cathode is caused only to release electrons without conduction so that light is emitted, and a dummy period (t_d) in which no conduction or emission of light occurs at the cathode. To variably adjust the lighting period (t_{on}), adjustments are absorbed by the dummy period (t_d) to maintain the heating period (t_h) constant at all times. With respect to the timing control of each period, the lighting period (t_{on}) is controlled at a timing independent of the heating period (t_h), whereas the heating period (t_h) is controlled at a timing dependent on the lighting period (t_{on}). This is preferred to facilitate the timing control of the lighting period (t_{on}).

This Sheet Has Been Replaced

