

Email received on January 27, 2010 from Steve Hayes.

I've been reading the letter of 22 Jan 2010 concerning LED operating frequency requirement

*It says ENERGY STAR qualified lamps do not exhibit visible flicker during full output or dimmed operation.*

I contend that AC leds today most certainly fail this test.

I further contend that there is no dramatic urgency in reaching a specification, which will surely take years to revise once it's enacted. Better by far to press hard for a sensible consensus performance requirement for modulation and so on and then enact the specification. It is unlikely that any particular set of minimum figures will change anything at all for the electronic designers, given that the frequency will, we all know, need to be >120Hz. The only other technical solution will be in longer persistence phosphors, and if that can be done then AC leds might yet become viable.

At the very least please use every possible stratagem to stop "unpleasant" products reaching the market, queering the pitch for LED lamps for years to come, and to ensure that the flickery AC led has a strictly limited lifetime if the pressure to let it out is too great to be able to prevent it.

After all, LEDs today don't have an energy saving advantage over fluorescent lamps, we can wait.

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Further, and I fear this isn't your problem, but please bear in mind that while the operating frequency in the USA is 120Hz, in much of the rest of the world it's 100Hz. A degree of flicker which is acceptable at 120Hz will be MUCH more unpleasant at 100Hz if regular fluorescent lamps are anything to go by.

If you determine that for example a modulation depth of 20% is acceptable at 120Hz, the same device operated at 100Hz may have a modulation depth of >50% such is the nature of phosphor decay.

I propose to you that as it is quite likely that the electronics will be constructed for a worldwide market, it would be in everybody's interest to take this into account.

Thanks

Steve

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from Steve Hayes