

ECANB Technical Guidance Note TGN 21 on Lighting chains

1. Introduction

A Lighting chain is a product which can flicker and/or make music in an objective of decoration or animation. The lamps used are incandescent lamps.

A Lighting chain is regarded as an electrodomestic product and similar within the meaning of the standard produces EN 55014.

A Lighting chain is intended for various environments :

- domestic environment,
- commercial environment,
- on the public highway.

The standards which make it possible to cover the essential requirements of these various environments is the standard EN 55015 for which it is necessary to add the standards EN 61000-3-2 and EN 61000-3-3.

Within the meaning of the standard EN 61000-3-2, which class covers Lighting chains ?

2. Guidelines:

Class C of edition 2006 of EN 61000-3-2 indicates: "Equipment with a primary function of generating and/or regulating and/or distributing optical radiation by means of incandescent lamps, discharge lamps or LED's".

By looking at the §7.3, it is necessary to note two cases for the limits of the class C.

a) $P_a > 25 \text{ W}$

"However the limits given in table 1 apply to incandescent lighting equipment that has built-in dimmers or consists of dimmers built in an enclosure". The control box of the Lighting chain are comparable to variators of lights and for this reason can profit of the application of the limits of table 1.

Incandescent lamp luminaires which do not incorporate an electronic transformer or a dimming device are deemed to fulfil the harmonic current requirements and need not be tested (Annex C §5.3).

b) $P_a < \text{ or } = \text{ to } 25 \text{ W}$

This paragraph specifies the conditions for the lighting equipment to discharges with $P_a < \text{ or } = \text{ to } 25 \text{ W}$ and nothing is specified for other lighting equipments.

The lighting chain using discharge lights (neon) must comply with one of the two

requirements of section 7.3b. The Lighting chain which do not discharge lamps (neon) have no limit.

Note: This TGN is based on TECHNICAL DECISION n° 3E : Edition 2 – 08/09/10 of the Working Group of French Notified Bodies for EMD Directive 2004/108/EC

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