

LIMITS AND METHODS OF MEASUREMENT OF RADIO DISTURBANCE CHARACTERISTICS OF ELECTRICAL LIGHTING AND SIMILAR EQUIPMENT

INTERPRETATION SHEET 1

This interpretation sheet has been prepared by subcommittee CISPR F: Interference relating to household appliances, tools, lighting equipment and similar apparatus, of IEC technical committee CISPR: International special committee on radio interference.

The text of this interpretation sheet is based on the following documents:

ISH	Report on voting
CISPR/F/583/ISH	CISPR/F/591/PVD

Full information on the voting for the approval of this interpretation sheet can be found in the report on voting indicated in the above table.

CISPR 15 interpretation sheet on the assessment of retrofit Extra Low Voltage LED lamps

Introduction

During the CISPR meeting in Seoul 2011 the IARU reported that a number of LED lighting products are causing interference with amateur radio reception. See item 15 of the minutes CISPR/1218/RM.

In addition to this verbal report, the IARU submitted in January 2012 a detailed written report which was circulated as CISPR/F/565/INF. Major sources of interference are some types of Extra Low Voltage (e.g. 12 V) LED lamps for which the current CISPR 15 requirements are not clear. Additional clarification of the standard was requested urgently.

In response the CISPR F management committee issued document CISPR/F/568/INF setting out an action plan to resolve the issue at short notice.

Part of the solution is this Interpretation Sheet which details the assessment of retrofit ELV LED lamps.

Question: How are the requirements of CISPR 15 applied to retrofit Extra Low Voltage (ELV) LED lamps?

Interpretation: When assessing retrofit ELV LED lamps against the requirements of CISPR 15 the following procedure shall be applied.

ELV LED lamps without active switching electronic components are considered to fulfil the requirements of CISPR 15 without test.

All other types of retrofit ELV LED lamps shall be tested in conjunction with a wire wound 50 or 60 Hz ring-core transformer. The use of such a transformer is considered to be the worst-case condition and shall be used unless it is clearly stated in the manufacturer's instructions that the lamp is unsuitable for use with such a transformer. In this case measurements shall be performed in combination with a typical compliant electronic transformer for halogen lamps.

The combination of transformer and ELV LED lamp shall comply with the mains disturbance voltage limits of Table 2a and the radiated disturbance limits of Tables 3a and 3b.

During the disturbance voltage measurement, the ELV LED lamp is mounted in a conical metal housing as described in Figure 7. The ELV LED lamp is then connected to the transformer by a flexible 3-core cable consisting of two ELV supply conductors and the earth connection to the conical housing. The length of this cable shall be as short as possible. The metal conical housing shall be positioned with its cable entrance close to the transformer.

The combination of transformer and conical metal housing shall be tested as a luminaire in accordance with the requirements of 8.2.

When performing the radiated disturbance measurements in accordance with Clause 9, the conical metal housing shall not be used.

References are to CISPR 15:2005, including Amendment 1 (2006) and Amendment 2 (2008).

LIMITES ET MÉTHODES DE MESURE DES PERTURBATIONS RADIOÉLECTRIQUES PRODUITES PAR LES APPAREILS ÉLECTRIQUES D'ÉCLAIRAGE ET LES APPAREILS ANALOGUES

FEUILLE D'INTERPRÉTATION 1

La présente feuille d'interprétation a été établie par le sous-comité CISPR F: Perturbations relatives aux appareils domestiques, aux outils, aux appareils d'éclairage et aux appareils analogues, du comité d'études CISPR de la CEI : Comité international spécial des perturbations radioélectriques.

Le texte de la présente feuille d'interprétation est issu des documents suivants:

ISH	Rapport de vote
CISPR/F/583/ISH	CISPR/F/591/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à l'approbation de cette feuille d'interprétation.

CISPR 15 feuille d'interprétation sur l'évaluation des lampes LED *retrofit* (ou améliorées) à très basse tension

Introduction

Au cours de la réunion CISPR de Séoul en 2011, l'Union internationale des radioamateurs (IARU) a signalé qu'un certain nombre de produits d'éclairage LED provoquaient des perturbations pour la réception radioamateur. Se reporter au point 15 du procès-verbal CISPR/1218/RM.

Outre ce rapport verbal, l'IARU a soumis en janvier 2012 un rapport écrit détaillé diffusé sous la désignation CISPR/F/565/INF. Des sources majeures de perturbations proviennent de certains types de lampes LED à Très Basse Tension (comme par ex. 12 V) pour lesquelles les exigences de la CISPR 15 actuelle ne sont pas claires. Il a été demandé en urgence un éclaircissement supplémentaire de la norme.

En réponse, le comité de gestion CISPR F a publié le document CISPR/F/568/INF établissant un plan d'action pour résoudre cette question à court terme.

Une partie de la solution figure dans la Feuille d'Interprétation précisant l'évaluation des lampes LED TBT de remplacement (installées à la place de lampes conventionnelles).