OFTA
電訊管理局

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26 November 2010

Chartered Institute of Housing, Asian Pacific Branch
Room 2709-11, Shui On Centre, 6-8 Harbour Road
Wanchai, Hong Kong

(Attn : Mr. Poon Yuen Fong, Sanford
Chairman)

Dear Mr. Poon,

Control of LED Lighting Equipment and Associated Power Supplies

I am writing to you further to our previous letter of 5 March 2010 about the control of LED lighting equipment.

In our previous letter, we mention about the requirements of the Telecommunications (Control of Interference) Regulations (Cap 106B) and the international standard CISPR 15 in relation to LED lighting equipment. Recently, we found that there would be potential interference to radiocommunications services from power supplies used in large LED lighting systems at frequencies which CISPR 15 may not cover. We have prepared an information note stipulating the details and the requirements to be observed in relation to LED lighting equipment and the associated power supplies. A copy of the information note is enclosed.

Your assistance to pass on the information note to your members for their reference and onward transmission to their contractors, project managers and consultants who are involved in projects related to LED lighting and associated power supplies will be highly appreciated. If you need further information, please feel free to contact me or my colleague, Mr. C H Chan at 2961 6718 (email: chchan@ofta.gov.hk).

Yours sincerely,

(Warren Wong)
for Director-General
of Telecommunications

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NOTES ON AVOIDING RADIO INTERFERENCE CAUSED BY LED LIGHTING EQUIPMENT AND ASSOCIATED POWER SUPPLIES

With increasing use of LED lighting, we would like to have the attention of manufacturers, suppliers, dealers, contractors, users of such equipment and other relevant parties to the potential harmful interference that may be caused by LED lighting equipment and the associated power supplies to the lawful radiocommunications services, such as the FM radio and TV broadcasting services, cellular mobile communications services such as GSM.

2. The Telecommunications (Control of Interference) Regulations (Cap 106B) sets out the control limits for radio disturbances of certain classes of non-telecommunications apparatus (including LED lighting equipment), which are generally based on the international standards such as the standards published by the International Special Committee on Radio Interference (CISPR) of the International Electrotechnical Commission (IEC). For LED lighting equipment, the relevant limits are specified in the CISPR standard entitled "CISPR 15 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment". Copy of the latest CISPR 15 standard (edition 7.2) can be purchased online from http://webstore.iec.ch/webstore/webstore.nsf/artnum/042471. CISPR 15 has an European equivalent, which is EN 55015.

3. While CISPR 15 contains radiated emission limits up to 300 MHz only, we have found that the switching power supplies of some large LED lighting systems may have the potential of causing interference to lawful radiocommunications services at frequencies above 300 MHz, e.g. mobile phone base stations at 900 MHz may be interfered with. As such, CISPR 15 may not be adequate to govern LED lighting systems (including the associated power supplies) for the purpose of avoiding radio interference above 300 MHz.

4. For power supplies, we find that the international standard "IEC 61204-3 Low voltage power supplies, d.c. output - Part 3: electromagnetic compatibility (EMC)" which contains radiated emission limits up to 1000 MHz may be relevant. Copy of the latest version of IEC 61204-3 (edition 1.0) which can be purchased from http://webstore.iec.ch/webstore/webstore.nsf/artnum/026515. IEC 61204-3 also has an European equivalent, which is EN 61204-3.

5. As far as the CISPR and IEC standards and their equivalences are concerned, we are taking steps to update the law to bring the relevant provisions for control of interference in line with the current international standards.

6. To ensure that the radio disturbances emitted from the LED lighting equipment and the associated power supplies will not cause harmful interference to other lawful radiocommunications services, manufacturers, suppliers, dealers, contractors, users of such equipment, and any other relevant parties shall make sure that the requirements of IEC 61204-3 (or EN 61204-3) for the power supplies used with LED lighting equipment, as well as the requirements of CISPR 15 (or EN 55015) for the LED lighting equipment, are complied with.

7. For enquiry of the issue, please send email to chchan@ofta.gov.hk or call Mr. C H Chan at telephone no. 2961 6718.

Office of the Telecommunications Authority
November 2010