

# Radio Spectrum Compliance for Lighting

*With the continued dominance of LED lighting and the strong market uptake of connected wireless controls in homes and commercial buildings, both EMC and intentional radio communication activity will be an important lighting compliance topic in coming years.*

## REGULATORY COMPLIANCE FOR LIGHTING

Regulatory compliance for lighting products in New Zealand falls into two categories, safety compliance and radio spectrum compliance. Safety compliance is managed by the Ministry of Business, Innovation & Employment (MBIE) Worksafe division and covers electrical, thermal, mechanical and photobiological safety. Radio spectrum compliance is managed by the Radio Spectrum Management (RSM) division of MBIE and has two aspects:

- Electrical Products – Unintentional Radiators - Electro Magnetic Compatibility (EMC)
- Radio Products – Intentional Radiators - Wireless transmitting and receiving

The publication “Radio Spectrum Management Compliance Guide” is available on the RSM website. EMC compliance is applicable to any lighting product that includes electronic components, and such products require compliance and marking with the Regulatory Compliance Mark (RCM). Radio transmitting and receiving compliance applies to newer types of connected lamps, luminaires and sensor devices with wireless controls that use Bluetooth or similar communication protocols, and such

products require compliance and marking with the NZ Radio Label (R-NZ).



RCM MARK



NZ RADIO LABEL

## EMC COMPLIANCE

Products supplied in New Zealand are required to meet the requirements of the *Radiocommunications (EMC Standards notice) 2004 No. 2* and suppliers are required to hold a test report or other documented evidence of conformity to an applicable standard as part of their technical compliance folder. Each supplier and installer should be confident that the equipment they are supplying or installing is compliant, and in the case of a chain of suppliers each is required to provide the documentation upon request.

## RADIO PRODUCT COMPLIANCE

Radio transmitters and receivers are managed by a MBIE RSM frequency licencing framework. In addition to RCM marking connected wireless lighting products require compliance and marking with the NZ Radio Label (R-NZ), with the exception of products

that meet Australian Communications and Media Authority (ACMA) compliance requirements, in which case RCM marking only is required.

## RADIO SPECTRUM SDoC TEMPLATE

There are two types of MBIE Supplier Declaration of Conformity (SDoC) templates, one for safety and one for radio spectrum compliance, both forms are needed for compliance of lighting products containing electronic components. The *Radiocommunications (Compliance) Notice 2013* outlines the requirements for each risk level and the minimum information required on the radio spectrum SDoC.

## REGULATOR COMPLIANCE AUDITS

MBIE RSM periodically audits samples of LED lighting products from suppliers in New Zealand to determine EMC compliance and there have been products in the market that have caused significant radio interference. Feedback from MBIE RSM audits is that some suppliers are only using the safety SDoC template, which means it is missing important information, namely the Electrical Regulatory Authorities Council (ERAC) supplier number and the specific EMC declaration.

*Lighting Council New Zealand is the industry association for lighting manufacturing, importing, and distribution companies in New Zealand, and associated lighting industry participants. [www.lightingcouncil.org.nz](http://www.lightingcouncil.org.nz)*

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