

SPECIFICATION FOR APPROVAL

CUSTOMER: Linkcom (Neutral Module)

MODEL NO. : U15QR-6011C1C1

PART NO. : ILMU15QR-6011C1C1-XX-1

MODEL NAME: 15W Receiving Module

REVISION: A6

DATE: 2025-5-16

APPROVED SIGNATURES

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Model No.	U15QR-6011C1C1	Model Name	15W Receiving Module
Part No.	ILMU15QR-6011C1C1-XX-1	Size	PCBA : 29±0.5* 20±0.5* 1.5±0.5 mm (Max) Coil + Shielding : 51*40*1.2 (±0.3) mm

Product Specification

產品規格書

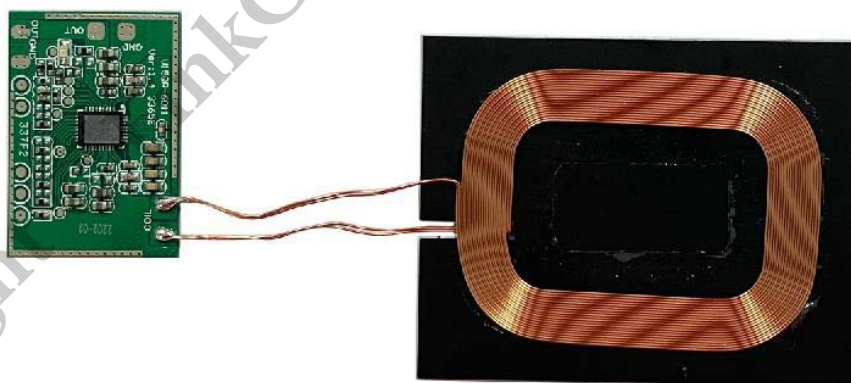
Product name/產品名稱: **15W Receiving Module**

Model No/ 產品型號: **U15QR-6011C1C1**

File number /文件編號:

Revision/版本號: **A6**

Date/日期: **2025-5-16**



APPROVED BY 批准	CHECKED BY 審核	DESIGNED BY 製作

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Reversion History/更新記錄

Revision	Date	Changes
A0	2024-11-11	New release
A1	2024-08-30	Added PCB PAD descriptions
A2	2024-10-10	Added checksum.
A3	2024-10-18	Revised Model No. to ILMU15QR-6011C1C1
A4	2024-12-02	1- Modified temperature protection setting for PCBA patch NTC is 85 °C ±5 °C to 75 °C ±5 °C 2- Deleted EMI standard EN55035 3- Revised weight 6.1g±1g to 4 g±1g
A5	2024-12-02	1. Add the EMI test result report. 2. Add the Audio noise spec at page 5.
A6	2025-5-16	Added consumer application description 、 execution standards 、 packaging 、 module description and attentions

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1. Scope/概述

The U15QR-6011 is a Qi 1.2.4 compatible single coil fast charging wireless charging receiver module with a transmission efficiency curve of up to 70% at its highest point, providing up to 15W of transmission power. This product is only suitable for general consumer product application installation and is not suitable for any automotive or aviation product application.

U15QR-6011是一款兼容Qi 1.2.4的單線圈快充無線充電接收模組，其傳輸效率曲線最高點可達70%，可提供高達15W的傳輸功率。

本產品僅適用於一般消費性產品應用安裝，不適用任何車規航空產品應用。

2. Product Characteristic /產品特點

◆ Provide three output options: DC5V/1.0A, DC9V/1.25A, and DC12V/1.25A

提供 DC5V/1.0A , DC9V/1.25A ; DC12V/1.25A 三種輸出選擇;

◆ Compatible with Qi 1.2.4 and fast charging for Samsung® and iPhone® phones.

兼容Qi 1.2.4並能為三星® 和iPhone® 手機快速充電。

3. Performance Parameter/性能參數

3.0	Compatible transmitting end/兼容發射端	WPC QI_1.1~1.2.4
3.1	Input voltage & current/輸入電壓電流	6.5~15.5 VAC
3.2	Wireless charging output power/ 無線充電輸出功率	12V 1.25A 15W MAX
3.3	Power Transfer Efficiency/轉換效率	70% ±5%
3.4	5W/10W/15W Frequency/5W/10/15W頻率	frequency conversion 110KHz-205KHz / 變頻110KHz-205KHz
3.5	Ripple noise /紋波及噪音	≤5%
3.6	Operating temperature /工作溫度	0-30℃
3.7	Relative humidity / 相對濕度	40%~60%
3.8	Audio noise/噪音	15cm distance less than 30dB
3.9	Check sum/軟件版本	0x1C1364

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4. Safety Control/安全機制

4.1. Short Circuit Protection/短路保護

In the case of short-circuit at the receiver output, the transmitter stop output. When removed the receiver or short circuit, the transmitter will resume normal operation.

在接收端輸出短路的情況下，發射端停止輸出。當移除接收或者短路解除時，發射端將恢復正常工作。

4.2. Over Current Protection/過流保護

When the receiver load exceeds the rated value (110% - 130%), the overcurrent protection is triggered and the transmitter stops working. When removed the receiver, the transmitter will resume normal operation.

當接收器負載 > 額定值的110% - 130%時，觸發過電流保護，發射端停止工作，當接收器被移除時，發射端將恢復正常工作。

4.3. Over-temperature Protection/過溫保護

4.3.1. Wireless charging over-temperature protection/無線充電過溫保護

The NTC temperature protection of the PCBA is 75°C ± 5°C. The transmitter stops working when the temperature exceeds the value. Resets the receiver or cools to 70-75°C, the transmitter returns to normal operation (optional replacement with external NTC)

PCBA貼片NTC溫度保護設定值為75°C ± 5°C，當溫度超過設定值，發射端停止工作，重新放置接收或者降溫至70-75°C時，發射器恢復正常工作。(可選擇更換成外接NTC)

5. Reliability Requirements/可靠性要求

5.1. Reliability Test/可靠性測試

Please refer to Link Com's reliability standard and reliability test Report.

請參考聯寶標準《可靠性測試規範》與《可靠性測試報告》

6. Environment Requirement/環境要求

6.1. Operating Temperature and Relative Humidity/操作溫度和相對濕度0°C-30°C / RH40~60%

6.2. Storage Temperature and Relative Humidity/儲存溫度和相對濕度-20°C-40°C / RH20~80%

6.2.1. Avoid direct exposure to the storage environment, and do a good temperature and humidity control, room temperature should be controlled at 5°C-25°C, relative humidity RH40~ 60%. In order to maintain good functionality of the product, please observe the following storage conditions. 儲存環境應避免產品受陽光直接照射，並作好溫濕度管控，室溫宜控制在5°C-25°C / RH40~60%。為使產品維持良好之功能性，請確實遵守以下保存條件

6.2.2. Keep away from high humidity, salt spray or oil spray. 儲存需避開高濕，鹽霧或油霧之環境

6.2.3. When storing, the storage environment temperature should be avoided too drastic, and the humidity should be avoided too high or too low. High humidity and large temperature difference tend to cause water Vapor condensation phenomenon, too low humidity easily cause the high electrostatic strength.

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Therefore, humidity will cause the electron ionization, and eventually cause the product functional abnormalities.

儲存時應避免儲存環境溫度變化過於激烈，同時避免濕度過高或過低。濕度過高和溫差過大容易導致水 蒸氣凝結現象，濕度過低容易導致靜電強度過高。故濕度會造成電子遊離，最終導致產品功能性異常。

7. Execution Standards/執行標準

7.1. EMI Standards電磁相容標

EN55032

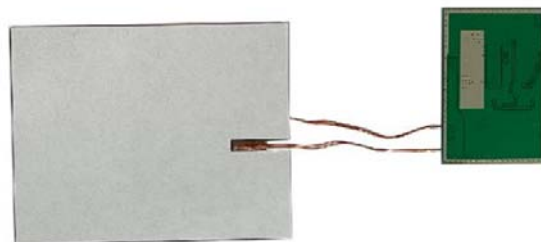
Note : The EMI test should include the actual testing of the enclosure and TX equipment.

備註：EMI 測試需包含外殼與 TX 設備實際測試.

8. Photo of Product/產品照片

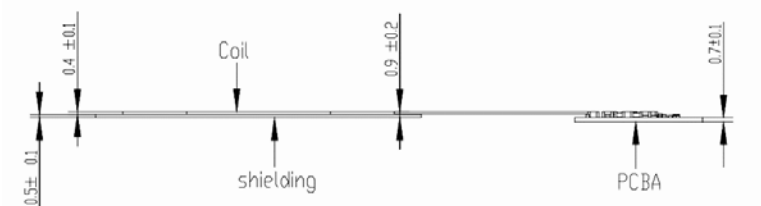


Module Front Side 模組前面



Module Back Side 模組後面

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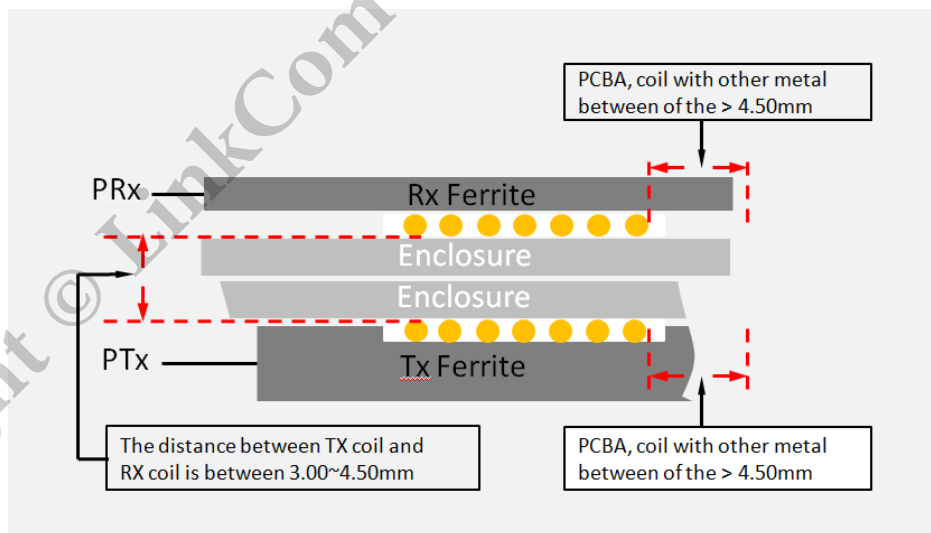
9. Module/模組

9.1. Product design proposal/產品設計要求

According to the standardization of QI, Please note the following:

為了要符合QI的標準，以下幾點需注意：

1. The distance between Coil with PCBA and other metal components is Min: 4.50mm.
線圈，PCBA和其他金屬部件之間的最小距離：4.50mm.
2. The surface distance between Tx Coil and Rx Coil is 3.00 – 4.50mm.
輸出線圈和接收線圈之間的表面距離為3.00 – 4.50mm.



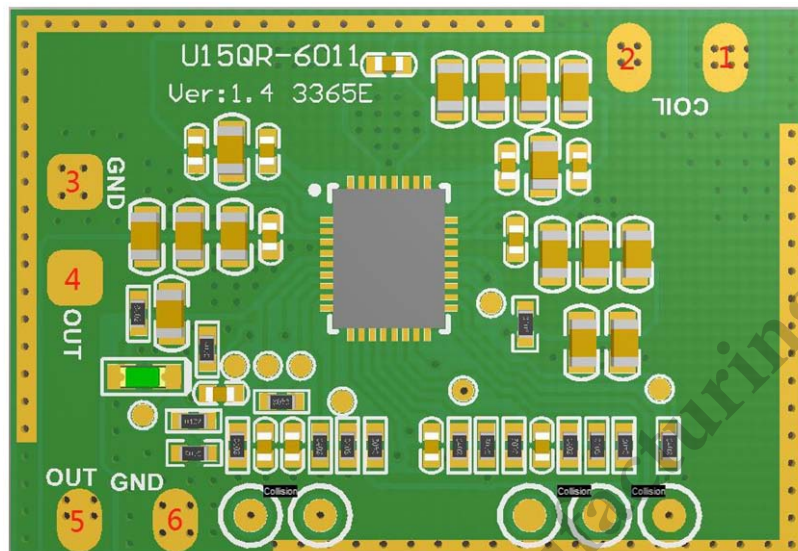
3. In order to achieve better temperature performance, it is recommended to add heat dissipation measures when designing, such as adding thermal conductive silicone pads to the PCBA to increase the heat dissipation area.

為了有更好的溫度表現，使用時建議增加散熱對策，如增加導熱矽膠墊於PCBA增加散熱面積。

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9.2. PCBA Port Functional Illustration/PCBA功能說明

PCBA Version : 1.4



PCBA圖

PCBA Size: L29*W20*H2mm

Port	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6
Function	Coil_1	Coil_2	OUT_GND	OUT_VCC	OUT_VCC	OUT_GND

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13. Packaging/包裝

中尺寸模組 (白盒) _ Carton Packing Method

2025.03.21

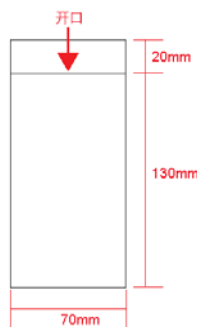
outer carton : 160 pcs
材质: K=K (4 boxes) size : W 315 × D 310 × H 210 mm
NW : kg GW : kg

inner carton : 40 pcs
材质: A3A (boxes) size : W 290 × D 145 × H 93 mm
NW : kg GW : kg

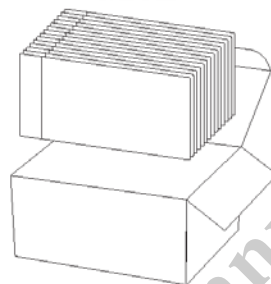
天地盖 (材质: A3A): 280x135mm (2PCS/箱)

PRODUCT

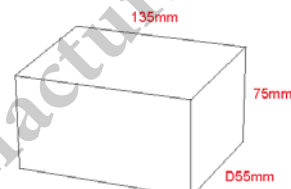
气泡袋
本厂标准的模组用气泡袋



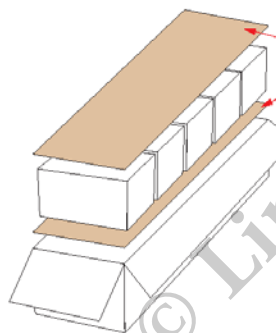
8PCS
模组入白盒



weight:



INNER

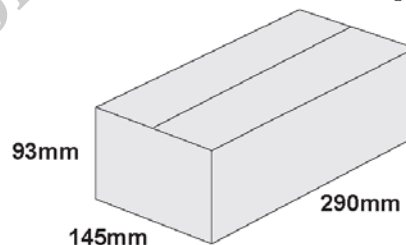


280 x 135mm (2PCS/箱)

shipping mark: 4 faces

line:

pcs: 40

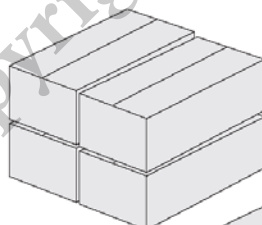


OUTER

shipping mark: 4 faces

line:

pcs: 160



210mm

310mm

315mm

Inner Material: A3A

Outer Material: K=K

Designer: Bruce

Coordinate:



Please make sure to get our approval of following issues before you start mass production of the cartons:

- printing of the shipping mark (ink color, printing date etc.)
- weight and size of the carton
- fitting between product & Inner carton, Inner carton & outer carton



LinkCom Manufacturing Co., Ltd.

聯寶電子股份有限公司

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14. Statement/聲明

All rights reserved by LinkCom Manufacturing Co., Ltd. for all of this specification for approval. About warranty, please refer to LinkCom company warranty policy.