

SPECIFICATION FOR APPROVAL

CUSTOMER: Linkcom (Neutral Module)

MODEL NO. : U15QT-6077

PART NO. : ILMU15QT-6077-XB-1

MODEL NAME: Wireless Charging Transmitter Module

REVISION: A1

DATE: 2025-05-15

APPROVED SIGNATURES

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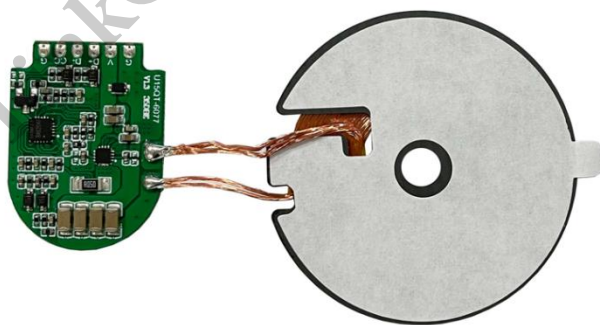
Model No.	U15QT-6077	Model Name	Wireless charging transmitter
Part No.	ILMU15QT-6077-XB-1	Size	PCBA : L28.5±0.5※W21.5±0.5※T2±0.25mm Coil : Φ43.5±0.5※T1.2±0.1mm

Product Specification

產品規格書

Product name/產品名稱: **Wireless Charging Transmitter Module**Model No/ 產品型號: **U15QT-6077**

File number /文件編號:

Revision/版本號: **A1**Date/日期: **2025-5-15**

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	2023-12-19	New release
A1	2025-05-15	Added P/N、consumer application description、execution standards、packaging、module description and attentions

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1. Scope/概述

The U15QT-6077 is a multi-function fast charge wireless charging transmitter module that meets the requirements of WPC_Qi 1.2.4: its transmission efficiency curve reaches 75% at its highest point, providing up to 15W of transmission power. It can power or charge any WPC-Qi certified product; It also provides fast wireless charging for Samsung® and iPhone® mobile phones.

This product is only suitable for general consumer product application installation and is not suitable for any automotive or aviation product application.

U15QT-6077 是一款符合 WPC_Qi 1.2.4 要求的多功能快充無線充電發射模組：其傳輸效率曲線最高點可達 75%，可提供高達 15W 的傳輸功率。它可以對任何 WPC-Qi 認證產品供電或充電；還能夠三星® 和 iPhone® 手機提供快速無線充電。

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

- ◆ QC3.0/PD3.0 power communication protocol
QC3.0 /PD3.0 電源通信協議；
- ◆ DC9V direct power supply
DC9V 電源直接供電；
- ◆ Meets Qi 1.2.4 and is compatible with Samsung® and iPhone® mobile fast charging .
符合 Qi 1.2.4 要求並相容 三星® 和 iPhone® 手機快速充電

3. Performance Parameter/性能參數

3.0	Power input protocol/電源輸入協定	QC3.0 / PD3.0 / DC9.0V
3.1	Input voltage & current/輸入電壓電流	8.75~9.50V * 2.5A
3.2	Working voltage & current/工作電壓電流	9.0V/0.03~2.2A Max
3.3	Wireless charging output power/ 無線充電輸出功率	5W/7.5W/10W/15W
3.4	Power Transfer Efficiency/轉換效率	70% ±5%
3.5	5W/10W/15W Frequency/5W/10/15W 頻率	frequency conversion 110KHz-205KHz / 變頻 110KHz-205KHz
3.6	Apple 7.5W frequency/蘋果 7.5W 頻率	Constant frequency 127.7KHz / 定頻 127.7KHz
3.7	Ripple noise /紋波及噪音	≤5%
3.8	Operating temperature /工作溫度	5-25℃

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3.9	Relative humidity / 相對濕度	40%~60%
3.10	Audio noise/噪音	15cm distance less than 30dB
3.11	Check sum/軟件版本	0x7E44

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. Overvoltage Protection/过压保护

The product would stop working when the input voltage exceeds the rated value (13.6V). The Product would be restarted working when the voltage returns to the set value range.

P/S: The input voltage shall not exceed 13.6V in case damage the product.

輸入端超过设定过压电压值13.6V时，發射端停止工作。电压恢复设定值范围时重新启动工作。

注意：输入电压不可以超过13.6V，以防损坏本产品。

4.4. Foreign Object Detect (FOD) (1 RMB coin as the standard.)/異物檢測（以一元RMB硬幣為標準）

異物檢測（以一元RMB硬幣為標準）

4.4.1. When placing the coin onto the center of the product under no-load condition, the transmitter detected foreign object and reports an error, then stops working. Removes the foreign object to resume normal operation .

空載時放置產品中心，發射端檢測到異物並報錯，停止工作，移除異物可恢復正常工作。

4.4.2. When placing the load and coin together onto the center of the product, an error is reported within 10s (time varies with different mobile phone models) and the output is closed. Removes the foreign object to resume normal operation.

負載和硬幣一起放置產品中心時，10秒（不同手機型號時間不同）之內報錯並關閉輸出，移除異物可恢復正常工作。

4.5. Over-temperature Protection/過溫保護

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

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The NTC temperature protection of the PCBA is 70± 5℃ (5W/7.5W/10W/15W). The transmitter stops working when the temperature exceeds the value. Resets the receiver or cools to 55± 5℃, the transmitter returns to normal operation (optional replacement with external NTC)

PCBA貼片NTC溫度保護設定值為70± 5℃ (5W/7.5W/10W/15W), 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55± 5℃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5℃-25℃ / RH40~60%

6.2. Storage Temperature and Relative Humidity/儲存溫度和相對濕度0℃-35℃ / 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℃-25℃, 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℃-25℃ / 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. 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

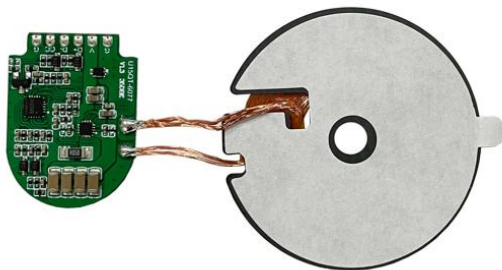
EN55032	EN55035
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Note : The EMI test should include the actual testing of the enclosure and RX equipment..

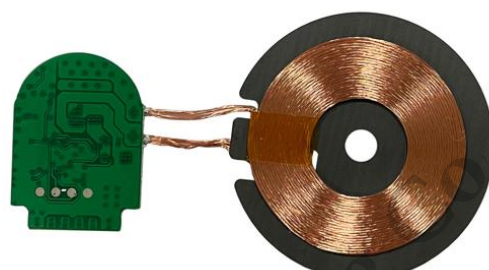
備註：EMI 測試需包含外殼與 RX 設備實際測試。

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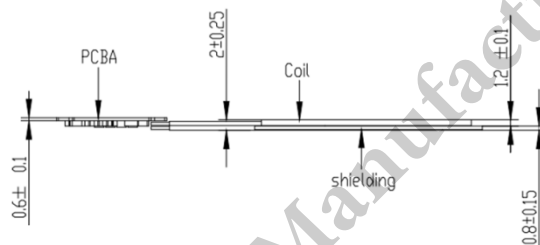
8. Photo of Product/產品照片



Module Front Side 模組前面



Module Back Side 模組後面



Thickness information 模組側面

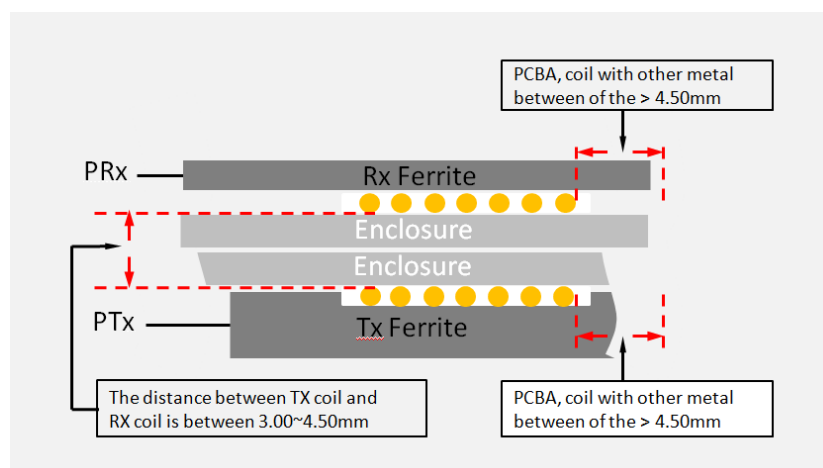
9. Module/模組

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.



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3. In order to pass the EMI test, it is recommended to use a DC 9V power supply plus a common mode inductor and then connect to the PCBA.

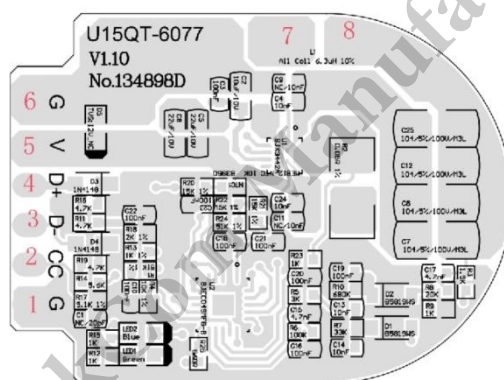
為了通過EMI測試，建議使用DC 9V(依照產品輸入電源規格做修改)電源外加共模電感後連接PCBA。

4. 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。

9.2. PCBA Port Functional Illustration/PCBA功能說明

PCBA Version : V1.1



PCBA圖

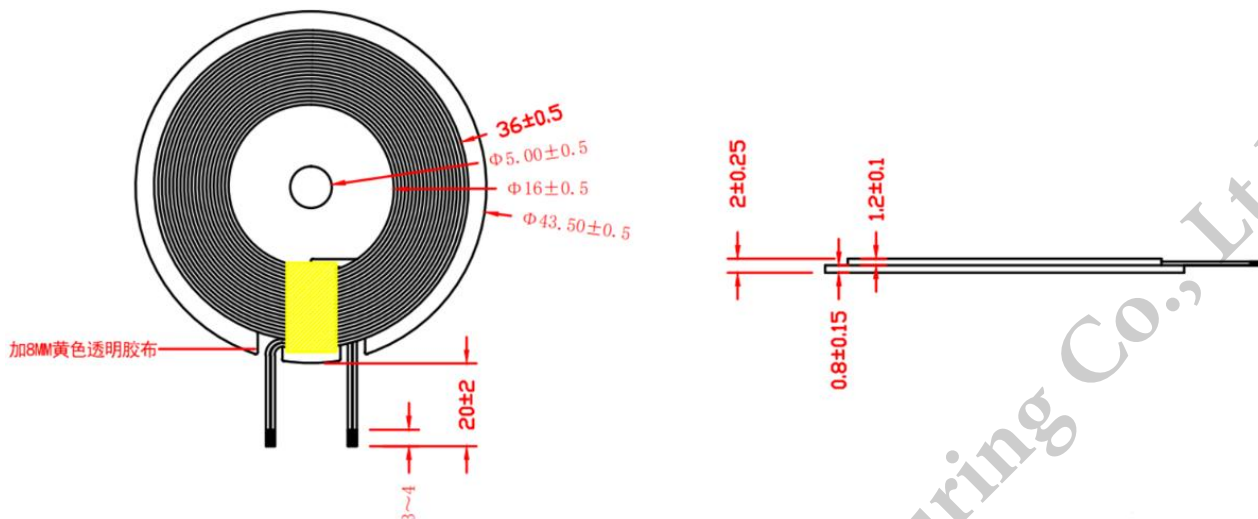
PCBA Size:28.5(±0.5)*21.5(±0.5)*2 (±0.25)mm

Port	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8
Function	GND	PD/CC	USB/D-	USB/D+	VCC	GND	Coil-1	Coil-2

9.3. Tx_Coil Spec : TX線圈規範

Coil + Shielding :58(±0.5)*43.5(±0.5)*1.2(±0.1)mm

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10. Attentions/使用注意事項

- 10.1. Please use the correct rated AC Adapter, to ensure the normal function.
請使用配置的正确規格火牛，保證功能正常。
- 10.2. This product is only suitable for general consumer product application installation and is not suitable for any automotive or aviation product application.
本產品僅適用於一般消費性產品應用安裝，不適用於任何汽車或航空產品應用。

11. Weight/重量

1 piece: 7.5±0.5 g

1 Carton/1箱: 160pcs; Net Weight/淨重: about 1.2kg; Gross Weight/毛重: about 3.2kg

12. Packaging/包裝

Model No.	U15QT-6077	Model Name	Wireless charging transmitter
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TX(单线圈)模组 (白盒) _ Carton Packing Method

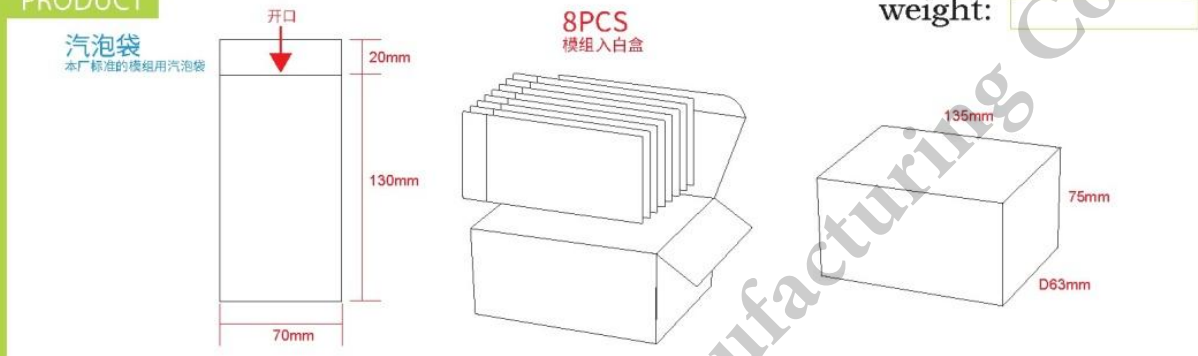
2025.05.06

outer carton : 160 pcs
材质: A=A (4 boxes)
size : W 350 × D 315 × H 210 mm
NW: kg GW: kg

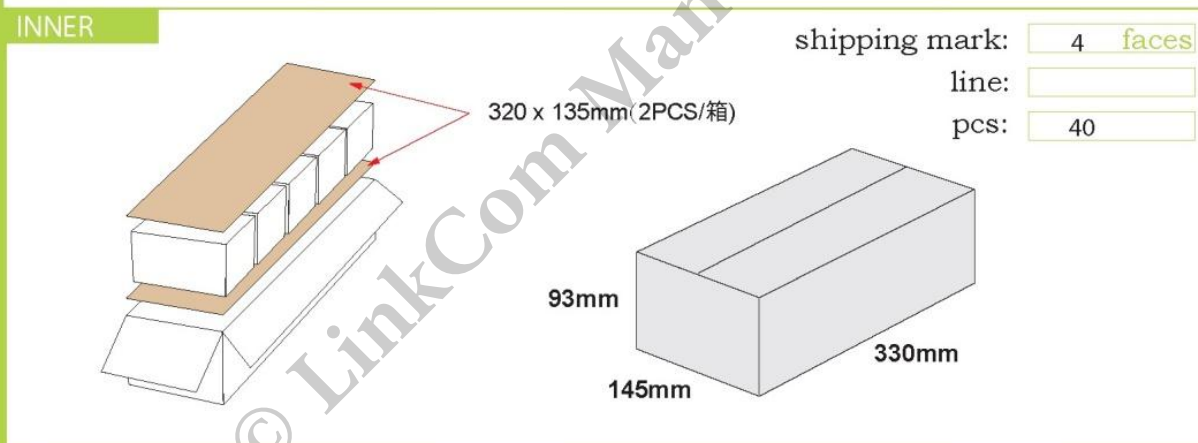
inner carton : 40 pcs
材质: A3A (boxes)
size : W 330 × D 145 × H 93 mm
NW: kg GW: kg

天地盖 (材质: A3A): 320 x 135mm(2PCS/箱)

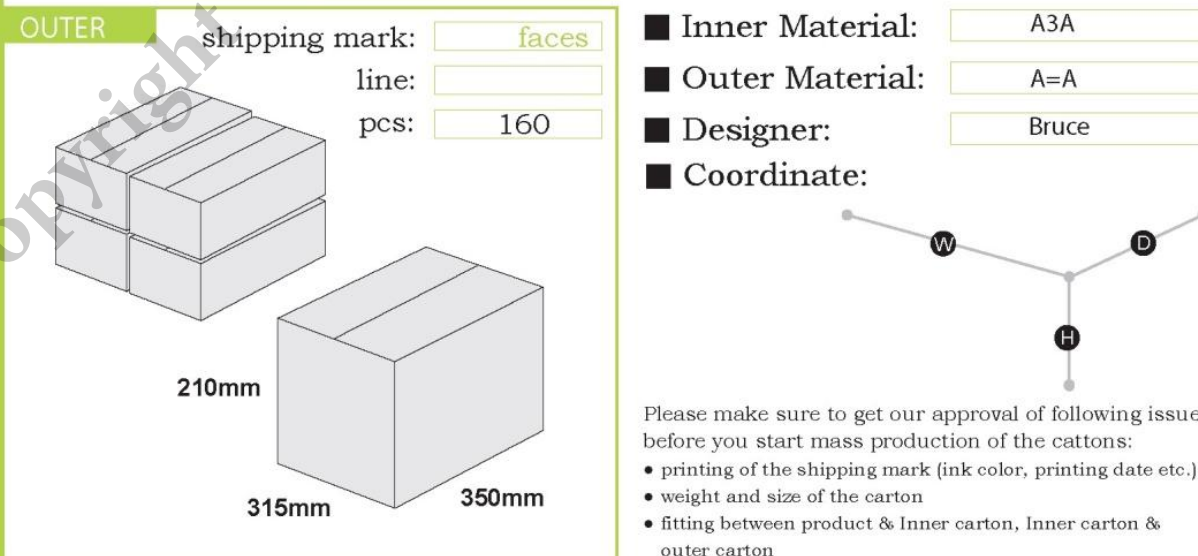
PRODUCT



INNER



OUTER



Model No.	U15QT-6077	Model Name	Wireless charging transmitter
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13. 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.
