

Antenna Specification

Antenna picture	
Antenna Type	Metal Antenna
Antenna Peak Gain	-2.74dBi
Operating Band	920 MHz
Test laboratory name and Address	IoT Antenna Test Laboratory, 3 / A, LEEDARSON LIGHTING CO., LTD. Xingtai Industrial Park, Changtai Economic Development Zone, Zhangzhou, 363900, China
Antenna Manufacturer	LEEDARSON LIGHTING CO., LTD.
Model name	Indoor Siren
Test Date	2025-05-27
Test Conductor	Fenghuijuan

OTA measurement

Test System

The SY-16 OTA system and RayZone2800 OTA system are anechoic chambers, which can measure antenna passive data such as antenna efficiency, antenna gain, and 2D&3D pattern. The systems are shown as follows:



Figure 1 SY-16 OTA system



Figure 2 RayZone2800 OTA system

Equipment List

Table 1 Equipment List

Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Due Date
<input checked="" type="checkbox"/>	Network Analyzer	Keysight	E5071C	MY46527808	2025/1/9	2026/1/8
<input type="checkbox"/>	Network Analyzer	Keysight	E5071C	MY46108051	2025/4/19	2026/4/18
<input checked="" type="checkbox"/>	Anechoic Chamber	Sunyield	SY-16	SI1727	2025/4/28	2026/4/27
<input type="checkbox"/>	Anechoic Chamber	General Test System	RayZone2800	CT10121244 B5079	2025/5/10	2026/5/9

Test Method

Table 2 Test Method

Name	Antenna Performance				
Parameter	Radiation Efficiency				
Test Method	IEEE Standard Test Procedures for Antennas				
Standard No.	ANSI/IEEE Std 149-2021				
Test Software	PMS-V2.8.5	<input checked="" type="checkbox"/>	MaxSign-V1.4.3	<input type="checkbox"/>	

Test Result

Efficiency and Gain

Table 3 Antenna Efficiency and Gain

Frequency (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
860	-1.88	-5.66	27.17
862	-1.93	-5.70	26.88
864	-1.90	-5.72	26.80
866	-1.73	-5.61	27.49
868	-1.56	-5.47	28.36
870	-1.55	-5.48	28.30
914	-2.39	-6.43	22.74
916	-2.27	-6.60	21.87
918	-2.58	-6.82	20.78

920	-2.74	-7.00	19.94
922	-2.78	-6.98	20.03
924	-2.87	-6.92	20.34
926	-3.11	-6.95	20.20

Radiation Pattern

Table 4 Product coordinates

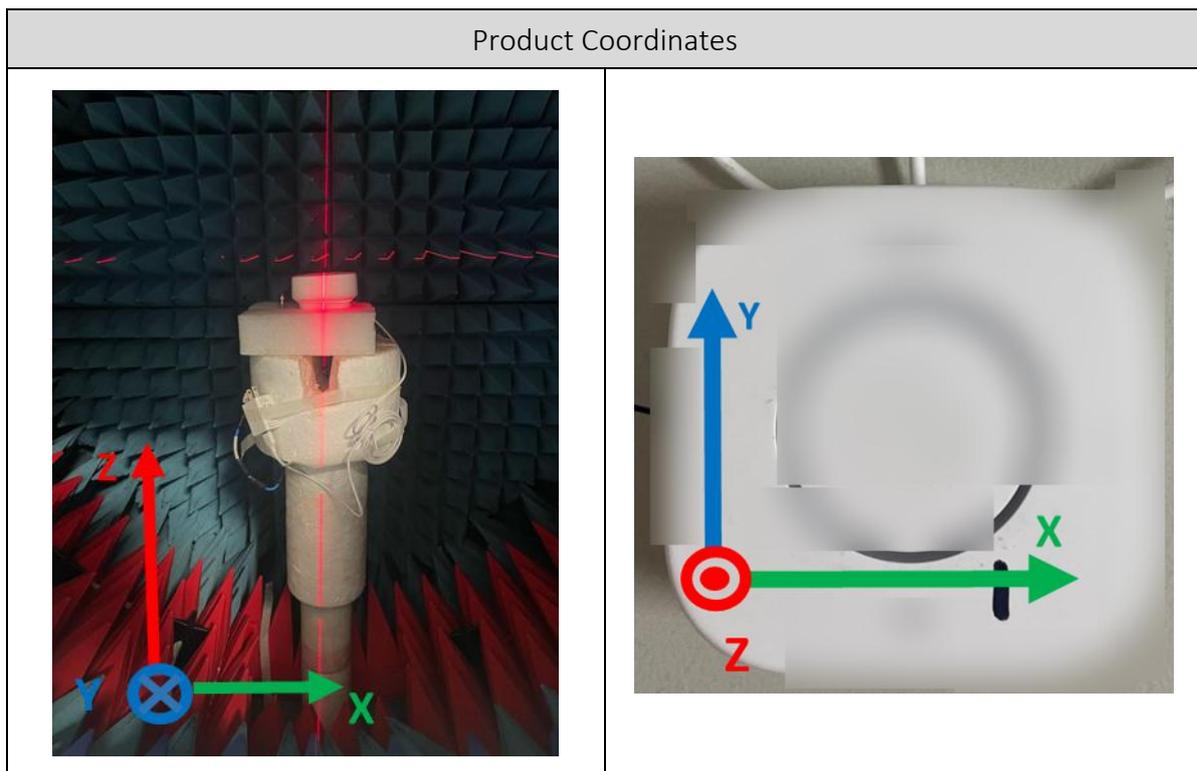


Table 5 3D radiation pattern

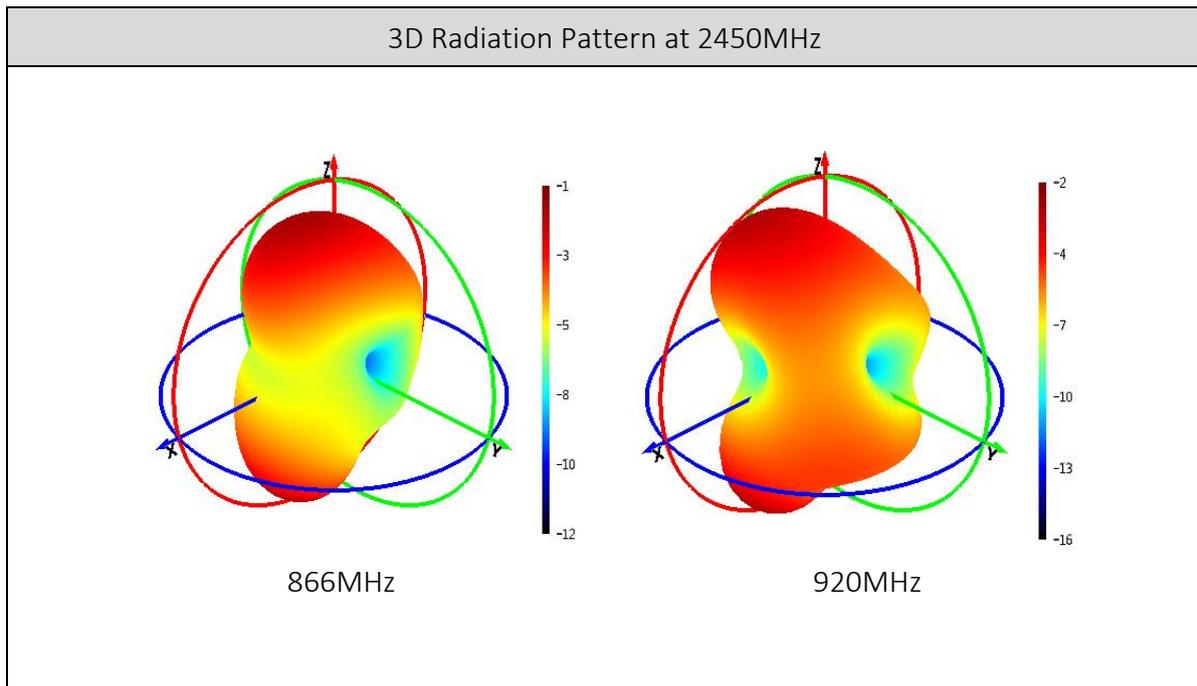


Table 6 Radiation pattern in XY Plane

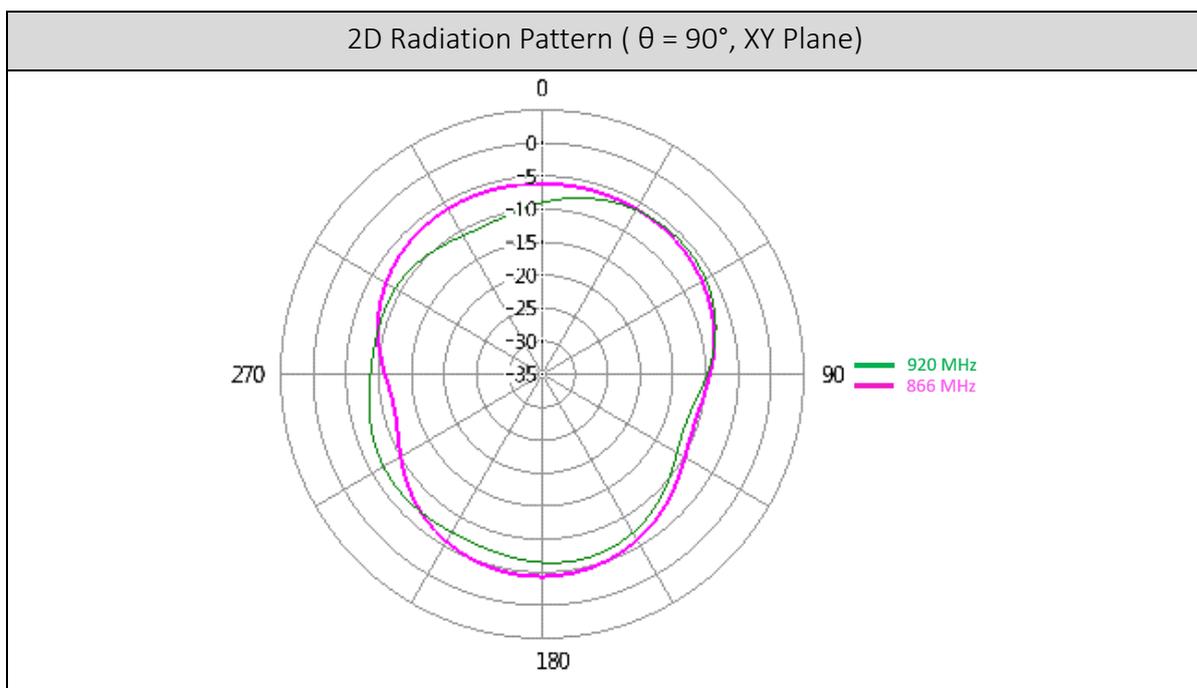


Table 7 Radiation pattern in XZ Plane

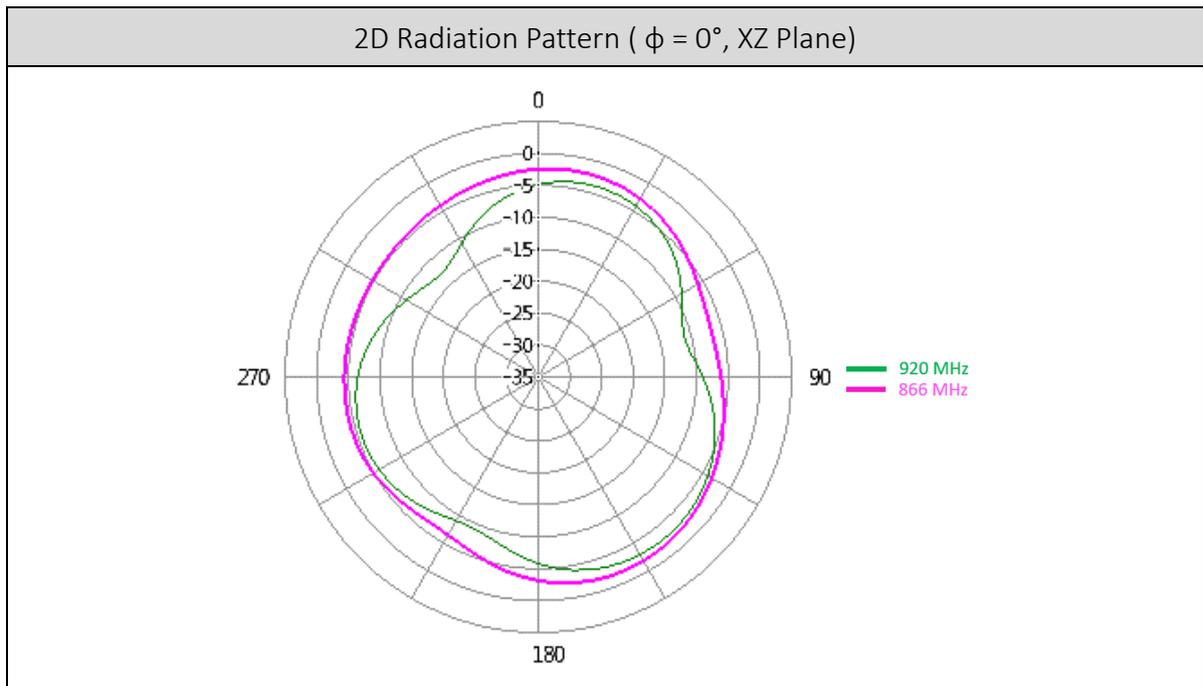


Table 8 Radiation pattern in YZ Plane

