



MPE Test Report

Report No.: AAOG-ESH-P24120353B-2

FCC ID: 2ABEU-YLHDJ0001

Product: Smart Outdoor Lights

Model: YLHDJ-0001, YLHDJ-0002, YLHDJ-0003, YLHDJ-0004, YLHDJ-0005,
YLHDJ-0006, YLHDJ-0007

Received Date: Dec.09, 2024

Test Date: Dec.09, 2024 to Jan.05, 2025

Issued Date: Jan.08, 2025

Applicant: Qingdao Yeelink Information Technology Co., Ltd.

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Manufacturer: Qingdao Yeelink Information Technology Co., Ltd.

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Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

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**FCC Registration /
Designation Number:** 176467/ CN1213



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Release Control Record

Issue No.	Description	Date Issued
AAOG-ESH-P24120353B-2	Original release	Jan.08, 2025



1 Certificate of Conformity

Product: Smart Outdoor Lights

Brand: YEELIGHT

Model: YLHDJ-0001, YLHDJ-0002, YLHDJ-0003, YLHDJ-0004, YLHDJ-0005, YLHDJ-0006, YLHDJ-0007

Applicant: Qingdao Yeelink Information Technology Co., Ltd.

Test Date: Dec.09, 2024 to Jan.05, 2025

Standards: FCC Part 2 (Section 2.1091)
KDB 447498 D01 General RF Exposure Guidance v06
IEEE C95.1-2019

The above equipment has been tested by **BUREAU VERITAS ADT (Shanghai) Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

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Jan.08, 2025

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2 General Information

2.1 General Description of EUT

BLE:

Product	Smart Outdoor Lights
Brand	YEELIGHT
Test Model	YLHDJ-0001, YLHDJ-0002, YLHDJ-0003, YLHDJ-0004, YLHDJ-0005, YLHDJ-0006, YLHDJ-0007
Model Difference	Light and length are different.
Power Rating	YLHDJ-0001: DC 24V 1A, Powered by adaptor YLHDJ-0002: DC 24V 2A, Powered by adaptor YLHDJ-0003: DC 24V 0.5A, Powered by adaptor YLHDJ-0004: DC 24V 0.5A, Powered by adaptor YLHDJ-0005: DC 24V 1A, Powered by adaptor YLHDJ-0006: DC 24V 1.5A, Powered by adaptor YLHDJ-0007: DC 24V 2A, Powered by adaptor
Modulation Type	GFSK
Modulation Technology	Bluetooth Low Energy 5.0
Operating Frequency	2402MHz ~ 2480MHz
Number of Channel	40
Antenna Type	PCB Antenna
Antenna Connector	--
Antenna Gain	1.96dBi

Note:

1. For more details, please refer to the User's manual of the EUT.

2.2 Description of Support Unit

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.
Adaptor for YLHDJ-0001, YLHDJ-0005	Dong Guan Royal Intelligent Co., Ltd	BI24G-240100-AdU(IP44)	NA
Adaptor for YLHDJ-0002, YLHDJ-0007	Dong Guan Royal Intelligent Co., Ltd	BI48G-240200-AdU(IP44)	NA
Adaptor for YLHDJ-0003, YLHDJ-0004	Dong Guan Royal Intelligent Co., Ltd	BI12G-240050-AdU(IP44)	NA
Adaptor for YLHDJ-0006	Dong Guan Royal Intelligent Co., Ltd	BI36G-240150-AdU(IP44)	NA

2.3 Model list

Product description	Model no.	Length	Controller	Adaptor
Smart Outdoor Ground Lights	YLHDJ-0001	10m		BI24G-240100-AdU(IP44) 100-240V~, 50/60Hz 24V=1A
	YLHDJ-0002	15m		BI48G-240200-AdU(IP44) 100-240V~, 50/60Hz 24V=2A
Smart Outdoor Pathway Lights	YLHDJ-0003	15m	R666, R67, R68 and R69 which is the same resistance value are in parallel. YLHDJ-0001 is with R67, R69. YLHDJ-0002 is with R67, R68. YLHDJ-0003 is with R67, R69. YLHDJ-0004 is with R67, R69. YLHDJ-0005 is with R67, R68. YLHDJ-0006 is with R66, R69. YLHDJ-0007 is with R66, R68.	BI12G-240050-AdU(IP44) 100-240V~, 50/60Hz 24V=0.5A
Smart Outdoor String Lights	YLHDJ-0004	15m		BI12G-240050-AdU(IP44) 100-240V~, 50/60Hz 24V=0.5A
	YLHDJ-0005	30m		BI24G-240100-AdU(IP44) 100-240V~, 50/60Hz 24V=1A
	YLHDJ-0006	45m		BI36G-240150-AdU(IP44) 100-240V~, 50/60Hz 24V=1.5A
	YLHDJ-0007	60m		BI48G-240200-AdU(IP44) 100-240V~, 50/60Hz 24V=2A

3 RF Exposure

3.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1,500	-	-	F/1500	30
1,500-100,000	-	-	1.0	30

F = Frequency in MHz

3.2 MPE Calculation Formula

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna (numeric gain=Log-1(dB antenna gain/10))

R = distance (cm)

3.3 MPE Calculation Formula

The antenna of this product, under normal use condition, is at least 20cm from the body of the user. So the device is classified as Mobile Device.

3.4 Calculation Result of Maximum Permissible Exposure

Frequency Band (MHz)	Max. Conducted output power(dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
BLE 5.0					
2402-2480	-8.80	1.96	20	0.000041	1

Conclusion:

The calculation result of MPE is less than the limit.

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