

TEST REPORT

Applicant Name: Astera LED Technology GmbH
Address: Schatzbogen 60, 81829 Munich, Germany
Report Number: 2504A02581E-RF
FCC ID: X55AST-QUKPBM

Test Standard (s)

FCC PART 2.1091

Sample Description

Product Name: QuikBeam
Model No.: AST-QUKBM-STD, AST-QUKBM
Trade Mark: ASTERA
Date Received: 2025-12-12
Report Date: 2026-02-13

Test Result:	The EUT complied with the standards above.
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Prepared and Checked By:

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Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA, or any agency of the Federal Government. The information marked "#" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included but no need marked. This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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TABLE OF CONTENTS

DOCUMENT REVISION HISTORY 3

GENERAL INFORMATION 4

 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) 4

 OBJECTIVE 4

 TEST FACILITY 4

RF EXPOSURE 5

 APPLICABLE STANDARD..... 5

 RESULT 6

EXHIBIT A-EUT PHOTOGRAPHS 7

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504A02581E-RF	Original Report	2026-02-13

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name	QuikBeam
Tested Model	AST-QUKBM-STD
Multiple Model	AST-QUKBM
Model Difference [#]	The differences between the two models are the model name and whether or not a battery is included. The model AST-QUKBM-STD has a battery and the model AST-QUKBM doesn't. Please refer to DOS letter for details. The applicant provided model "AST-QUKBM-STD" for testing.
Voltage Range [#]	DC 10.9V from battery DC 48V from POE adapter

Frequency Range	BLE: 2402-2480MHz Lora: 917-922.2MHz
Maximum Conducted Peak Output Power (actual test result)	BLE: 5.35 dBm Lora:10.30 dBm
Antenna Specification [#]	Internal Antenna, BLE Gain: -5.94 dBi, Lora Gain: -2.02 dBi (It is provided by the applicant.)
Sample Serial Number	3EDF-6 (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 1-Subpart I and Part 2-Subpart J, Radiofrequency Radiation Exposure of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC §1.1307(b)& §2.1091 rules.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

RF EXPOSURE

Applicable Standard

According to FCC §1.1307(b)& §2.1091, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D04 Interim General RF Exposure Guidance v01, clause 2.1.4 –MPE-Based Exemption:

An alternative to the SAR-based exemption is provided in § 1.1307(b)(3)(i)(C), for a much wider frequency range, from 300 kHz to 100 GHz, applicable for separation distances greater or equal to $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power. For this case, a RF source is an RF exempt device if its ERP (watts) is no more than a frequency-dependent value, as detailed tabular form in Appendix B. These limits have been derived based on the basic specifications on Maximum Permissible Exposure (MPE) considered for the FCC rules in § 1.1310(e)(1).

Table to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

f = frequency in MHz;

R = minimum separation distance from the body of a nearby person (appropriate units, e.g., m);

Result

For worst case:

Radio	Frequency Range (MHz)	Tune-Up Conducted Output Power [#] (dBm)	Antenna Gain [#]		ERP		Evaluation Distance (cm)	MPE-Based Exemption (mW)
			(dBi)	(dBd)	(dBm)	(mW)		
BLE	2402-2480	6.0	-5.94	-8.09	-2.09	0.62	20	768.0
Lora	917-922.2	10.5	-2.02	-4.17	6.33	4.30	20	469.5

Note 1: The Tune-up Conducted Output Power and Antenna Gain are declared by the applicant.

Note 2: ERP = Tune-up Conducted Output Power + Antenna Gain(dBd)

Note 3: 0dBd=2.15dBi.

Note 4: Lora and BLE can transmission simultaneously.

Simultaneous transmitting consideration (worst case):

The ratio=BLE/Limit + Lora /Limit

$$= 0.62/768 + 4.30/469.5$$

$$= 0.009966$$

$$<1.0$$

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliance.

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Attachment No.1 2504A02581E-RF EUT External Photos and Attachment No.2 2504A02581E-RF EUT Internal Photos.

******* END OF REPORT *******