TEST REPORT
IEC 60825-1
Safety of laser products -
Part 1: Equipment classification and requirements

Report Number. :	4842025711000
Date of issue :	2025-09-28
Total number of pages :	30
Name of Testing Laboratory preparing the Report :	TÜV SÜD Certification and Testing (China) Co., Ltd.
Applicant's name :	SHENZHEN AKUSENSE TECHNOLOGY CO., LTD
Address :	4F West and 5F, Building A, No. 2 of Luozu Industrial Avenue, Luozu Community, Shiyan Street, Baoan District, Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Test specification:	
Standard :	IEC 60825-1:2014
Test procedure :	N/A
Non-standard test method :	N/A
TRF template used :	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. :	IEC60825_1G
Test Report Form(s) Originator :	OVE
Master TRF :	Dated 2021-10-05

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

This report is not valid as a CB Test Report unless signed by an approved IECEE Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing NCB. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description ..... :	Functional Safety LiDAR
Trade Mark(s) ..... :	N/A
Manufacturer ..... :	SHENZHEN AKUSENSE TECHNOLOGY CO., LTD 4F West and 5F, Building A, No. 2 of Luozu Industrial Avenue, Luozu Community, Shiyan Street, Baoan District, Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA
Model/Type reference ..... :	AS-60C 4, AS-60C 8, AS-60C 16, AS-60C 32, AS-60C 64
Ratings ..... :	24V DC, 5W, Class 1 laser product, 905nm typical

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**Testing Laboratory:**	TÜV SÜD Certification and Testing (China) Co., Ltd.	
Testing location/ address ..... :		Floor 1-4, Building B, No.37, Tuanjie Road(Middle), Xishan Economic and Technological Development Zone, Wuxi, Jiangsu 214100, China	
Tested by (name, function, signature) ..... :		*Dong SHAO, Yuchen LIU* *Project Handler*	
Approved by (name, function, signature) ... :		*Yang YANG* *Designated Reviewer*	
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Approved by (name, function, signature) ... :			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address ..... :			
Tested by (name + signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) ... :			
☐	**Testing procedure: CTF Stage 3:**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address ..... :			
Tested by (name, function, signature) ..... :			
Witnessed by (name, function, signature) . :			
Approved by (name, function, signature) ... :			
Supervised by (name, function, signature) :			

List of Attachments (including a total number of pages in each attachment):

Attachment No.1: Photo documentation (5 pages)

Summary of testing:

All applicable tests as described in test cases and appended tables were performed.

The tests have been performed according to the following sequence:

Determine wavelength λ.

Determine angular subtense α of apparent source.

Determine measurement conditions (distance, aperture stop, time base, AEL)

Measure radiant power under normal condition.

Measure radiant power under single fault condition.

Tests performed (name of test and test clause):	**Testing location:**
Complete tests on model AS-60C 4.	TÜV SÜD Certification and Testing (China) Co., Ltd.
The test results comply with the requirements of Class 1 laser product.	Floor 1-4, Building B, No.37, Tuanjie Road(Middle), Xishan Economic and Technological Development Zone, Wuxi, Jiangsu 214100, China

Summary of compliance with National Differences (List of countries addressed):

European Group Differences and National Differences

☒ **The product fulfils the requirements of IEC 60825-1:2014 and EN 60825-1:2014+A11:2021.**

Use of uncertainty of measurement for decisions on conformity (decision rule):

☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

Information on uncertainty of measurement:

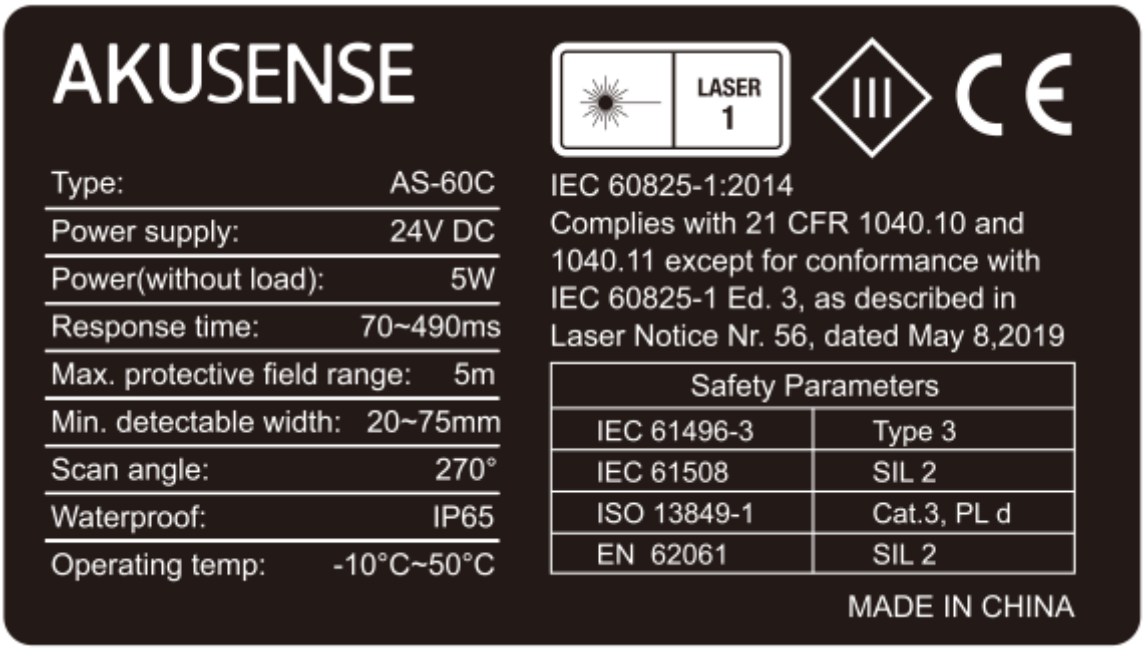
The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

The artwork below may be only a draft.



Test item particulars.....:	
Classification of installation and use.....:	Component for built-in
Supply Connection.....:	Not direct connected to mains
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2025-09-20
Date (s) of performance of tests .....:	2025-09-20 to 2025-09-27

General remarks:

"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies) ..... :	SHENZHEN AKUSENSE TECHNOLOGY CO., LTD 4F West and 5F, Building A, No. 2 of Luozu Industrial Avenue, Luozu Community, Shiyan Street, Baoan District, Shenzhen, Guangdong, PEOPLE'S REPUBLIC OF CHINA

General product information and other remarks:

The product in this report is a LiDAR sensor for built-in use which emits rotating laser points for measuring purpose.

All models are identical except for model name.

The radiation measurements for the product are performed under normal condition and foreseeable single fault conditions. The angular subtense is considered to be less than 1.5 mrad.

After the measurements and classification analysis, the product is classified as class 1 laser product.