



# TEST REPORT

Client Name	Leishen intelligent system Co., Ltd.
Name of product	First Edition of lidar
Manufacturer	Leishen intelligent system Co., Ltd.
Trade mark & model	C16-700A, C16-121A, C16-151A
Test sort	Commission Test



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**CCIC Southern Electronic Product Testing (Shenzhen) Co., Ltd.****TEST REPORT**

Name of sample	First Edition of lidar		Trade mark		
Manufacturer	Leishen intelligent system Co., Ltd.		Model/Type	C16-700A, C16-121A, C16-151A	
Client	Leishen intelligent system Co., Ltd.		Sampling method	/	
Sampler	/		Amount of samples	/	
Sampling place	/		Quantity of samples	1 piece	
Production date	/	Sampling date	/	Application data	2018-04-28
Test date	2018-05-14		Environment condition	25.0°C, 50%RH	
Sample description: EUT is Class 1 laser products. Wavelength: 895-915(nm). All models are identical except the distance of software opening and the angle of resolution. Unless otherwise specified, all tests are performed on C16-700A to represent other models.					
Test item: Laser power test.					
Reference documents: IEC 60825-1:2014 Safety of laser products – Part 1: Equipment classification and requirements					
Summary: Refer to the test result.					
Test conclusion: Pass					
Possible test case verdicts: -test case does not apply to the test object.....:N(.A.) -test object does meet the requirement.....:P(ass) -test object does not meet the requirement.....:F(ail)					
Tested by:		Inspected by:		Approved by:	
	2018Y 05 M 16 D		2018Y 05 M 16 D		2018Y 05 M 16 D



IEC 60825-1			
Clause	Requirement + Test	Result - Remark	Verdict
<b>4</b>	<b>CLASSIFICATION PRINCIPLES</b>		
4.3	Classification rules		---
4.3 a	Radiation of a single wavelength		P
4.3 b	Radiation of multiple wavelengths		N/A
	1) Laser product emits at two or more wavelengths shown as additive in Table 1		N/A
	2) Laser product emits at two or more wavelengths not shown as additive in Table 1		N/A
4.3 c	Radiation from extended sources (see 5.4.3)		N/A
4.3 d	Non-uniform, non-circular or multiple apparent source		N/A
4.3 e	Time bases		---
	1) 0,25 s		N/A
	2) 100 s		P
	3) 30000 s		N/A
4.3 f	Repetitively pulsed or modulated lasers		P
	1) Any single pulse		P
	2) Average power for pulse trains		N/A
	3) Pulse duration $t \leq T_i$ ..... : Number of pulses N and $C_5$ ..... :		N/A
	3) Pulse duration $t > T_i$ ..... : Number of pulses N and $C_5$ ..... :		N/A
4.4	Laser products designed to function as conventional lamps.		N/A
	measured at 200 mm distance from closest point of human access ( $> 5$ mrad).		N/A
	Un-weighted radiance L measured at 200 mm distance (comparison with $L_T = 1 \text{ MWm}^{-2}\text{sr}^{-1}$ ) under reasonably foreseeable single fault conditions.		N/A



IEC 60825-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Evaluation of emission according to IEC 62471 series (optional): Standard applied (IEC 62471 series)..... : Risk Group..... : Labelling..... : Classification of product based on accessible laser radiation (if no laser radiation accessible: Class 1).		N/A

<b>5</b>	<b>DETERMINATION OF THE ACCESSIBLE EMISSION LEVEL and PRODUCT CLASSIFICATION</b>		
5.1	Tests		---
	Compliance under reasonably foreseeable single fault conditions.		N/A
5.3	Determination of the class of the laser product .. : For Class 1C: vertical safety standard applied with requirements for Class 1C.		---
5.4	Measurement geometry		---
5.4.1	General		---
5.4.2	Default (simplified) evaluation		P
	Conditions applied ..... :	Condition 3	P
	Aperture diameter ..... :	Condition 3: 7mm.	P
	Reference point : .....		P
	Measurement distance ..... : (for each condition)	Condition 3 = 100mm	P
5.4.3	Evaluation condition for extended sources		N/A
	Conditions applied ..... :		N/A
	Most restrictive position ..... : (distance from reference point)		N/A
	Angular subtense of the apparent source $\alpha$ and $C_6$ : (for each condition)		N/A



IEC 60825-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.4.3 a	Aperture diameters (for each condition)..... :		N/A
5.4.3 b	Angle of acceptance (for each condition).....:		N/A



Measured laser radiation, calculations and comparison with AEL limits:

### 1. Measuring condition

- The radiant power is measured under normal condition.
- Measurement condition 3 is measured.

### 2. Measured Results

- Default (5.4.2 simplified) evaluation

Operating Condition	Wavelength (nm)	Aperture Stop Diameter Size (mm)	Measurement Distance from Apparent Source Location to Aperture Stop (mm)	Measured Output Power (mW)
Normal condition 3	905	7	100	0.30

### 3. AEL (Accessible Emission Limit)

Model	Exposure Time (s)	Measured Results	AEL	Class
/	100	Condition 3 = 0.30mW	1.002 mW	1

### 4. Classification

The product is classified as **Class 1**.

### 5. Measuring Instrument

Name	Maker	Model	Serial No.	Date expired
Laser power meter	Newport	1930-C	A0705478	2018-05-20
Detector	Newport	918-UV	A0705479	2018-05-20
Laser spectrum analyzer	Newport	OSM-400-UV-NIR	A0705480	2019-04-23

Photo document



Photo 1

# STATEMENT

1. The test report is invalid without stamp of laboratory.
2. The test report is invalid without signature of person(s) testing and authorizing.
3. The test report is invalid if erased and corrected.
4. Test results of the report is valid to the test samples if sampling by client.
5. “☆”item cannot be Accredited by CNAS.
6. The test report shall not be reproduced except in full, without written approval of the laboratory.
7. If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.