IK Code Test Report

Applicant	:	**Shanghai Reeth Glass Lens Co.,LTD** Zhentai Road, Bbaoshan District, Shanghai, China.
Sample Description		
Product	:	LED GLASS LENS
Model No.	:	RH-SL-06, RH-SL-07, RH-SL-11, RH-SL-23, RH-SL-28, RH-SL-07-1, RH-SL-17, RH-SL-20, RH-SL-34, RH-SL-39, RH-SL-25, RH-SL-03, RH-SL-16, RH-SL-43, RH-SL-18, RH-SL-32, RH-HBL-11, RH-HBL-12, RH-HBL-13, RH-HBL-63, RH-HBL-65, RH-HBL-21, RH-HBL-55, RH-HBL-08, RH-HBL-49, RH-HBL-19, RH-HBL-14, RH-HBL-20, RH-HBL-43, RH-HBL-47.
Trademark	:	N/A
Receipt Date	:	2018-08-21
Test Date	:	2018-08-22 to 2018-08-23
Issue Date	:	2018-08-24
Test Standard(s)	:	**IEC 62262: 2002**
Conclusions	:	**PASS** In the configuration tested, the product complied with the standards specified above. The product technically complies with the IEC 62262:2002 requirements

Test/Witness Engineer : Jason Deng

Approved & Authorized : Frank Zhang

ATA Testing Technology Service Co., Ltd. ATA APPROVED ********

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

TEST REPORT

IEC 62262

Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)

Report No.:	ATA180822001T
Date of issue..... :	2018-08-24
Total number of pages..... :	9
Testing Laboratory..... :	ATA Testing Technology Service Co., Ltd.
Address..... :	5/F., Huashenghui Commercial Building, Jinhai Road, Xixiang, Bao'an District, Shenzhen, China
Applicant's name..... :	Shanghai Reeth Glass Lens Co.,LTD
Address..... :	Zhentai Road, Bbaoshan District, Shanghai, China.
Manufacturer's name..... :	Shanghai Reeth Glass Lens Co.,LTD
Address..... :	Zhentai Road, Bbaoshan District, Shanghai, China.
Test specification:	
Test Standard..... :	**IEC 62262: 2002**
Test procedure..... :	**IK08**
Non-standard test method..... :	N/A
Test Report Form No..... :	IEC62262A
Test Report Form(s) Originator..... :	ATA Testing
Master TRF..... :	Dated 2012-06
Test item description..... :	LED GLASS LENS
Trade Mark..... :	N/A
Model/Type reference..... :	RH-SL-06, RH-SL-07, RH-SL-11, RH-SL-23, RH-SL-28, RH-SL-07-1, RH-SL-17, RH-SL-20, RH-SL-34, RH-SL-39, RH-SL-25, RH-SL-03, RH-SL-16, RH-SL-43, RH-SL-18, RH-SL-32, RH-HBL-11, RH-HBL-12, RH-HBL-13, RH-HBL-63, RH-HBL-65, RH-HBL-21, RH-HBL-55, RH-HBL-08, RH-HBL-49, RH-HBL-19, RH-HBL-14, RH-HBL-20, RH-HBL-43, RH-HBL-47.

Summary of testing: From the result of our tests on the submitted samples, we conclude they comply with the requirements of the standards	
Tests performed (name of test and test clause): Impact test according to IK code - IK08. Tests are performed with free fall hammer complying with IEC 60068-2-75. Relevant tests were performed with fully assembled enclosure.	**Testing location:** ATA Testing Technology Service Co., Ltd. 5/F., Huashenghui Commercial Building, Jinhai Road, Xixiang, Bao'an District, Shenzhen, China
Summary of compliance with National Differences N/A	

Copy of marking plate N/A

Test item particulars..... :	LED GLASS LENS
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..... :	2018-08-21
Date(s) of performance of tests..... :	2018-08-22 to 2018-08-23

General remarks:

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 testing laboratory.
"(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.

General product information:

The products under test is LED GLASS LENS.

See clause 5.3 and table 1 for detailed information about the test results.

IEC 62262			
Clause	Requirement + Test	Result - Remark	Verdict

4	**DESIGNATIONS**		**—**
	The degree of protection provided by an enclosure agains		P
4.1	Arrangement of the code		P
	IK	08	N
	Codes letter(International mechanical protection) Characteristic group numeral(00 to 10)		P
4.2	Characteristic group numerals of the IK code and their meanings		P
	Each characteristic group numeral represents a impact energy value as shown in table	See appended table 1	P
4.3	Application of the IK code		P
	The degree of protection applies to the complete enclosure.	All parts of the enclosure are same degree.	P
4.4	Marking		N
	- One part of an enclosure has a different degree of protection to that of another part of the same enclosure		N
	- the mounting position has an influence on the degree of protection.		N

5	**Enclosures under test**		**—**
5.1	Atmospheric conditions for tests		P
	Unless otherwise specified in the relevant product standard, the test shall be carried out under the standard atmospheric conditions for tests described in IEC 60068-1.	No special condition required.	P
	- temperature rage:	15℃-35℃	P
	- air pressure	86kPa to 106kPa(860mbar to 1060mbar)	P
	When the altitude at which the test is performed is higher than 2000m, the height of fall shall be adjusted where necessary to result in the specified impact energy		P
5.2	Enclosures under test		—

IEC 62262			
Clause	Requirement + Test	Result - Remark	Verdict
	Each enclosure under test shall be in a clean and new condition, compete with all its parts pace unless otherwise specified in the relevant product standard	Compliance with requirement	P
5.3	Specifications to be given in the relevant product standard		—
	The relevant product standard shall specify	See below	P
	- the definition of “enclosure” as it applies to the particular	Part providing protection of equipment against certain external influences an in any direction protection against contact	P
	- the test equipment (e.g. pendulum hammer, spring hammer or vertical hammer, see clause 7)	Vertical hammer	P
	- the number of samples to be tested;	4	P
	- the conditions for mounting, assembling and positioning the samples,	Placed on flat and rigid wood plate	P
	- the pre-conditioning, if any, which is to be used;		P
	- whether to be tested energized;	Energized	P
	- whether to be test with any moving parts in motion;	Moving	P
	- the number of of impacts and their points of application;		P
	In the absence of such specifications in the relevant product standard, conditions of the standard shall apply.		P
6	**Test to verify the protection against mechanical impacts**		**—**
6.1	The test specified in the standard	Type test	P
6.2	During the test the LED GLASS LENS is installed on a fixed position. blows shall be applied to the enclosure to tested.	Test are described in clause 7	P
6.3	During the test the enclosure is mounted on a rigid support.	According to the manufacturer’s instructions for use	P
	A support is considered to be sufficiently rigid if its displacement is less than or equal to 0.1mm under the effect of an impact directly applied and whose energy corresponds to the degree of protection.		P

IEC 62262			
Clause	Requirement + Test	Result - Remark	Verdict
6.4	Impacts test	(See append a table 2).	--
	Each exposed face unless otherwise specified in the relevant product standard.	The number of impacts five	P
	The impacts shall are evenly distributed on the applied in the surroundings of the same point of the enclosure.	Evenly distributed	P
	The relevant product standard specify the points of application of impacts.		P
6.5	Test evaluation:		--
	The relevant product standard shall specify the criteria upon which the acceptance or rejection of the enclosure is to be based, particularly		P
	- admissible damages,		P
	- verification criteria relative to the continuity of safety and reliability of the equipment		P
7	**Test apparatus**		—
	The test shall be done by using one of the test apparatus described in IEC 60068-2-75. The relevant product standard shall specify specify which types of test apparatus are appropriate	Vertical hammer and test on the basis EN 60068-2-75	P

IEC 62262			
Clause	Requirement + Test	Result - Remark	Verdict

Table 1 – Relation between IK code and impact energy

IK code	IK00	IK01	IK02	IK03	IK04	IK05	IK06	IK07	IK08	IK09	IK10
Impact energy, J	*	0,14	0,2	0,35	0,5	0,7	1	2	5	10	20

* Not protected according to this standard.

NOTE 1 When higher impact energy is required, the value of 50 J is recommended.

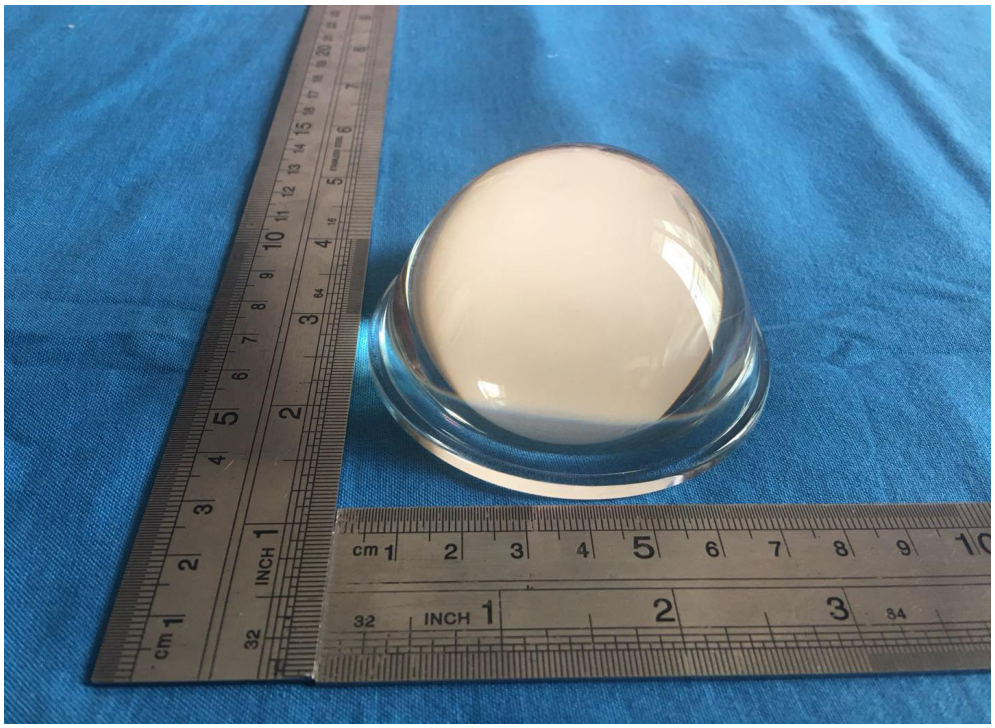
NOTE 2 A characteristic group numeral of two figures has been chcsen to avoid confusion with some national standards which used a single numeral for a specific impact energy.

Table 2: Samples under test:		
Model: RH-SL-06	IK Code: IK 08	
Location	**Appearance check (visual check)**	**Test verdict / comment**
Position 1	No visible damage	Broken

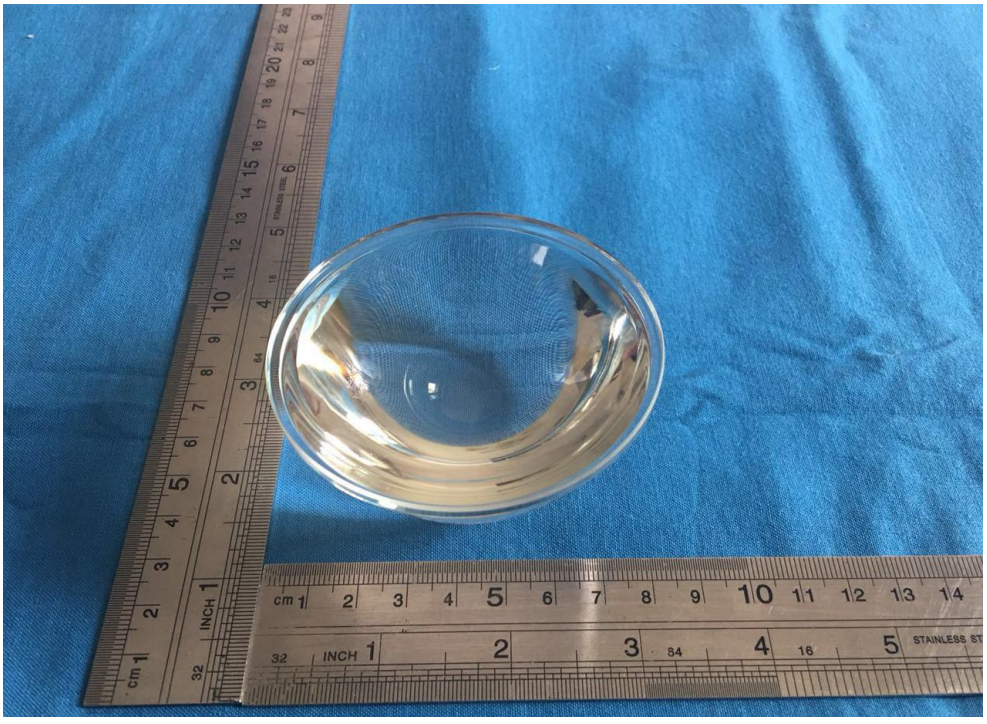
IEC 62262			
Clause	Requirement + Test	Result - Remark	Verdict

Photographs - Constructional Details

Before the test

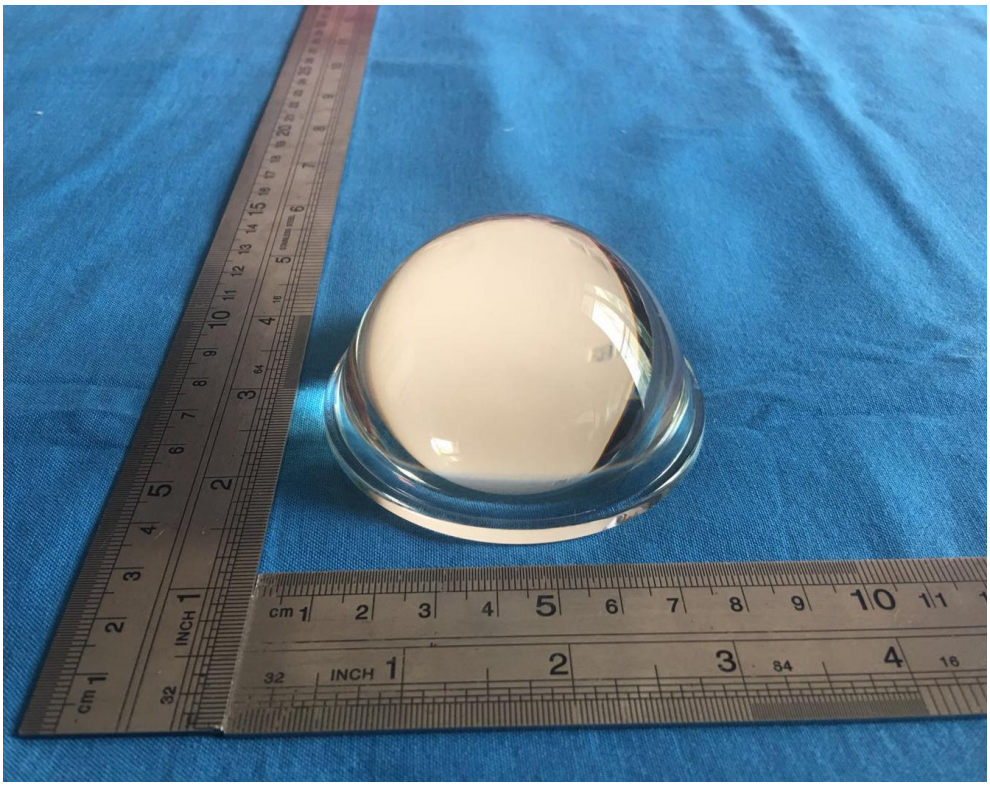


Before the test



IEC 62262			
Clause	Requirement + Test	Result - Remark	Verdict

After the test



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