# TEST REPORT

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|---|---|
| **Kunde:** *Client:* | Logos Lighting Co., Ltd |
| **Adresse:** *Address:* | 5th Floor, Building A, Zhixuanhan Yuanling Industrial Park, Shiyan Town, Baoan District, Shenzhen City, Guangdong Province, China 518108 |
| **Hersteller:** *Manufacturer:* | Logos Lighting Co., Ltd |
| **Adresse:** *Address:* | 5th Floor, Building A, Zhixuanhan Yuanling Industrial Park, Shiyan Town, Baoan District, Shenzhen City, Guangdong Province, China 518108 |
| **Name der Marke:** *Brand Name:* | LOGOS LED |
| **Beschreibungdes Produkts:** *Product Description:* | LED Street Light |
| **Modelle:** *Models:* | See model list on page 3 |
| **Bewertung:** *Rating:* | See model list on page 3 |
| **Verfahren:** *Method:* | IEC 62262:2002+A1:2021 |
| **Prüfergebnis*:** *Test result*:* | Pass |

| **Datum der Prüfung:** *Date of Test:* | **Datum der Emission:** *Date of Issue:* | **Klassifizierung:** *Classification:* | **Gegenstand der Prüfung:** *Test item:* |
|---|---|---|---|
| 2023/8/24 | 2025/4/29 | Commission Test | IK10 Test |

**Prüflabor (Testlabor) /** Testing Laboratory:
Shenzhen Southern LCS Compliance Testing Co., Ltd.
Room 101-201, Building 39, Xialang Industrial Zone, Heshuikou Community, Matian Street, Guangming District, Shenzhen, Guangdong, China

| **Test von/**Test by: | **Check von/**Check by: | **Genehmigt von/**Approved by: |
|---|---|---|
| Yeoh Zhang/ Project Engineer | Torres He/ Director | Jesse Liu/ Manager |

**Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.**

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**General remarks:**

1. The test results presented in this report relate only to the object tested.
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Modified Information

| Version | Report No. | Revision Date | Summary |
|---|---|---|---|
| -- | LCSB050823087S | / | Original Version |
| V1.0 | LCSB04015069S | 2025-04-29 | Co-license |

The declaration of identity dated 2025-04-29 from applicant confirm this:
The “LED Street Light” model “LGS-SLAU-50W,LGS-SLAU-100W,LGS-SLAU-150W,LGS-SLAU-200W, LGS-SLSE-50W,LGS-SLSE-60W,LGS-SLSE-80W,LGS-SLSE-100W,LGS-SLSE-120W,LGS-SLSE-150W, LGS-SLSE-180W,LGS-SLSE-200W,LGS-SLIR-30W,LGS-SLIR-50W,LGS-SLIR-60W,LGS-SLIR-80W, LGS-SLIR-100W,LGS-SLIR-150W,LGS-SLIR-200W” of co-license holder “Name:Logos Lighting Co., Ltd. ” “Address: 5th Floor, Building A, Zhixuanhan Yuanling Industrial Park, Shiyan Town, Baoan District, Shenzhen City, Guangdong Province, China 518108”is the same “****” model “****” of license holder “Name:****” “Address:****”.(****:hided by commercial reason)

Existing approved test report “LCSB050823087S” dated 2023/8/24. This co-license test report is based on the test raw-data of existing approved test report, after construction/information review and verification, no additional tests were considered necessary.

**Equipment used during test:**

| ID Number | Instrument | Model/ Type | Cal. Date | Due. Date |
|---|---|---|---|---|
| SLCS-S-182 | IK tester | AGIKCJ | 2023-05-09 | 2024-05-08 |
| SLCS-S-135 | Digital hygrometer thermometer | HTC-1 | 2023-05-09 | 2024-05-08 |
| SLCS-S-088 | Tape | 5M | 2023-05-10 | 2024-05-09 |
| SLCS-E-024 | Temperature and humidity barometer | HTC-1 | 2023-05-10 | 2024-05-09 |

**General product information:**

- Unless otherwise specified, the models LGS-SLIR-200W was chosen as representative model to perform all

test.

- AC 100-240V, 50/60Hz

Model list:

| Model No. | Power (W) | LED driver model No. |
|---|---|---|
| LGS-SLIR-30W | 30 | ZH-WP-40H-130 |
| LGS-SLAU-50W | 50 | ZH-WP-60H-130 |
| LGS-SLIR-50W | 50 | |
| LGS-SLSE-50W | 50 | |
| LGS-SLSE-60W | 60 | |
| LGS-SLIR-60W | 60 | |
| LGS-SLSE-80W | 80 | ZH-WP-80H-130 |
| LGS-SLIR-80W | 80 | |
| LGS-SLAU-100W | 100 | ZH-WP-120H-150 |
| LGS-SLIR-100W | 100 | |
| LGS-SLSE-100W | 100 | |
| LGS-SLSE-120W | 120 | |
| LGS-SLAU-150W | 150 | ZH-WP-160H-150 |
| LGS-SLIR-150W | 150 | |
| LGS-SLSE-150W | 150 | |
| LGS-SLSE-180W | 180 | ZH-WP-200H-260 |
| LGS-SLAU-200W | 200 | |
| LGS-SLSE-200W | 200 | |
| LGS-SLIR-200W | 200 | |

| Parts | Thickness(mm) |
|---|---|
| Translucent cover | 2 |

| IEC 62262 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

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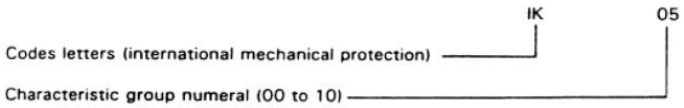
| **4** | **Designations** | | |
| 4.1 | Arrangement of the IK code<br>  | IK10 | -- |
| 4.2 | Characteristic group numerals of the IK code and their meanings Each characteristic group numeral, represents an impact energy value as shown in Table1. | See table 1 of IEC 62262, IK10 Impact energy Joule 20J | -- |
| 4.3 | Application of the IK code<br>In general the degree of protection applies to the complete enclosure. If parts of the enclosure have differing degrees of protection, the latter shall be separately indicated. | | N/A |
| **4.4** | **Marking** | | |
| | In case where the relevant product committee decides that marking of the IK-code shall be required, the marking requirements shall be detailed in the relevant product standard. | IK10 | P |
| | Where appropriate, such a standard should also specify the method of marking which is to be used when: | | -- |
| | —one part of an enclosure has different degree of protection to that of another part of the same enclosure; | | N/A |
| | —the mounting position has an influence on the degree of protection. | | N/A |
| **5** | **General requirements for tests** | | |
| 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 IEC60068-1as: | | -- |
| | Temperature range15°C to 35°C | 25°C | P |
| | Air pressure 86kPa to 106kPa (860mbar to 1060mbar) | 96kPa | 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. | Below 2000m | N/A |
| 5.2 | Enclosures under test | | N/A |
| | Each enclosure under test shall be in a clean and new condition, complete with all their parts in place unless otherwise specified in the relevant product standard. | | P |
| 5.3 | Specifications to be given in the relevant product standard | | |
| | The relevant product standard shall specify: | | -- |

| IEC 62262 | | | |
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| Clause | Requirement + Test | Result - Remark | Verdict |
| | —the definition of “enclosure” as it applies to the particular type of equipment; | | N/A |
| | —the test equipment (e.g. pendulum hammer, spring hammer or vertical hammer, seeClause7); | | P |
| | —the number of samples to be tested; | 1 | P |
| | —the conditions for mounting, assembling and positioning the samples, e.g. by the use of an artificial surface(ceiling, floor or wall), in order to stimulate intended service conditions as far as possible; | | P |
| | —the pre-conditioning, if any, which is to be used; | | N/A |
| | —whether to be tested energized; | No energized | N/A |
| | —whether to be tested with any moving parts in motion; | No moving parts | N/A |
| | —the number of impacts and their points of application (see 6.3). | | P |
| | In the absence of such specifications in the relevant product standard, conditions of this standard shall apply. | | P |
| **6** | **Test to verify the protection against mechanical impacts** | | |
| 6.1 | The tests specified in this standard are type tests. | | -- |
| 6.2 | In order to verify the protection against mechanical impacts blows shall be applied to the enclosure to be tested. The device to be used for this test are described in Clause7. | | P |
| 6.3 | During the test the enclosure shall be mounted, according to the manufacturer instructions for use, on a rigid support. 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. Alternative mounting and support, suitable for the product, may be specified in the relevant product standard. | Displacement is less than or equal to 0,1mm | P |
| 6.4 | The number of impacts shall be five on each exposed face unless otherwise specified in the relevant product standard. The impacts shall be evenly distributed on the faces of the enclosure (s) under test. In no case shall more than three impacts be applied in the surroundings of the same | 5 points, 3 times per point | P |
| 6.5 | Test evaluation<br>The relevant product standard shall specify the criteria upon which the acceptance or rejection of the enclosure is to be based on particularly: | | P |
| | —admissible damages; | No damage | P |
| | —verification criteria relative to the continuity of the safety and reliability of the equipment. | No broken | P |

| IEC 62262 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

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| **7** | **Test apparatus** | | |
| | The test shall be done by using one of the test apparatus as described in EN60068-2-75. | | P |
| | The striking surface shall be visually examined before each impact in order to ensure that there is no damage that might affect the result of the test. | See Figure 1 | P |
| 7.1 | Test Ehc: Vertical hammer | | N/A |
| 7.1.1 | The hammer consists basically of a striking element which falls freely from rest through a vertical height, selected from table2 of IEC 60068-2-75, on to the specimen surface held in a horizontal plane. The characteristics of the striking element shall comply with table 1 of IEC 60068-2-75. The fall of the striking element shall be along a guide way, for example a tube, with negligible braking. This guide way shall not rest on the specimen and the striking element shall be free of the guide way on striking the specimen. In order to reduce the friction, the length l of the striking element shall not be smaller than its diameter D, and a small gap (for example 1 mm) shall be provided between the striking element and the guide way. | | N/A |
| 7.1.2 | Height of fall | | N/A |
| | The height of fall is given in table2 of IEC 60068-2-75, the equivalent mass stated therein being equal to the actual mass of the striking element. | | N/A |
| 7.2 | Test Eha: Pendulum hammer | | P |
| 7.2.1 | Test apparatus | | P |
| 7.2.1.1 | Test apparatus for severities not exceeding 1 J | | N/A |
| 7.2.1.2 | Test apparatus for severities of 2 J and above | | P |
| 7.2.2 | Height of fall | | P |
| | To produce impacts of the required severity, the striking element is released from a height depending on the equivalent mass of the pendulum, according to Table 2 of IEC 60068-2-75. | | P |
| 7.2.3 | Testing | | P |
| | In order to avoid secondary impacts, i.e. rebounds, the hammer is retained after the initial impact by grasping the striking element whilst avoiding the arm so that distortion is prevented. | | P |
| 7.3 | Test Ehb: Spring hammer | | N/A |

| IEC 62262 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 7.3.1 | Test apparatus | | N/A |
| 7.3.2 | Influence of earth's gravity | | N/A |
| | The downward/upward variation is taken into account when establishing the actual energy delivered. | | N/A |
| 7.3.3 | Calibration | | N/A |
| | The spring hammer is calibrated. | | N/A |

| IEC 62262 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

**REMARKS:**

**1. The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.**

**2. Characterization & Condition of Sample: Normal.**

**Table 1 of IEC 62262-2002:**

**Table 1- Relation between IK code and impact energy**

| IK code | IK00 | IK01 | IK02 | IK03 | IK04 | IK05 | IK06 | IK07 | IK08 | IK09 | IK10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Impact energy Joule | a | 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 Joule is recommended.

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

**Table 2 of IEC 60068-2-75:**

**Table 2- Height of tall**

| Energy J | 0,14 | 0,2 | | (0,3) | 0,35 | (0,4) | 0,5 | | 0,7 | 1 | 2 | 5 | 10 | 20 | 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Equivalent mass kg | 0,25 | (0,2) | 0,25 | (0,2) | 0,25 | (0,2) | (0,2) | 0,25 | 0,25 | 0,25 | 0,5 | 1,7 | 5 | 5 | 10 |
| Height of tall mm±1% | 56 | (100) | 80 | (150) | 140 | (200) | (250) | 200 | 280 | 400 | 400 | 300 | 200 | 400 | 500 |

NOTES

1 See note in 3.2.2.

2 In this part of IEC 60068, the energy, J, is calculated taking the standard acceleration clue to the earth's Gravity($g_n$), rounded up to the nearest whole number, that is 10m/s².

| IEC 62262 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

**Table 1 of IEC 60068-2-75**

**Table 1 - Co-ordinated charateristics of the striking elements**

| Energy value J | ≤1 ±10% | 2 ±5% | 5 ±5% | 10 ±5% | 20 ±5% | 50 ±5% |
|---|---|---|---|---|---|---|
| Equivalent mass ±2% kg | 0,25 (0,2) | 0,5 | 1,7 | 5 | 5 | 10 |
| Material | Polyamide[1)] | Steel[2)] | | | | |
| R mm | 10 | 25 | 25 | 50 | 50 | 50 |
| D mm | 18,5 (20) | 35 | 60 | 80 | 100 | 125 |
| f mm | 6,2 (10) | 7 | 10 | 20 | 20 | 25 |
| r mm | -- | -- | 6 | -- | 10 | 17 |
| l mm | To be adjusted to match the equivalent mass, see annex A. | | | | | |

1) 85≤HRR≤100, Rockwell hardness according to ISO 2039-2.
2) Fe 490-2, according to ISO 1052: Rockwell hardness: HRE 80...85 according to ISO 6508.

NOTE - The values shown in brackets for the equivalent mass and the diameter of the striking element for the energy value equal to or less than 1 J are those in the current test Ef. The values currently in test Eg are also shown for these two parameters. For co-ordination purposes, the values in brackets will be deleted five years from the publication of this standard.

**Figure1— Example sketch of a striking element**

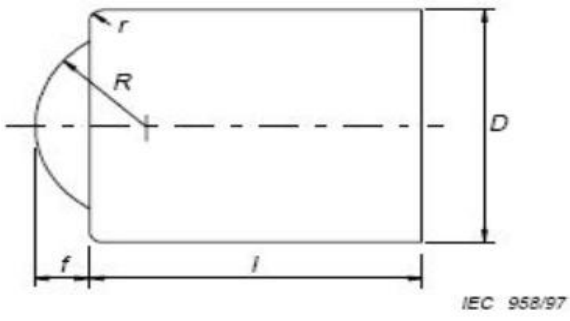


Figure 1 – Example sketch of a striking element

**Photo Documentation:**

Photo 1: Overall view of model LGS-SLIR-200W

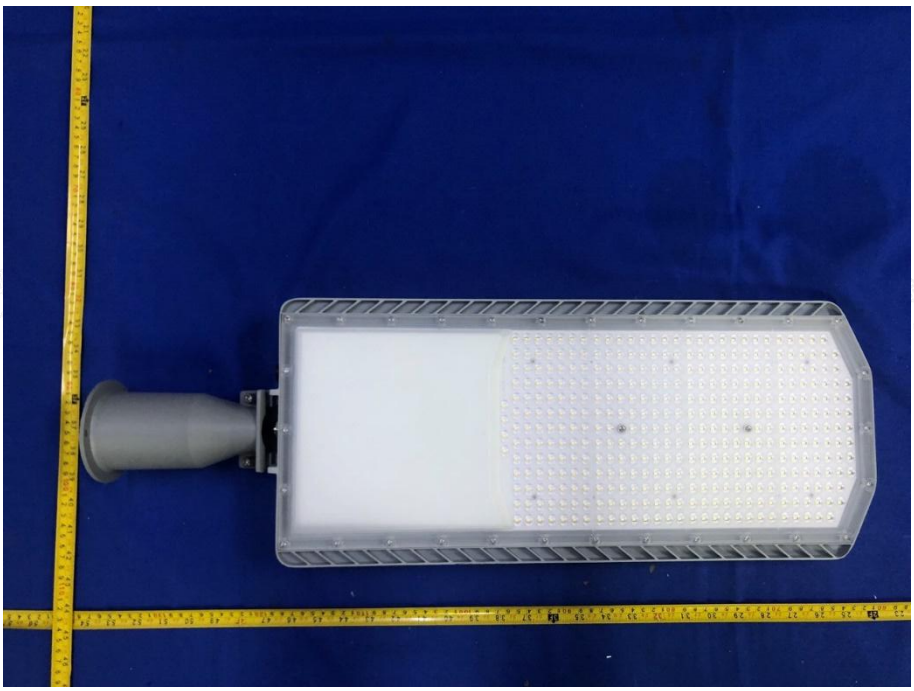

Photo 2: Overall view of model LGS-SLIR-200W

**----- End of Test Report-----**