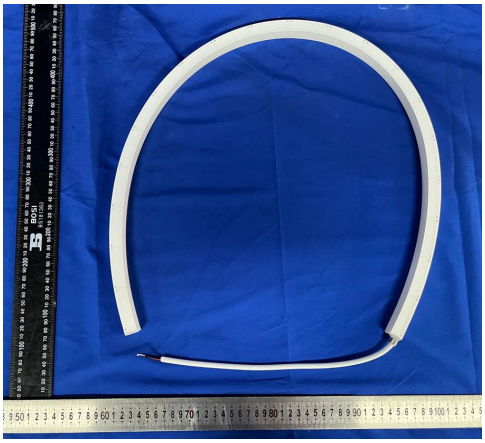
Prüfbericht-Nr.: *Test report no.:*	**CN24JZRZ 001**	**Auftrags-Nr.:** *Order no.:*	168513390	Seite 1 von 12 *Page 1 of 12*
Kunden-Referenz-Nr.: *Client reference no.:*	N/A	**Auftragsdatum:** *Order date:*	2024-11-13	
Auftraggeber: *Client:*	**SHENZHEN LEDYI LIGHTING CO., LTD.** 8th Floor, Skyworth Digital Building, Songbai Road, Shiyan, Bao'an District, Shenzhen, China			
Prüfgegenstand: *Test item:*	LED NEON LIGHT			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	LY-XXXXXWWHHXX, details see page 10			
Auftrags-Inhalt: *Order content:*	Test report			
Prüfgrundlage: *Test specification:*	IK10 test according to IEC 62262:2002+A1:2021, EN 62262:2002+A1:2021, IEC TR 62696:2011			

Wareneingangsdatum: *Date of sample receipt:*	2024-11-13
Prüfmuster-Nr.: *Test sample no:*	A003820569
Prüfzeitraum: *Testing period:*	2024-11-13 to 2024-11-18
Ort der Prüfung: *Place of testing:*	**TÜV Rheinland (Shenzhen) Co., Ltd.**
Prüflaboratorium: *Testing laboratory:*	**TÜV Rheinland (Shenzhen) Co., Ltd.**
Prüfergebnis*: *Test result*:*	Pass



geprüft von:
tested by Phil Zhang: Phil Zhang

Datum:
Date: 2024-11-21

Stellung / Position: Project Engineer

genehmigt von:
authorized by Duffe Zhong: Duffe Zhong

Ausstellatum:
Issue date: 2024-11-21

Stellung / Position: Reviewer

Sonstiges / *Other:*

1. This report is issued for the test mentioned above by performing on the sample submitted by the client.
2. This report is supervised by Vincent Li. Vincent Li

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

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.
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.
V05

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.*

Produktbeschreibung
Product description

1	***Product details:***	LED NEON LIGHT
2	***Trademark:***	N/A
3	***Manufacturer:***	Same as the client's name and address
4	***Ratings:***	Models LY-W2428161767, LY-C2428502567, LY-C2428061267, LY-C2428101067: 24VDC, IK10, other models see page 8.
5	***Others:***	Test sample(s), as well sample information, description, product details and intended usage was provided by customer.
6	***Test sample obtaining:***	☒ Sending by customer ☐ Sampling by TÜV Rheinland Group ☐ others
7	***Summary of testing:***	1. Test condition: ta=25°C, R.H.=65%. 2. One sample of models LY-W2428161767, LY-C2428502567, LY-C2428061267, LY-C2428101067 was submitted by the client for the IK10 test. 3. Slight deformation of products, no crack, no hazards.

Figure 1. During IK test of model LY-W2428161767

Figure 2. After IK test of model LY-W2428161767

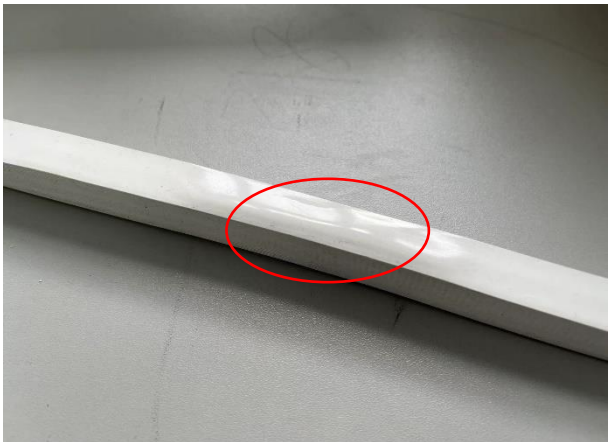


Figure 3. During IK test of model LY-C2428502567

Figure 4. After IK test of model LY-C2428502567

Figure 5. During IK test of model LY-C2428061267	Figure 6. After IK test of model LY-C2428061267

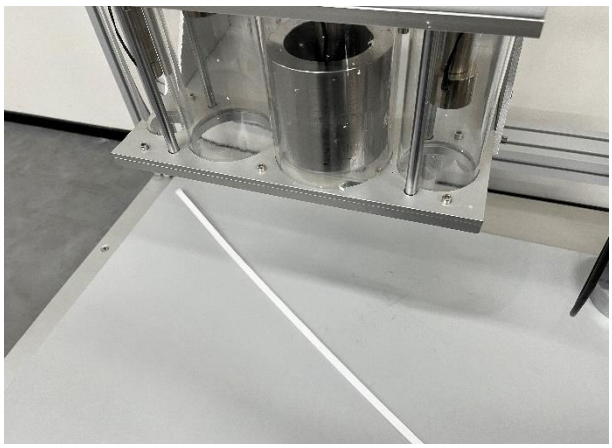
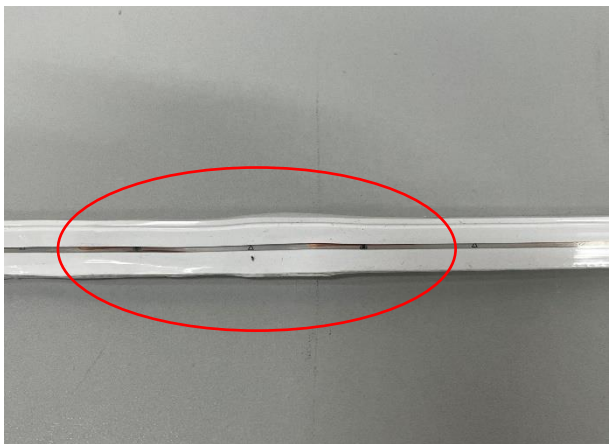

	

Figure 7. After IK test of model LY-C2428061267	Figure 8. After IK test of model LY-C2428061267

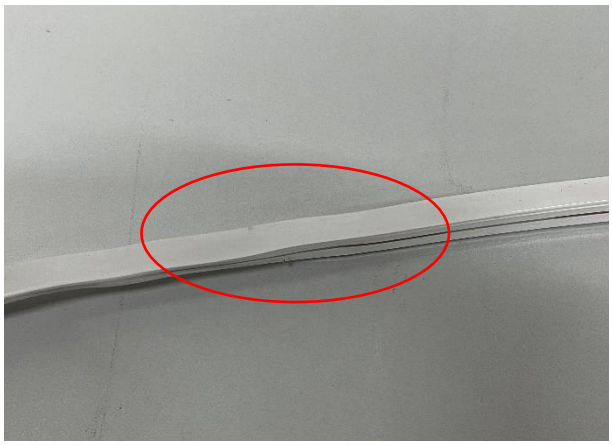
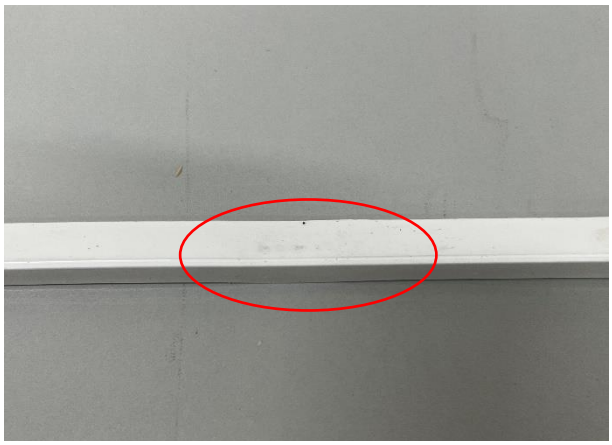
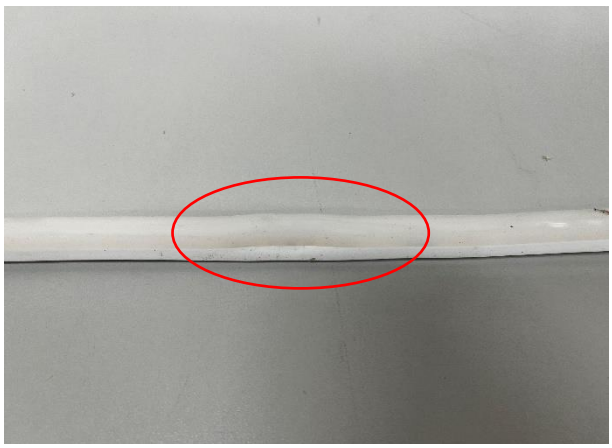
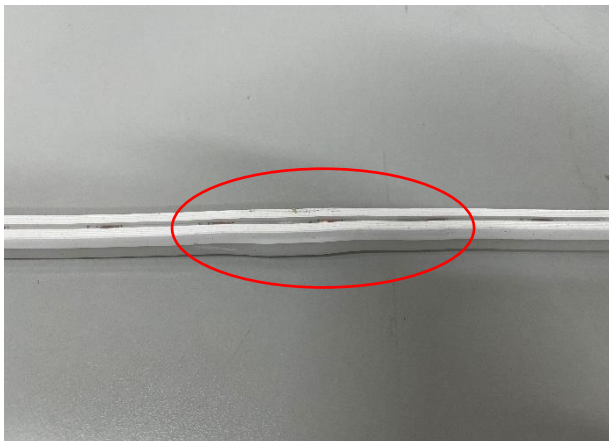
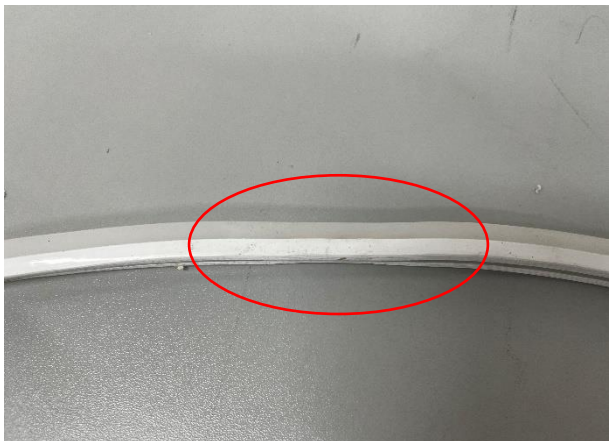

	

Figure 9. During IK test of model LY-C2428101067	Figure 10. After IK test of model LY-C2428101067
	

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen /** *Measuring results - Remarks*	**Ergebnis** *Result*

Figure 11. After IK test of model LY-C2428101067	Figure 12. After IK test of model LY-C2428101067
	

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen /** *Measuring results - Remarks*	**Ergebnis** *Result*
	IEC 62262		
5	**General requirements for tests**		**P**
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:		P
	. temperature range: 15 °C to 35 °C, . air pressure: 86 kPa to 106 kPa (860 mbar to 1 060 mbar).		P
5.2	**Enclosures under test**		P
	Each enclosure under test shall be in a clean and new condition, complete with all its parts in place unless otherwise specified in the relevant product standard.		P
5.3	**Specifications to be given in the relevant product standard**		P
	The relevant product standard shall specify . the definition of "enclosure" as it applies to the particular type of equipment; . the test equipment (e.g. pendulum hammer, spring hammer or vertical hammer, see clause 7); . the number of samples to be tested; . 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 simulate intended service conditions as far as possible; . the pre-conditioning, if any, which is to be used; . whether to be tested energised; . whether to be tested with any moving parts in motion; . the number of impacts and their points of application (see 6.4).		P

6	**Test to verify the protection against mechanical impacts**		P
6.1	The test specified in this standard is a type test.		P
6.2	In order to verify the protection against mechanical impacts, blows shall be applied to the enclosure to be tested. The devices to be used for this test are described in clause 7.		P
6.3	During the test the enclosure shall be mounted on a rigid support, according to the manufacturers instructions for use. A support is considered to be sufficiently rigid if its displacement is less than or equal to 0,1 mm 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.		P

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen /** *Measuring results - Remarks*	**Ergebnis** *Result*
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 point of the enclosure. The relevant product standard shall specify the points of application of impacts.	See table 6.5	P
6.5	**Test evaluation**		P
	The relevant product standard shall specify the criteria upon which the acceptance or rejection of the enclosure is to be based, particularly . admissible damages, . verification criteria relative to the continuity of the safety and reliability of the equipment.	Slight deformation of products, no crack, no hazards	P

7	**Test apparatus**		P
	The test shall be done by using one of the test apparatus described in IEC 60068-2-75. The relevant product standard shall specify which types of test apparatus are appropriate.	Vertical hammer	P

6.5	**Table: impact test**				P
Test model	location	Impact number of times	Impact energy (J)	Comments	
LY-W 2428161767	Front surface	5	20	No crack, no hazards	
	Side surface	5	20	No crack, no hazards	
LY-C 2428502567	Front surface	5	20	No crack, no hazards	
	Side surface	5	20	No crack, no hazards	
LY-C 2428061267	Front surface	5	20	No crack, no hazards	
	Side surface	5	20	No crack, no hazards	
LY-C 2428101067	Front surface	5	20	No crack, no hazards	
	Side surface	5	20	No crack, no hazards	

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen /** *Measuring results - Remarks*	**Ergebnis** *Result*
	IEC TR 62696		
3	**Conditions of testing**		**P**
3.1	In general, testing is conducted in accordance with IEC 62262, having regard to the general test conditions specified by IEC 60598-1, Subclause 4.13, and the following conditions which are specific for the IK testing and rating of luminaires.		P
3.2	Impacts should not be applied through openings in the luminaire enclosure with an area less than 64 cm².		P
3.3	**Luminaires should be tested fully assembled and installed for use.**		P
	Luminaires for ceiling or wall mounting should be mounted on a rigid wooden board.		P
	Suspended luminaires should be tested as in normal use, with the minimum suspension length detailed by the manufacturer's instructions.		N/A
	Luminaires to be installed on a pole, with or without a mast arm, should be installed on a rigid portion of the pole.		N/A
	Floor mounted luminaires should be tested in a suitable rigid structure to simulate normal use.		N/A
3.4	Luminaires should not to be energised during test and no preconditioning of the luminaire sample is required.		P
3.5	Testing should be conducted on a single luminaire sample unless the results of impact testing of other areas of the luminaire could influence assessment of the result. Three impact blows should be applied to the point(s) of the luminaire considered to be the weakest.		P
3.6	Impact testing should be conducted using striking elements with head radius and material type as specified by IEC 60068-2-75. Spring hammer apparatus should be used for ratings up to and including IK06. For ratings IK07 and above, the use of pendulum or vertical hammer apparatus is acceptable, as most appropriate for the luminaire design and its intended installation.	IK10, vertical hammer	P
3.7	Impact testing should be conducted with the luminaire in its intended mounting orientation whenever this is possible, and when this could affect the outcome of the test (e.g. for assessment of mounting surface fixing security). When impact testing of a ceiling-mounted luminaire is required from below the luminaire, and this is impractical, the luminaire may be rotated 90º (to a wall mounted position) for the purposes of this testing.	Simulate ceiling mounted position, the back surface was no need to perform the IK test.	P
3.8	In cases where it may be impossible to carry out the impact test due to the luminaire construction, it is acceptable to use a specially-prepared luminaire to perform the test. For this situation, the modification should not impair the mechanical strength characteristics of the luminaire.		N/A
4	**Conditions of acceptance**		P

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen /** *Measuring results - Remarks*	**Ergebnis** *Result*
	IEC TR 62696		
4.1	Safety of the luminaire is to be maintained as per the criteria given in IEC 60598-1, Subclause 4.13. Furthermore, the fixings of the luminaire to the mounting surface should remain secure. Non safety critical damage to the luminaire enclosure and optics is accepted, but no parts of the luminaire should become detached.		P
4.2	Protection of the light source should be provided and basic functioning of the luminaire should be maintained.		P

General product information and other remarks:

Product: LED NEON LIGHT.
Ratings: 24VDC, IK10 for models LY-W2428161767, LY-C2428502567, LY-C2428061267, LY-C2428101067.
Suitable for direct mounting on normally flammable surfaces, non-replaceable light sources.

1.Test model and series models are design with similar construction, except dimension, input voltage, appearance and LED use.

Model LY-XXXXXWWHHXX:

LY	-	X	XX	XX	WW	HH	XX
I		II	III	IV	V	VI	VII

I: "LY" represents company series number.
II: "X" represent LED color, may be replace by "A" means 2100K, "E" means2400K, "W" means 2700K, "S" means 3000K, "F" means 3500K, "C" means 4000K, "N" means 5000K, "D" means 6000K, "SK" means 10000K, "R" means Red, "G" means Green, "B" means Blue, "P" means Pink, "Y" means Yellow, "O" means Orange, "V" means Violet, "T" means Color Turnable, "RGB" means integrate of Red, Green and Blue, "RGBW" means integrate of Red, Green, Blue and Warm Write, "RGBD" means integrate of Red, Green, Blue and Daylight, "RGBT" means integrate of Red, Green, Blue and Color Turnable.
III: "XX" represents input voltage, "05" represents input voltage 5Vdc, "11" represents input voltage 110Vac, "12" represents input voltage 12Vdc, "23" represents input voltage 230Vac, "24" represents input voltage 24Vdc, "30" represents input voltage 30Vdc, "36" represents input voltage 36Vdc, "48" represents input voltage 48Vdc.
IV: "XX" represent LED type, may be replace by "13" means 1313, "20" means 2010, "22" means 2216, "28" means 2835, "30" means 3030, "34" means 3014, "35" means 3528, "36" means 3535, "38" means 3838, "40" means 4040, "50" means 5050, "56" means 5630, "57" means 5730, "CB" means COB.
V: "WW" represent the width of LED stripe, may be digits from 06 to 50; for example:06 mean 06mm, 50 mean 50mm.
VI: "HH" represent the height of LED stripe, may be digits from 10 to 25; for example:10 mean 10mm, 25 mean 25mm.
VII: "XX" represents waterproof method, "65" represents waterproof IP65, "67" represents waterproof IP67, "68" represents waterproof IP68.

Photo documentation

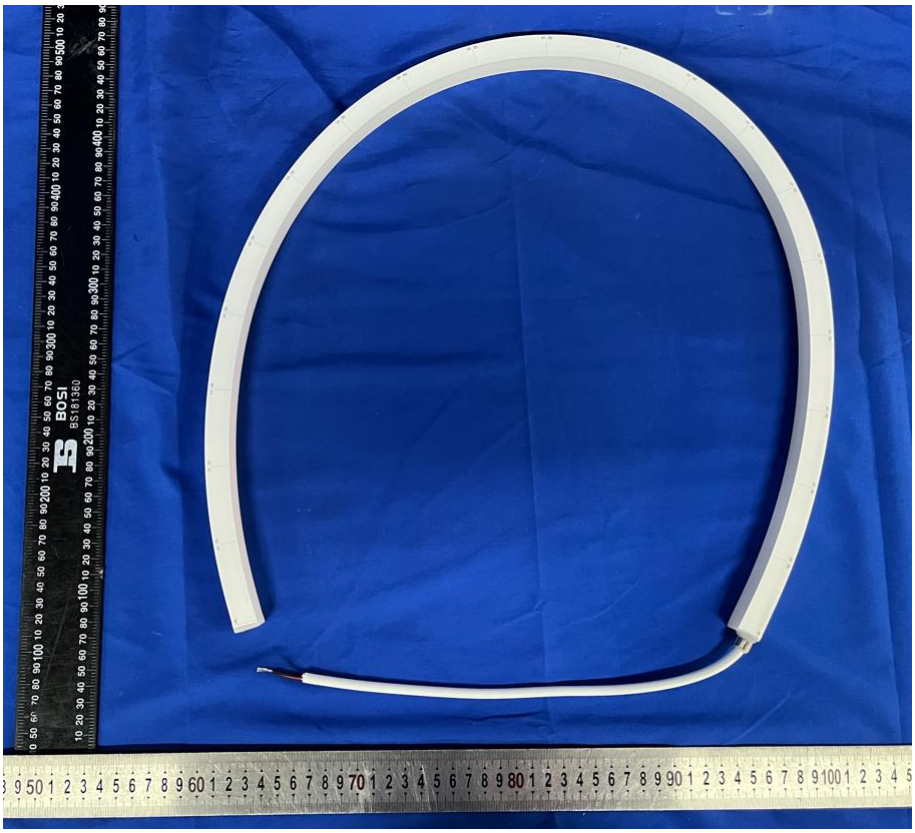


Figure 1. Overview of model LY-W2428161767

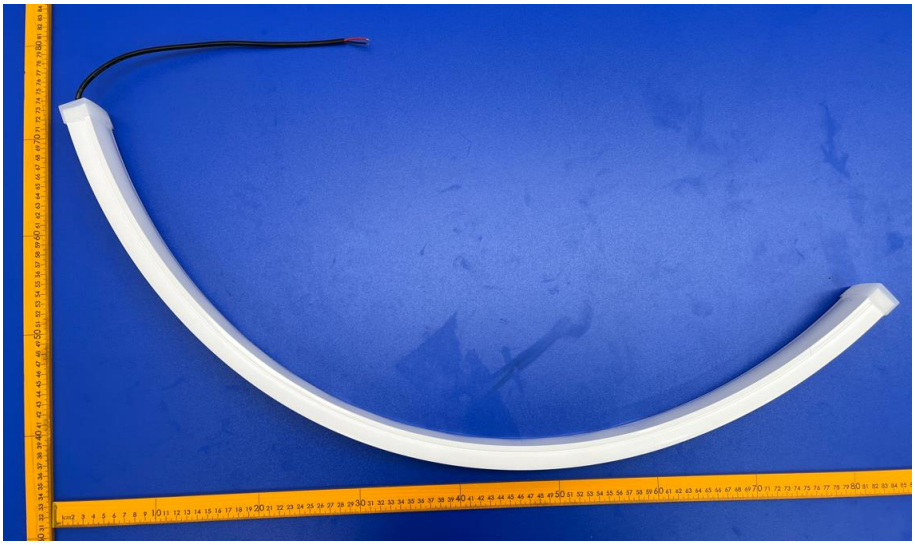


Figure 2. Overview of model LY-C2428502567

Photo documentation

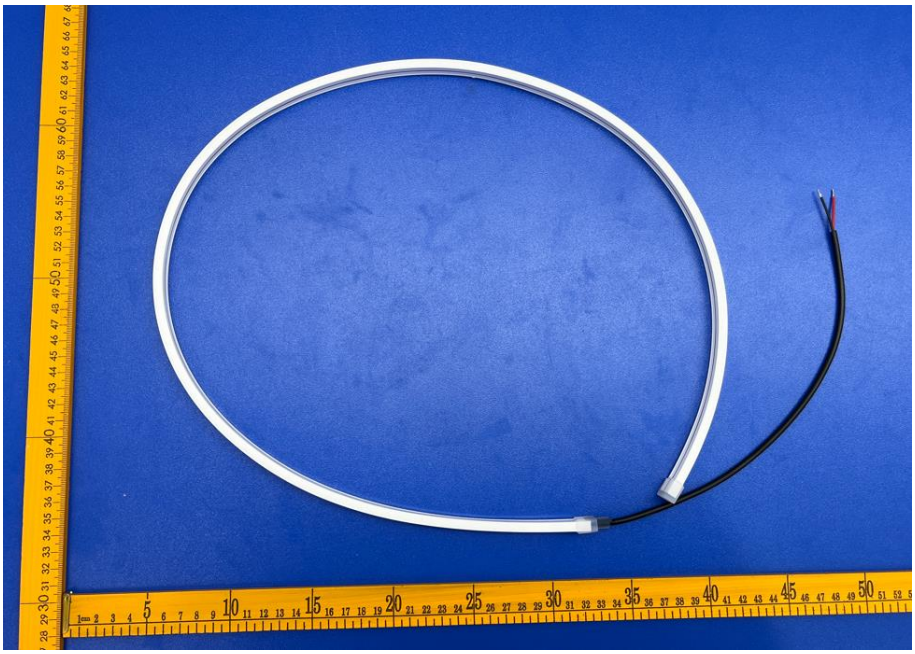


Figure 3. Overview of model LY-C2428061267

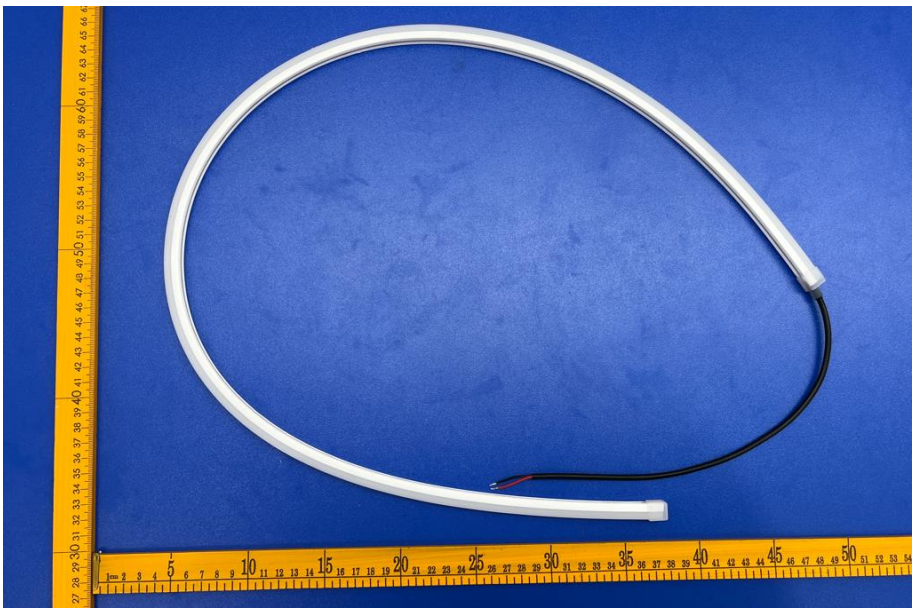


Figure 4. Overview of model LY-C2428101067