

Technical Report No.: 68.140.24.0064.01

Date: 2024-01-24

Client: Name: Tangla lighting and living limited
Address: 10F Mass Mutual Tower, 33 Lockhart Road, Wanchai, HONG KONG
Contact person: Sheila Zheng

Manufacturer: Manufacturer's name: Same as client
Address: Same as client

Factory: Factory's name: --
Address: --

Test object: Product: LED Rechargeable Lamps
Model: TL-RL-1001-3000mAh; TL-RL-1002-3000mAh;
TL-RL-1003-3000mAh; TL-RL-1004-3000mAh;
TL-RL-1006-3000mAh; TL-RL-1007-3000mAh;
TL-RL-1008-3000mAh; TL-RL-1009-3000mAh;
TL-RL-1010-3000mAh; TL-RL-1011-3000mAh;
TL-RL-1012-3000mAh; TL-RL-1013-3000mAh;
TL-RL-1014-3000mAh; TL-RL-1015-3000mAh;
TL-RL-1016-3000mAh; TL-RL-1017-3000mAh;
TL-RL-1018-3000mAh; TL-RL-1019-3000mAh;
TL-RL-1020-3000mAh; TL-RL-1021-3000mAh;
TL-RL-1022-3000mAh;
TL-RL-1001-2000mAh; TL-RL-1002-2000mAh;
TL-RL-1003-2000mAh; TL-RL-1004-2000mAh;
TL-RL-1006-2000mAh; TL-RL-1007-2000mAh;
TL-RL-1008-2000mAh; TL-RL-1009-2000mAh;
TL-RL-1010-2000mAh; TL-RL-1011-2000mAh;
TL-RL-1012-2000mAh; TL-RL-1013-2000mAh;
TL-RL-1014-2000mAh; TL-RL-1015-2000mAh;
TL-RL-1016-2000mAh; TL-RL-1017-2000mAh;
TL-RL-1018-2000mAh; TL-RL-1019-2000mAh;
TL-RL-1020-2000mAh; TL-RL-1021-2000mAh;
TL-RL-1022-2000mAh

Trademark: --

Test specification: · IP44 test according to clause 9.2.0 and 9.2.5 of IEC 60598-1:2020.

Purpose of examination: · Testing and evaluation (visual / partial) according to the test specification

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Rev.: 00
Date: 2024-01-24

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TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu,
Nantou, Nanshan District, Shenzhen, Guangdong 518052, China
Telephone: +86 755 8828 6998
Telefax: +86 755 8828 5299

Test result: The test results show that the presented products are in compliance with the above listed test specifications.

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1. Description of the test object

1.1 Picture(s)

See 'Appendix 1'

1.2 Function

Manufacturer's specification for intended use:
Portable luminaires for indoor and outdoor use.

1.3 Consideration of the foreseeable use

- ☐ Not applicable
- ☒ Covered through the applied standard
- ☐ Covered by the following comment*
- ☐ Covered by attached risk analysis

*

1.4 Technical Data

Portable general purpose luminaires
(LED Rechargeable Lamps)

Rated Voltage	: 5VDC
Battery	: Li-ion battery, 3.7V, 2*1500mAh [for models with suffix '3000mAh']; Li-ion battery, 3.7V, 2000mAh [for models with suffix '2000mAh']
Rated Power	: 1.5W
Protection Class	: III
Degree of Protection	: IP44

Data communication ports: ☐ N/A

Wired ports.....: ☐ N/A ☒ USB ☐ LAN ☐ DALI
☐ other:

Wireless ports: ☒ N/A ☐ Wifi ☐ Bluetooth ☐ NFC ☐ 4G/LTE ☐ 5G
☐ Other:

Data Storage/ Processing: ☒N/A ☐Local ☐Cloud

2. Order

2.1 Date of Purchase Order, Customer's Reference

2023-12-19

2.2 Test Sample(s)

- Reception date(s): 2023-12-19
- Location(s) of reception: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China
- Condition of test sample(s): Good

2.3 Testing

- Testing date(s): 2023-12-19- to 2024-01-24
- Location(s) of testing: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu, Nantou, Nanshan District, Shenzhen, Guangdong 518052, China

2.4 Points of Non-Compliance or Exceptions of the Test Procedure

- None

3. Test Results

“Decision rule according to IEC Guide 115:2023, clause 4.3.3 was applied.”

3.1 Positive Test Results

IP4X test (clause 9.2.0 of IEC 60598-1)

Test condition:

- a) The luminaire was tested at every possible point with a probe in accordance with test probe D of IEC 61032, applied with a force which was $1\text{N} \pm 10\%$.
- b) The end of probe wire (diameter: $1\text{mm} (+0.05/-0\text{mm})$) was cut at right angles to its length and be free from burrs.

Test evaluation:

During test, the test probe didn't entry into enclosure of luminaire.

Test Result: Pass

IPX4 test (Clause 9.2.5 of IEC 60598-1)

Test condition

a) Test method:

- Normal mounting position according to the manufacturer's mounting instruction and overturned position were tested.
- The luminaire was switched on and brought to a stable operating temperature at rated voltage.
- The luminaire was sprayed from every direction with water for 10 min switched on, after this 10 min period, the luminaire was switched off and cooled naturally whilst the water spray was continued for a further 10 min.
- The tube was caused to oscillate through an angle of almost 360° , 180° on either side of the vertical, the time for one complete oscillation ($2 \times 360^\circ$) was about 12s, the luminaire was turned about its vertical axis during the test at a rate of 1 r/min.

b) Test apparatus:

- Spray apparatus was shown in Figure 7 of IEC 60598-1;
- The radius of the semicircular tube was as small as possible and compatible with the size and position of the luminaire;
- The tube was perforated so that jets of water are directed towards the centre of the circle and the water pressure at the inlet of the apparatus was approximately 80kN/m^2 .

Test evaluation:

After test, there was no trace of water inside luminaire and it passed the electric strength test.

Test Result: Pass

3.2 Points of Non-Compliance according to the test specification

- None

4. Test History

- None

5. Remarks

- None

6. Documentation

6.1 Appendix 1: Photo documentation

6.2 Model list:

Model no.		Size	Photo
TL-RL-1001-3000mAh	TL-RL-1001-2000mAh	Æ128*H280	 ABS + metal base
TL-RL-1002-3000mAh	TL-RL-1002-2000mAh	Æ128*H500	
TL-RL-1003-3000mAh	TL-RL-1003-2000mAh	Æ128*H366	 ABS + metal base
TL-RL-1004-3000mAh	TL-RL-1004-2000mAh	Æ130*H298	 ABS + metal base
TL-RL-1006-3000mAh	TL-RL-1006-2000mAh	Æ129*H266	 ABS + metal base

TL-RL-1007-3000mAh	TL-RL-1007-2000mAh	Æ128*H285	 ABS + metal base
TL-RL-1008-3000mAh	TL-RL-1008-2000mAh	Æ128*H285	 ABS + Cork base
TL-RL-1009-3000mAh	TL-RL-1009-2000mAh	Æ250*H215	 ABS + Bamboo shade
TL-RL-1010-3000mAh	TL-RL-1010-2000mAh	Æ360*H330	
TL-RL-1011-3000mAh	TL-RL-1011-2000mAh	Æ460*H375	
TL-RL-1012-3000mAh	TL-RL-1012-2000mAh	Æ152*H198	 ABS + Glass shade
TL-RL-1013-3000mAh	TL-RL-1013-2000mAh	130 x130*H388	 ABS + metal base
TL-RL-1014-3000mAh	TL-RL-1014-2000mAh	130 x130*H500	
TL-RL-1015-3000mAh	TL-RL-1015-2000mAh	Æ180*H1400	 ABS + metal base
TL-RL-1016-3000mAh	TL-RL-1016-2000mAh	148*128*H125	 ABS+ metal hanging hook
TL-RL-1017-3000mAh	TL-RL-1017-2000mAh	190*128*H85	 ABS+ metal hanging pole

TL-RL-1018-3000mAh	TL-RL-1018-2000mAh	190*128*H85	 ABS + wood hanging pole
TL-RL-1019-3000mAh	TL-RL-1019-2000mAh	148*128*H192	 ABS + metal support
TL-RL-1020-3000mAh	TL-RL-1020-2000mAh	150*130*H426	 ABS + metal hanging hook + metal base
TL-RL-1021-3000mAh	TL-RL-1021-2000mAh	150*130*H538	
TL-RL-1022-3000mAh	TL-RL-1022-2000mAh	Æ128*H86.5	 ABS
Remark: While use USB cord charge, it needs to charge indoor.			

Models TL-RL-1012-3000mAh and TL-RL-1014-3000mAh were chosen as representative models to perform the tests.

7. Summary

"The test specifications are met"

TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
TÜV SÜD Group

Tested by:


Elain Zhang, Project Handler

Approved by:


Sunny Yan, Designated Reviewer

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Appendix 1

Photo documentation

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Details of: Outlook for TL-RL-1001-3000mAh, TL-RL-1002-3000mAh, TL-RL-1001-2000mAh, TL-RL-1002-2000mAh
.....
Representative model TL-RL-1002-3000mAh



Details of: Outlook for TL-RL-1001-3000mAh, TL-RL-1002-3000mAh, TL-RL-1001-2000mAh, TL-RL-1002-2000mAh
.....
Representative model TL-RL-1002-3000mAh



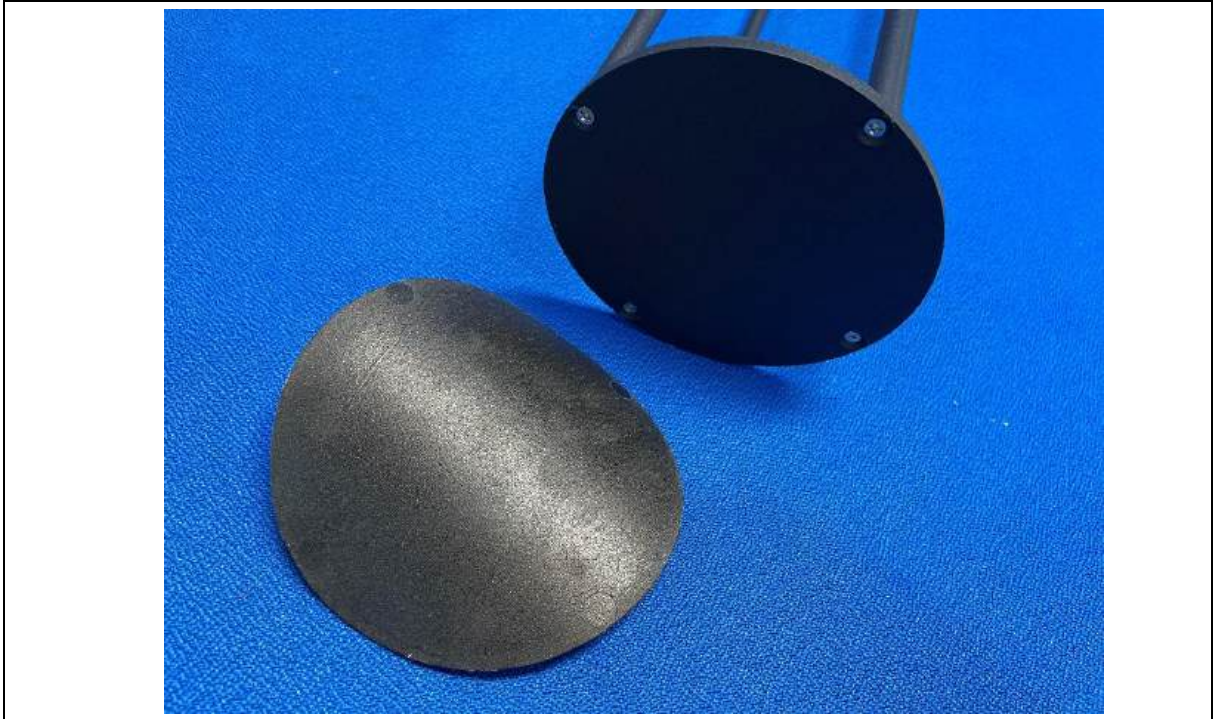
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Details of: Base view for TL-RL-1001-3000mAh, TL-RL-1002-3000mAh, TL-RL-1001-2000mAh, TL-RL-1002-2000mAh



Details of: Detail view for TL-RL-1001-3000mAh, TL-RL-1002-3000mAh, TL-RL-1001-2000mAh, TL-RL-1002-2000mAh



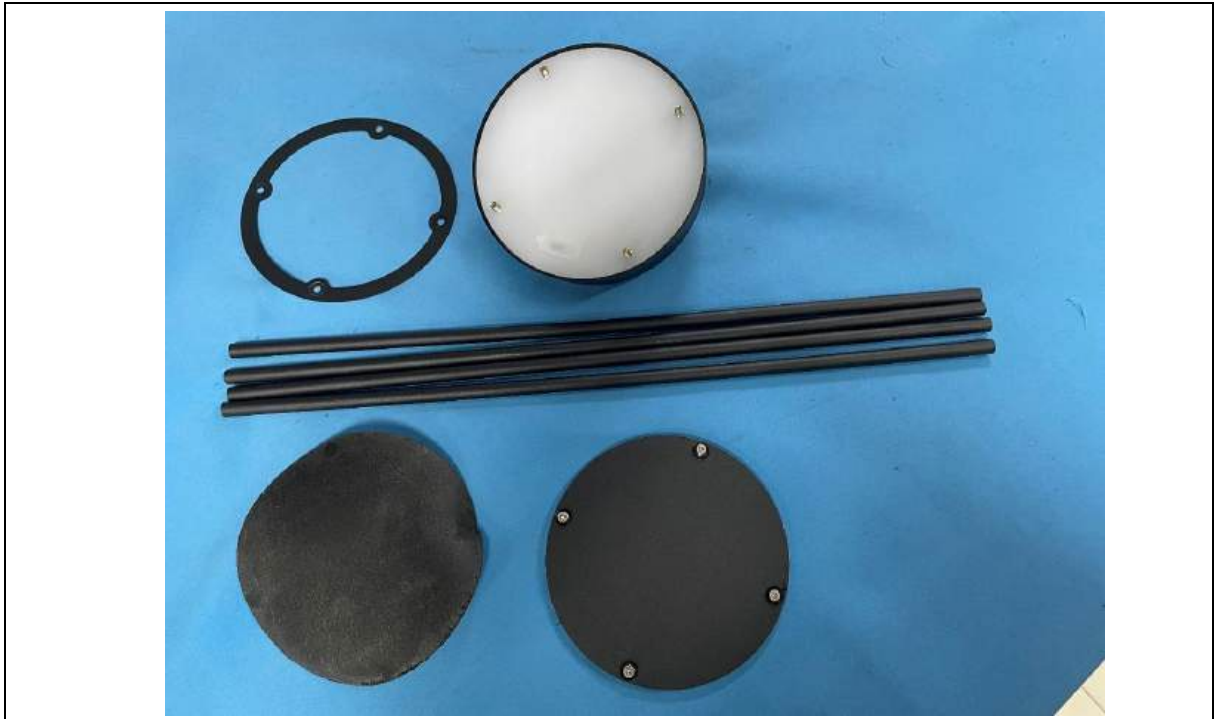
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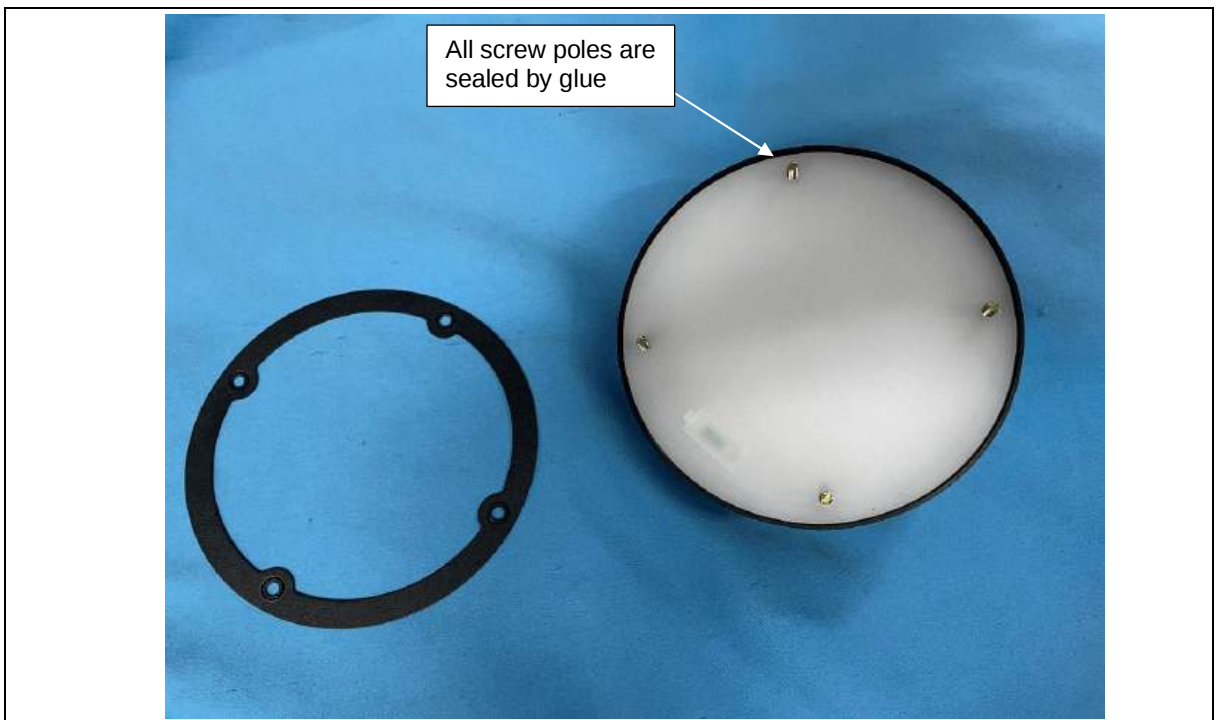
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Details of: Detail view for TL-RL-1001-3000mAh, TL-RL-1002-3000mAh, TL-RL-1001-2000mAh, TL-RL-1002-2000mAh



Details of: Detail view for TL-RL-1001-3000mAh, TL-RL-1002-3000mAh, TL-RL-1001-2000mAh, TL-RL-1002-2000mAh



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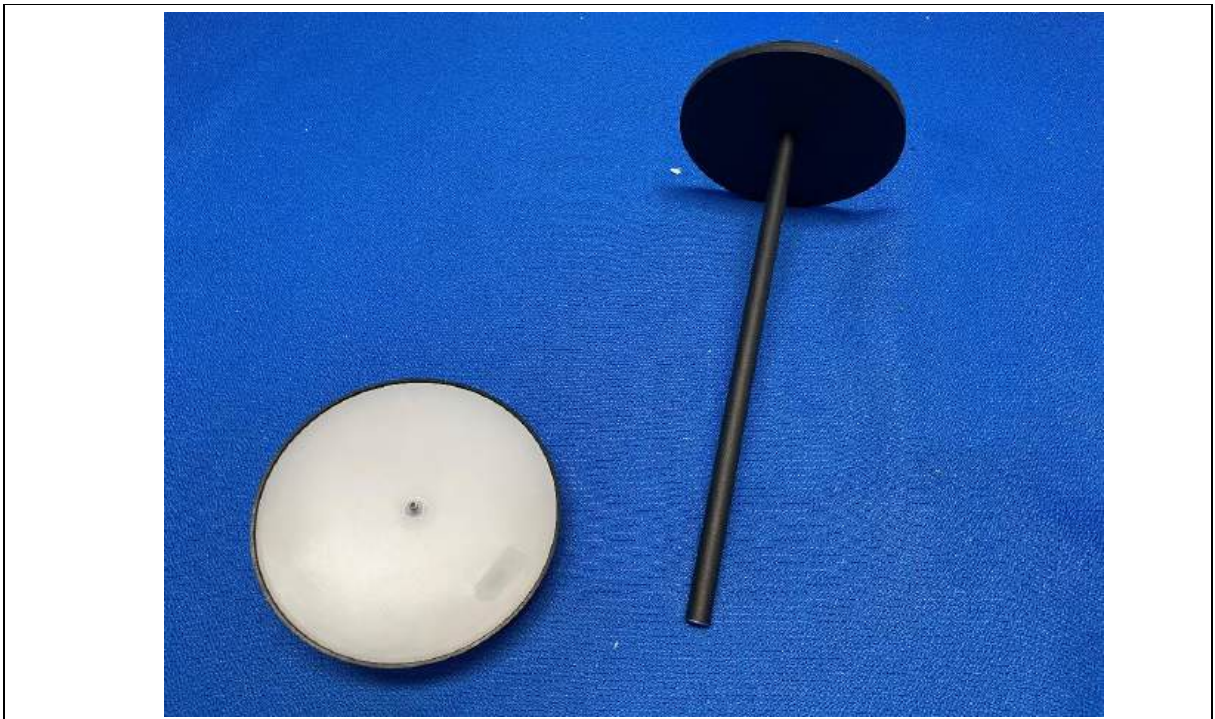
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Details of: Outlook for TL-RL-1003-3000mAh, TL-RL-1003-2000mAh



Details of: Outlook for TL-RL-1003-3000mAh, TL-RL-1003-2000mAh



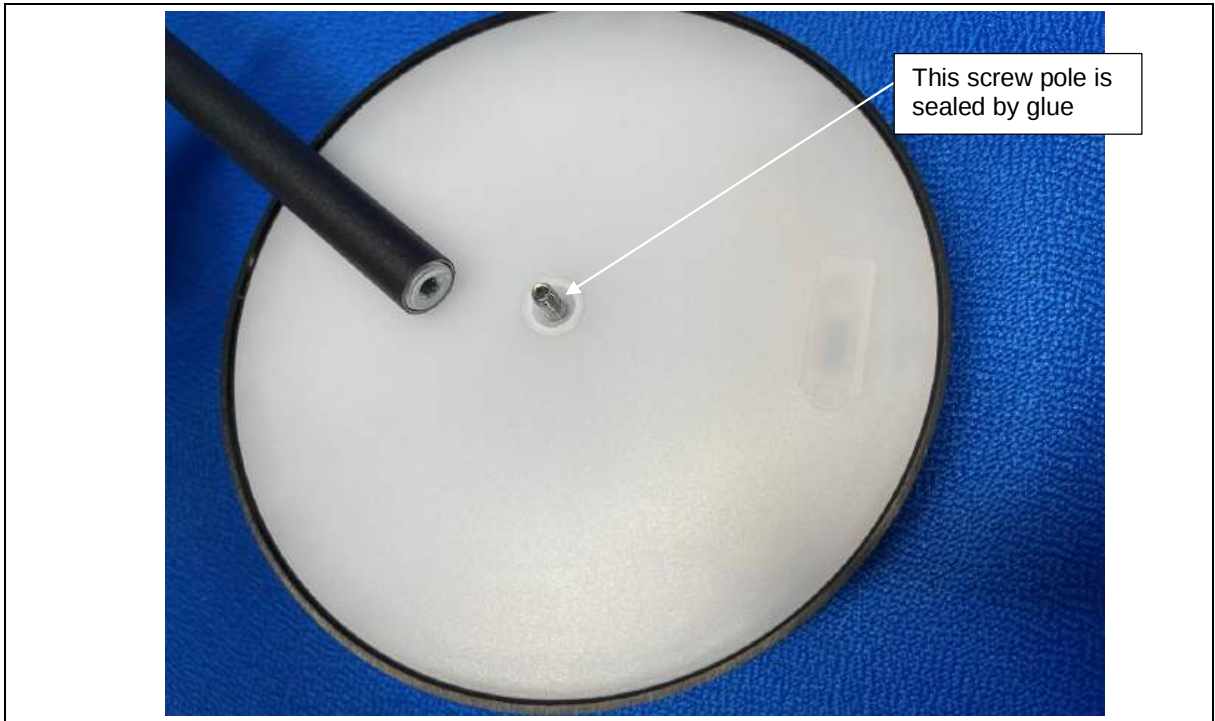
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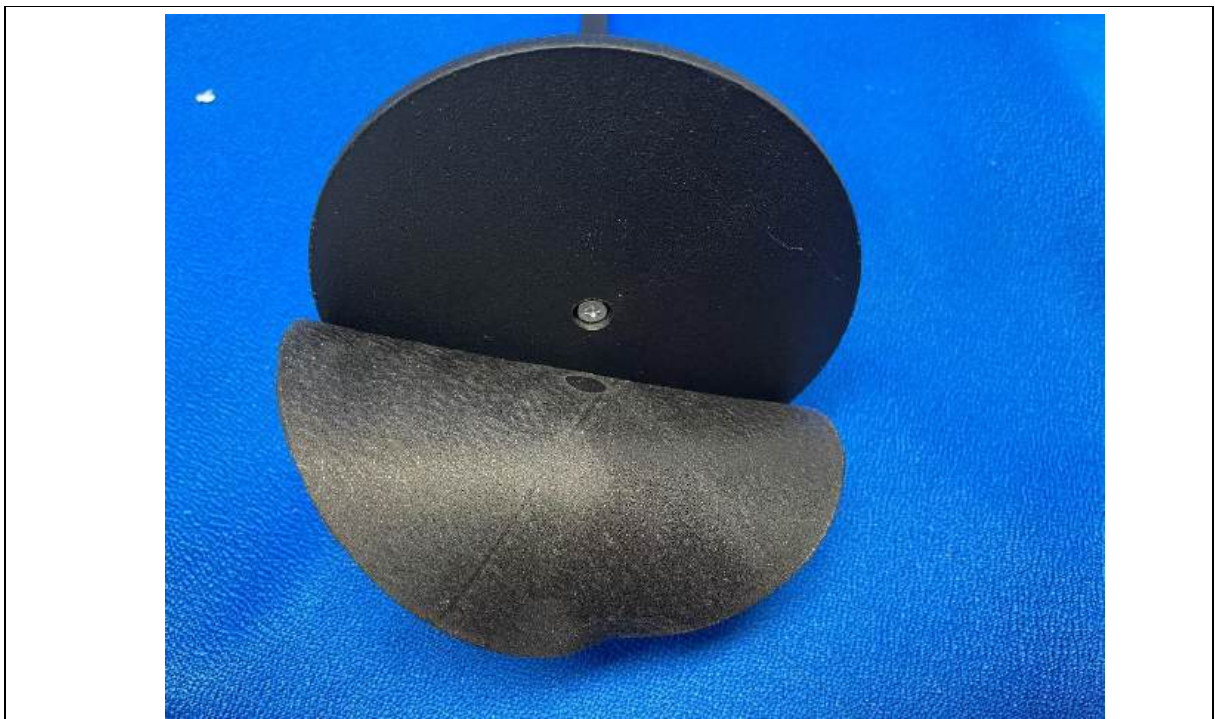
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Details of: ..Detail view for TL-RL-1003-3000mAh, TL-RL-1003-2000mAh.....



Details of: ..Base view for TL-RL-1003-3000mAh, TL-RL-1003-2000mAh.....



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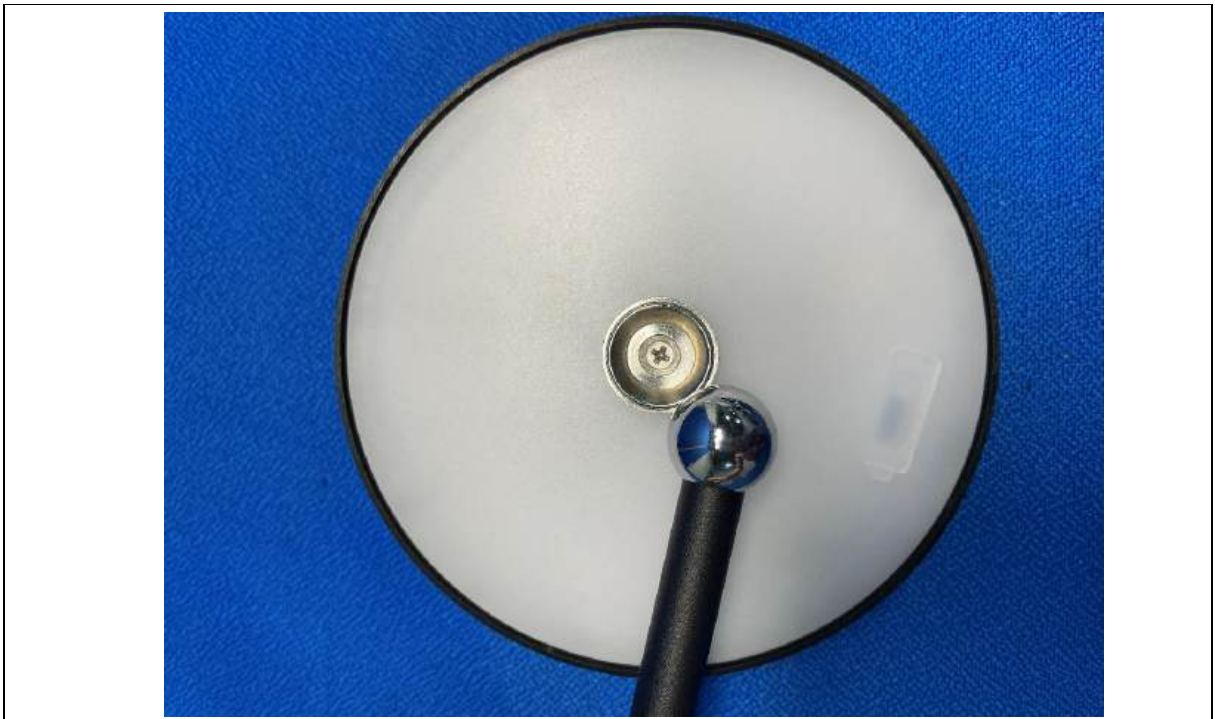
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Details of: Outlook for TL-RL-1004-3000mAh, TL-RL-1004-2000mAh



Details of: Detail view for TL-RL-1004-3000mAh, TL-RL-1004-2000mAh



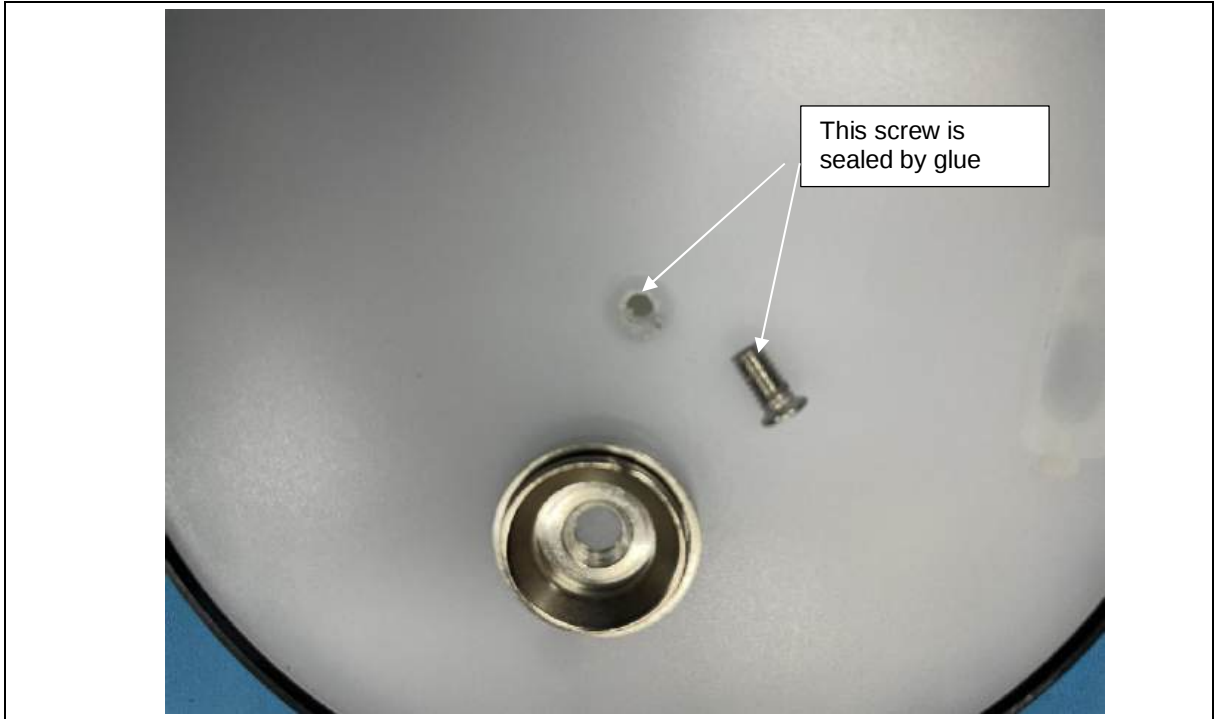
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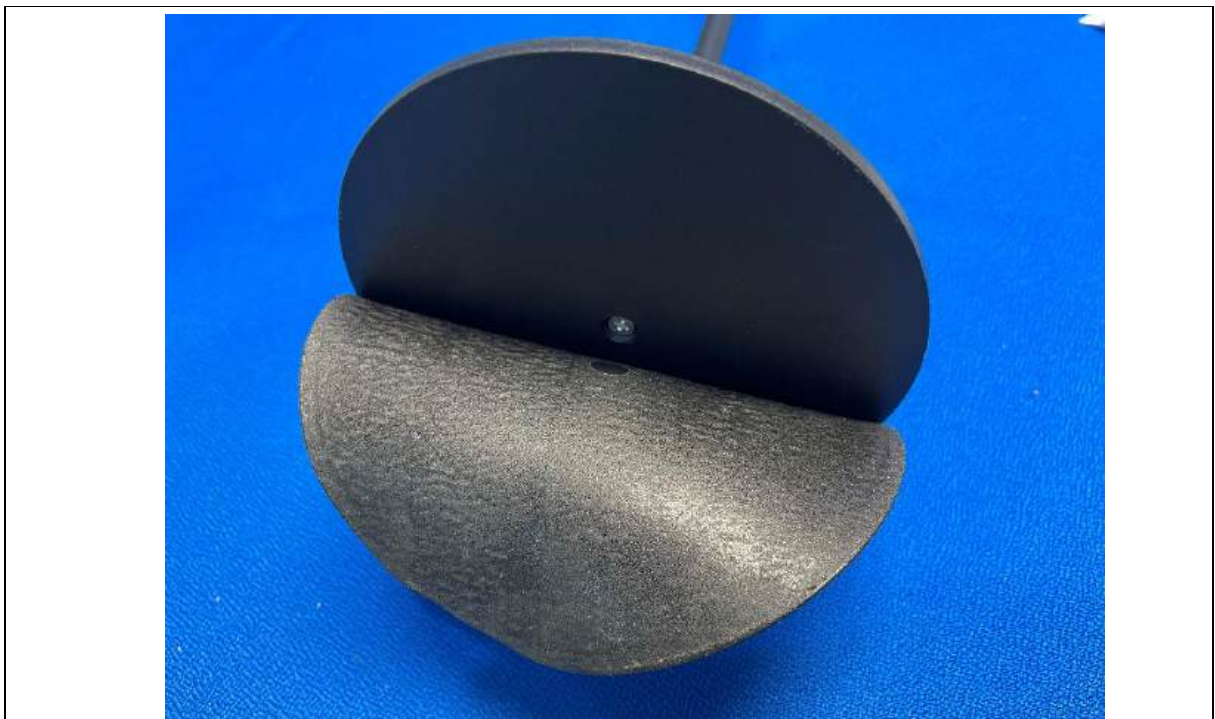
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Details of: ..Detail view for TL-RL-1004-3000mAh, TL-RL-1004-2000mAh.....



Details of: ..Base view for TL-RL-1004-3000mAh, TL-RL-1004-2000mAh.....



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Details of: Outlook for TL-RL-1006-3000mAh, TL-RL-1006-2000mAh



Details of: Detail view for TL-RL-1006-3000mAh, TL-RL-1006-2000mAh



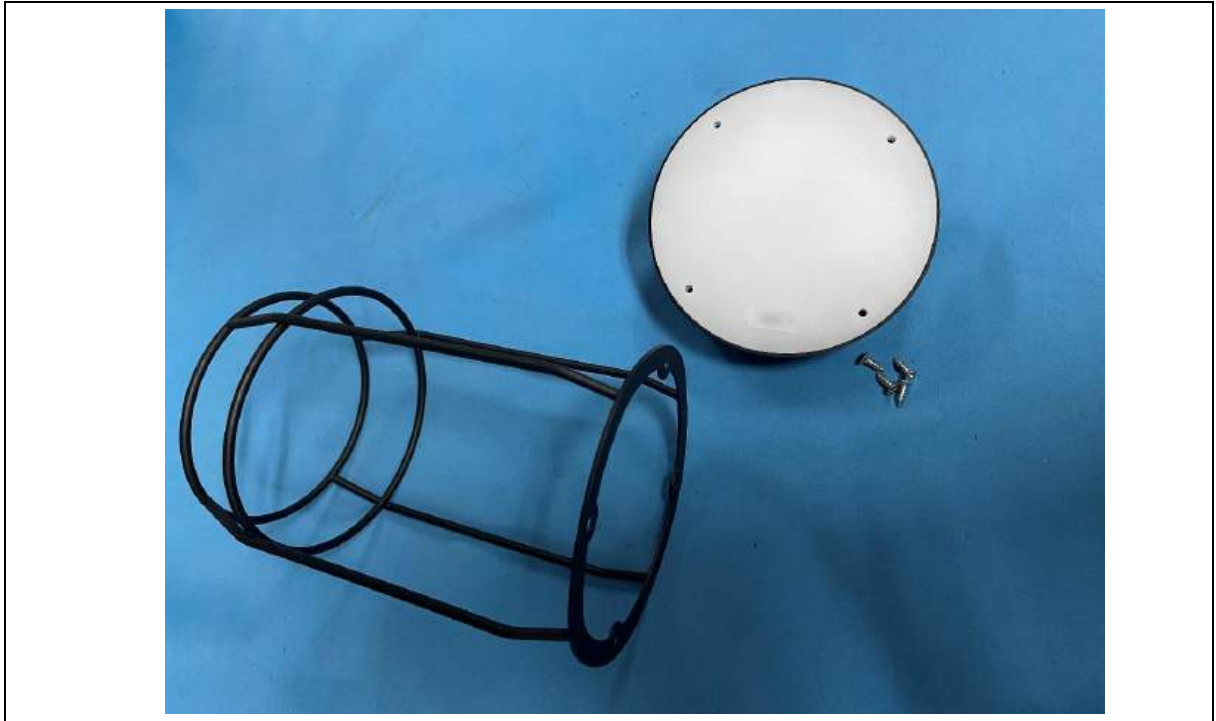
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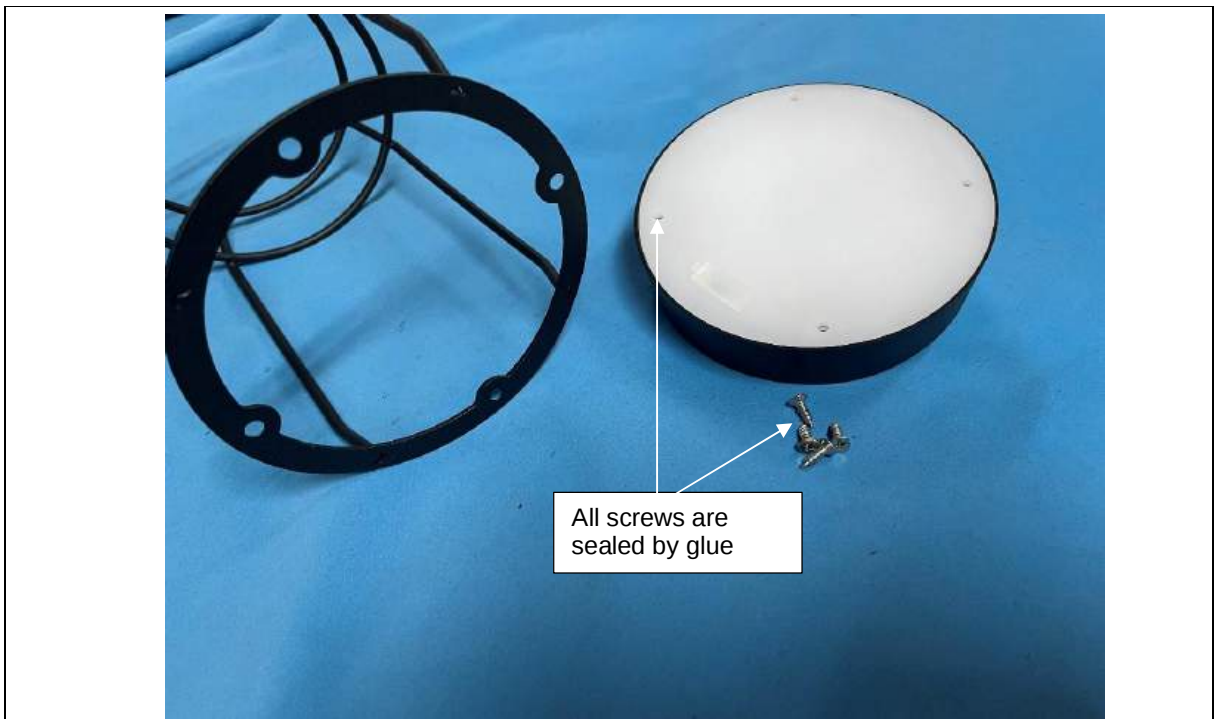
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Details of: ..Detail view for TL-RL-1006-3000mAh, TL-RL-1006-2000mAh.....



Details of: ..Detail view for TL-RL-1006-3000mAh, TL-RL-1006-2000mAh.....



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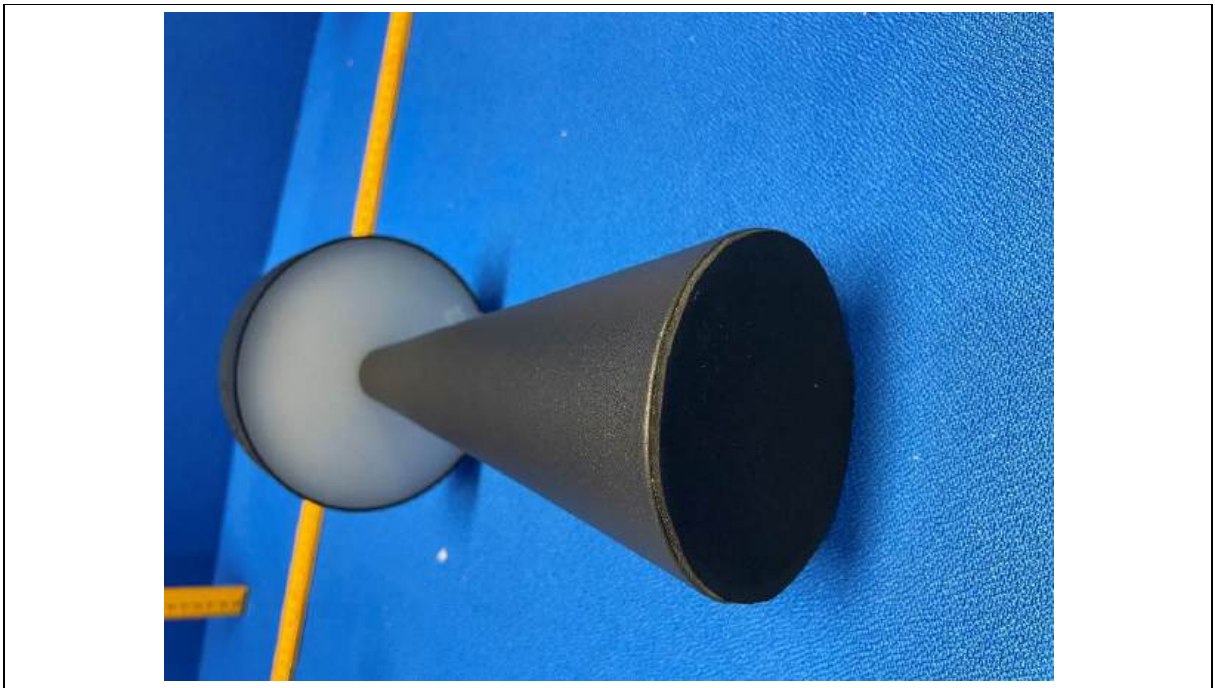
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Details of: Outlook for TL-RL-1007-3000mAh, TL-RL-1007-2000mAh



Details of: Outlook for TL-RL-1007-3000mAh, TL-RL-1007-2000mAh



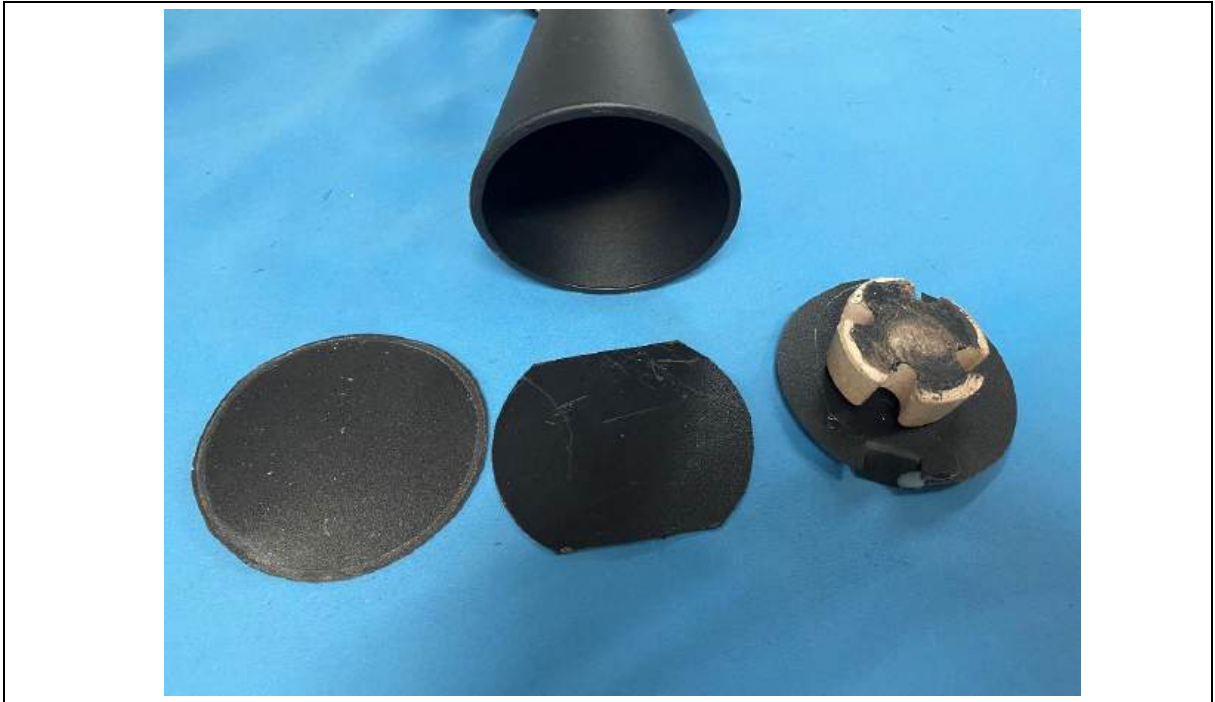
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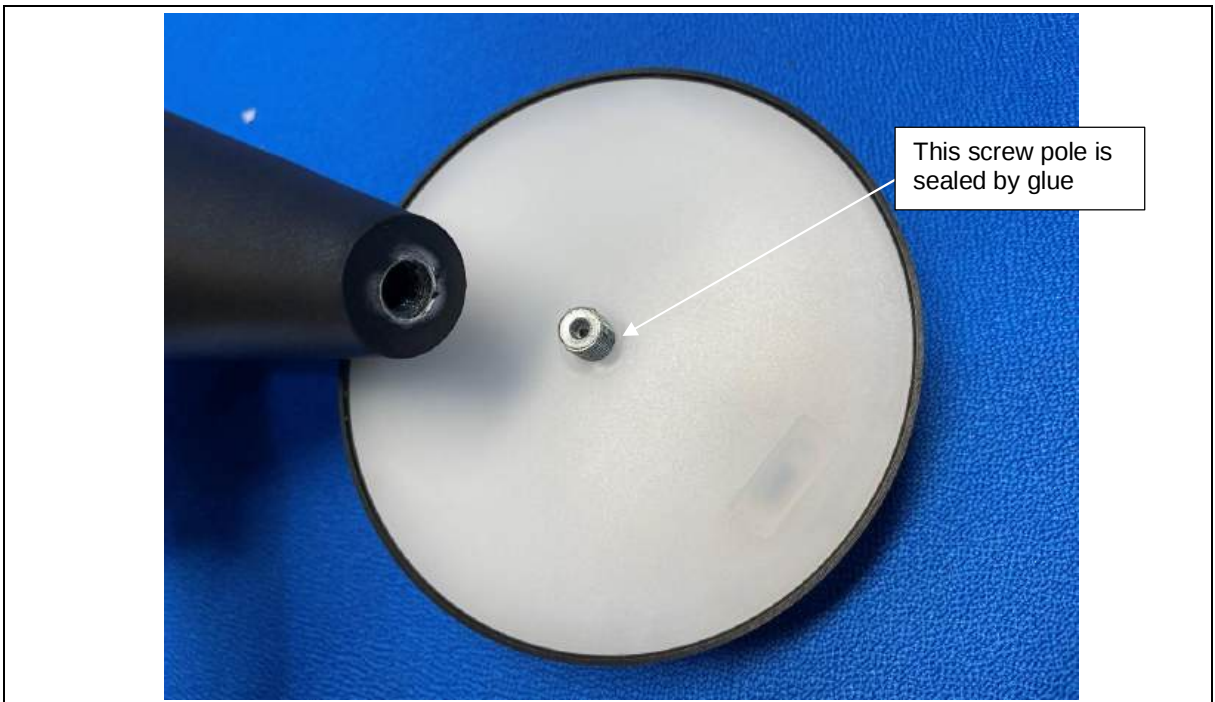
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Details of: Base view for TL-RL-1007-3000mAh, TL-RL-1007-2000mAh



Details of: Detail view for TL-RL-1007-3000mAh, TL-RL-1007-2000mAh



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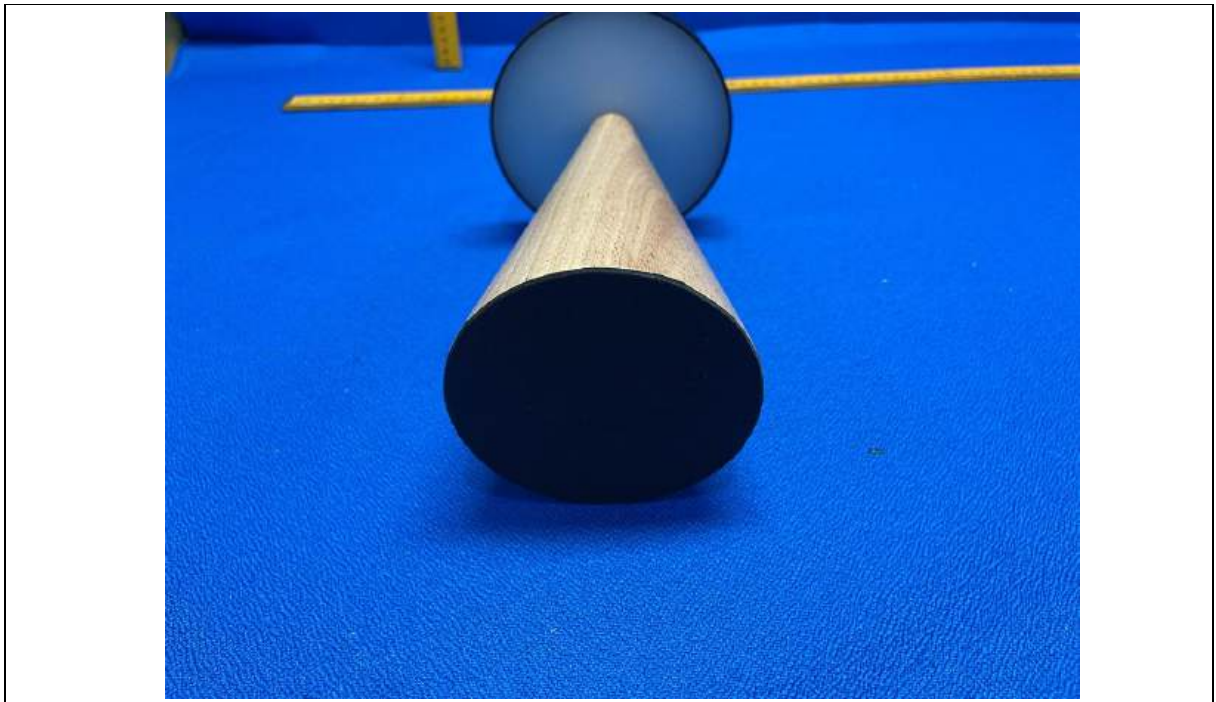
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Details of: ..Outlook for TL-RL-1008-3000mAh, TL-RL-1008-2000mAh.....



Details of: ..Outlook for TL-RL-1008-3000mAh, TL-RL-1008-2000mAh.....



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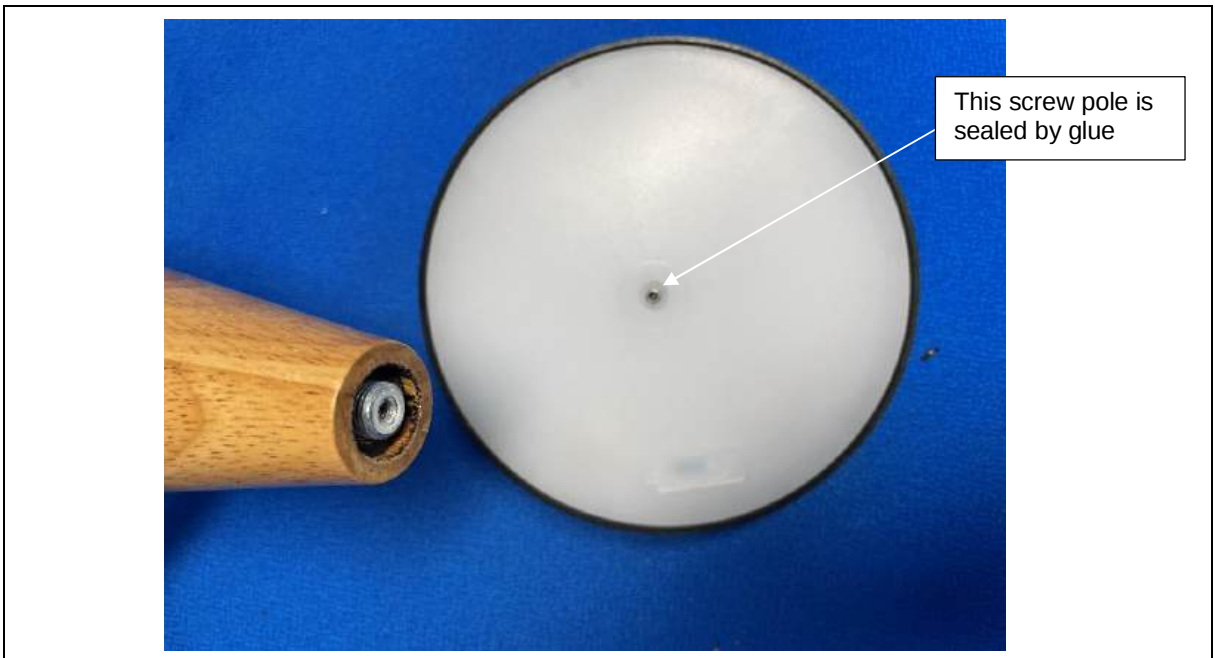
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Details of: Base view for TL-RL-1008-3000mAh, TL-RL-1008-2000mAh



Details of: Detail view for TL-RL-1008-3000mAh, TL-RL-1008-2000mAh



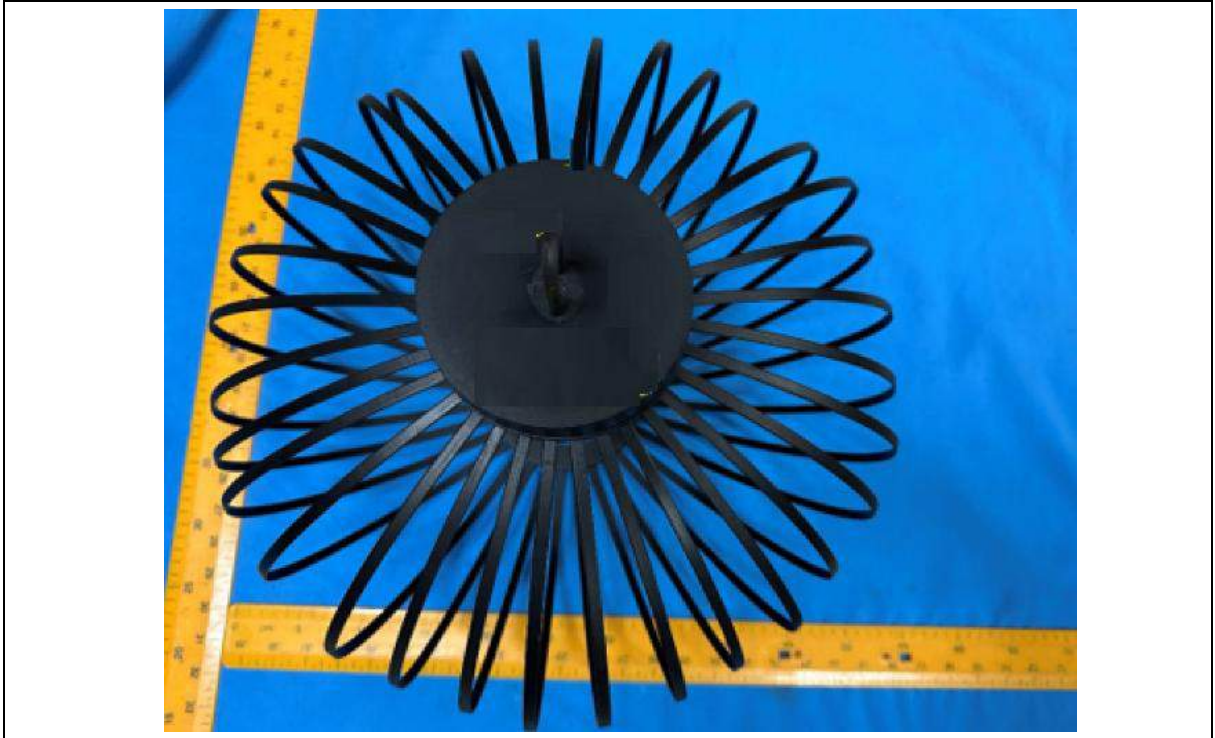
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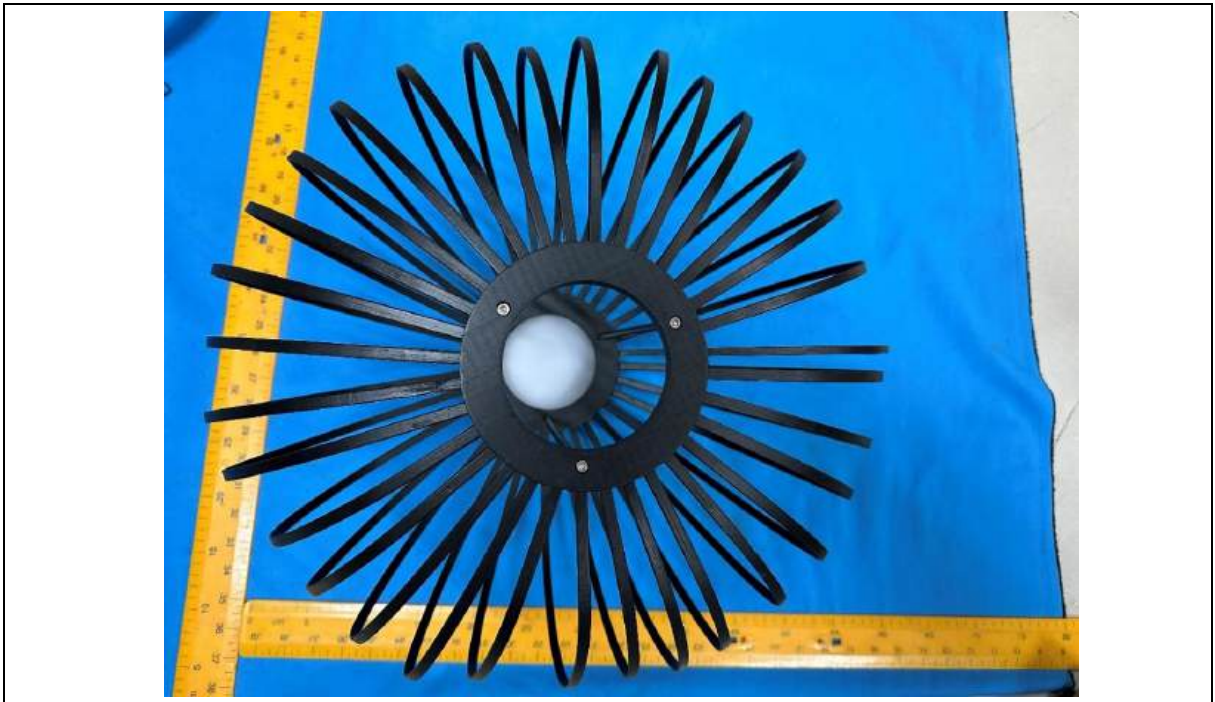
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Details of: Outlook for TL-RL-1009-3000mAh, TL-RL-1010-3000mAh, TL-RL-1011-3000mAh, TL-RL-1009-2000mAh, TL-RL-1010-2000mAh, TL-RL-1011-2000mAh



Details of: Outlook for TL-RL-1009-3000mAh, TL-RL-1010-3000mAh, TL-RL-1011-3000mAh, TL-RL-1009-2000mAh, TL-RL-1010-2000mAh, TL-RL-1011-2000mAh



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Details of: Exploded view for TL-RL-1009-3000mAh, TL-RL-1010-3000mAh, TL-RL-1011-3000mAh, TL-RL-1009-2000mAh, TL-RL-1010-2000mAh, TL-RL-1011-2000mAh.....



Details of: Detail view for TL-RL-1009-3000mAh, TL-RL-1010-3000mAh, TL-RL-1011-3000mAh, TL-RL-1009-2000mAh, TL-RL-1010-2000mAh, TL-RL-1011-2000mAh.....



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Details of: ..Outlook for TL-RL-1012-3000mAh, TL-RL-1012-2000mAh.....



Details of: ..Outlook for TL-RL-1012-3000mAh, TL-RL-1012-2000mAh.....



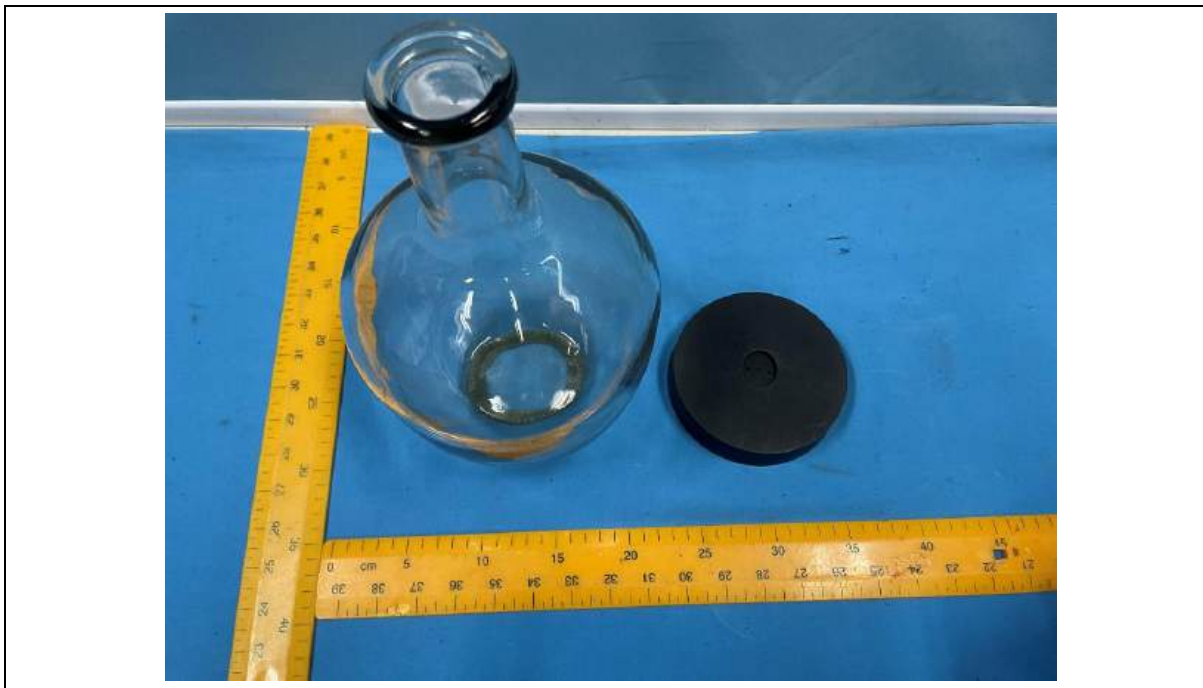
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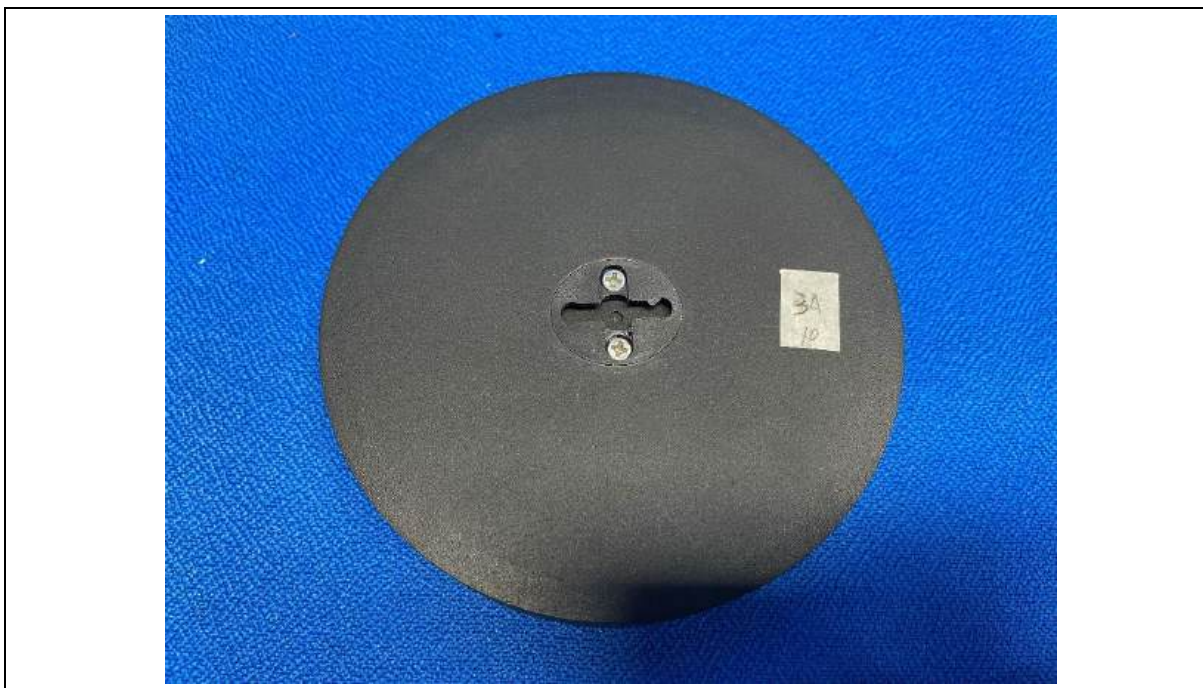
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Details of: Outlook for TL-RL-1012-3000mAh, TL-RL-1012-2000mAh



Details of: Detail view for TL-RL-1012-3000mAh, TL-RL-1012-2000mAh



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Details of: Outlook for TL-RL-1013-3000mAh, TL-RL-1014-3000mAh, TL-RL-1013-2000mAh, TL-RL-1014-2000mAh
Representative model TL-RL-1014-3000mAh



Details of: Outlook for TL-RL-1020-3000mAh, TL-RL-1021-3000mAh, TL-RL-1020-2000mAh, TL-RL-1021-2000mAh
Representative model TL-RL-1021-3000mAh



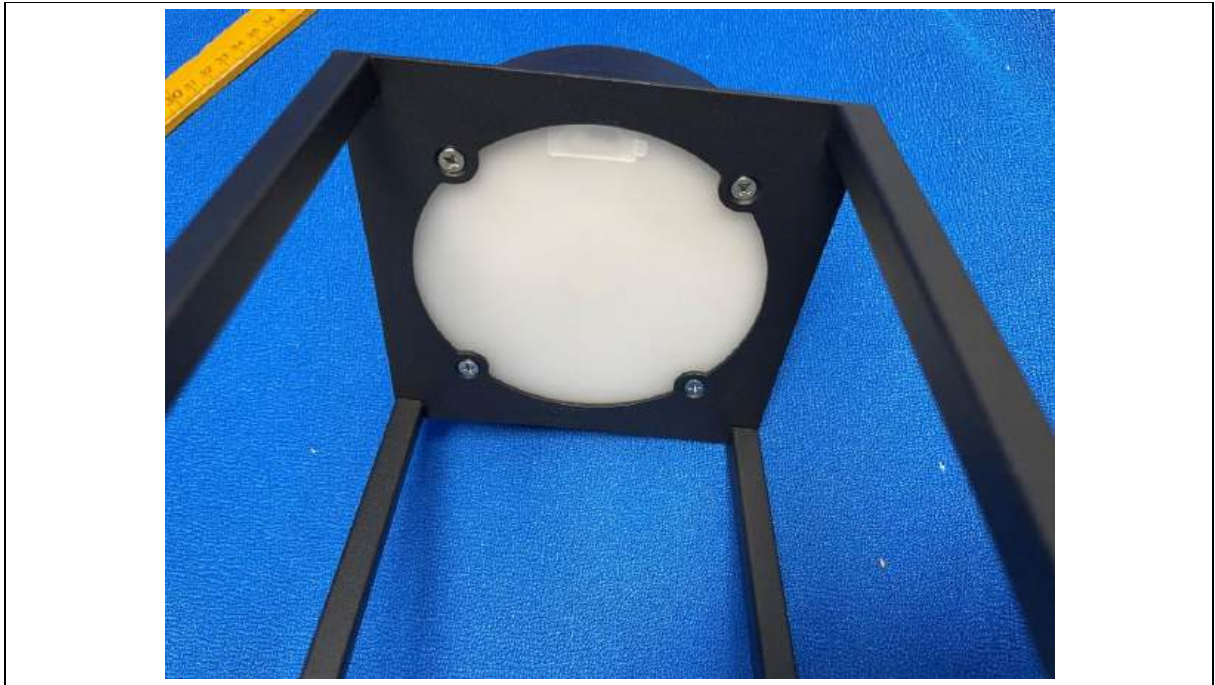
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Details of: Detail view for TL-RL-1013-3000mAh, TL-RL-1014-3000mAh, TL-RL-1020-3000mAh, TL-RL-1021-3000mAh, TL-RL-1013-2000mAh, TL-RL-1014-2000mAh, TL-RL-1020-2000mAh, TL-RL-1021-2000mAh



Details of: Detail view for TL-RL-1013-3000mAh, TL-RL-1014-3000mAh, TL-RL-1020-3000mAh, TL-RL-1021-3000mAh, TL-RL-1013-2000mAh, TL-RL-1014-2000mAh, TL-RL-1020-2000mAh, TL-RL-1021-2000mAh



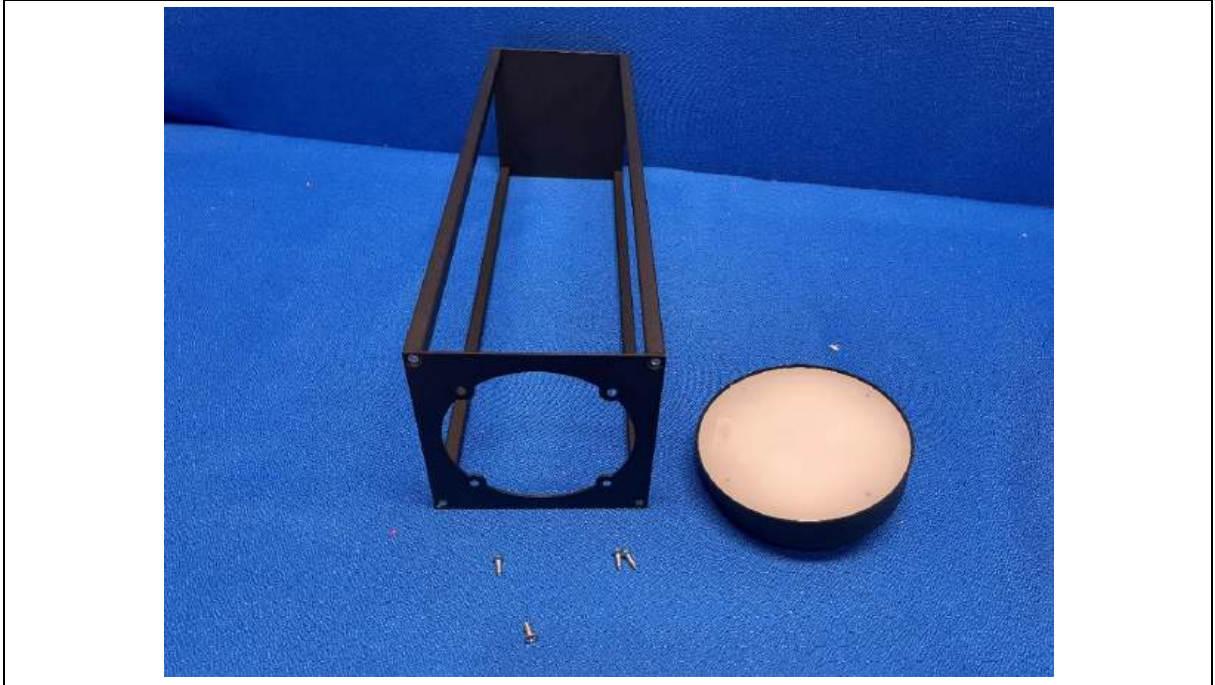
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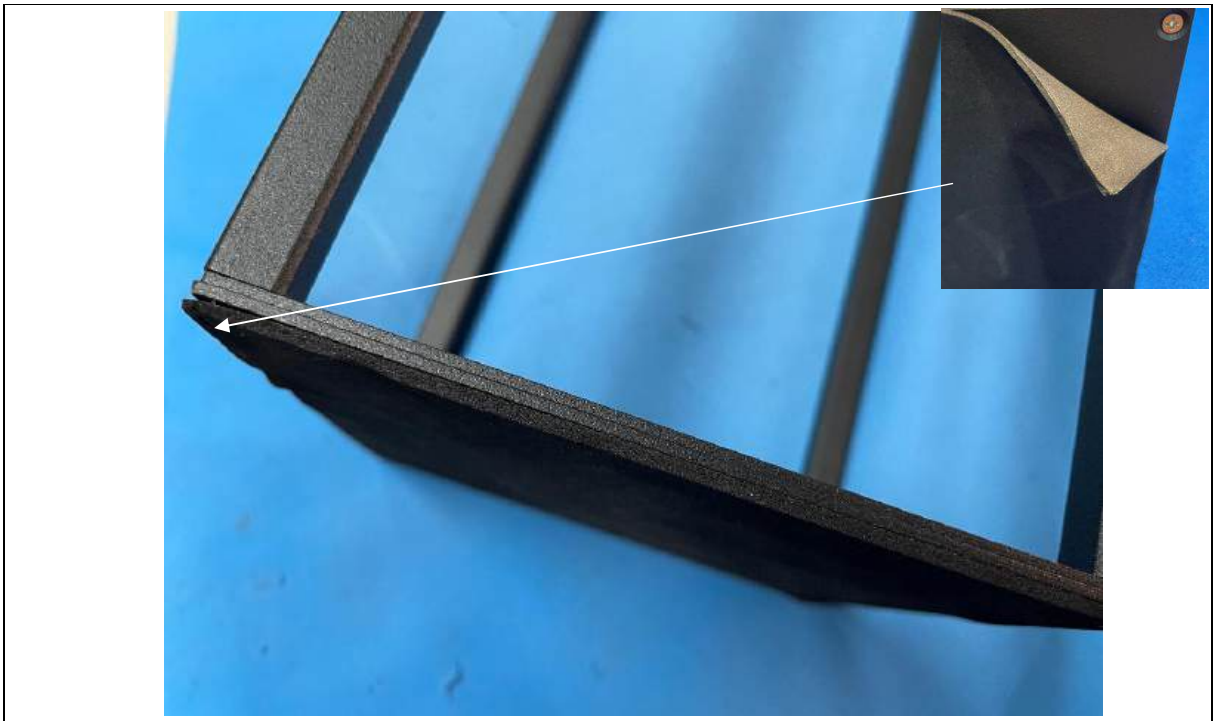
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Details of: Detail view for TL-RL-1013-3000mAh, TL-RL-1014-3000mAh, TL-RL-1020-3000mAh, TL-RL-1021-3000mAh, TL-RL-1013-2000mAh, TL-RL-1014-2000mAh, TL-RL-1020-2000mAh, TL-RL-1021-2000mAh



Details of: Detail view for TL-RL-1013-3000mAh, TL-RL-1014-3000mAh, TL-RL-1020-3000mAh, TL-RL-1021-3000mAh, TL-RL-1013-2000mAh, TL-RL-1014-2000mAh, TL-RL-1020-2000mAh, TL-RL-1021-2000mAh



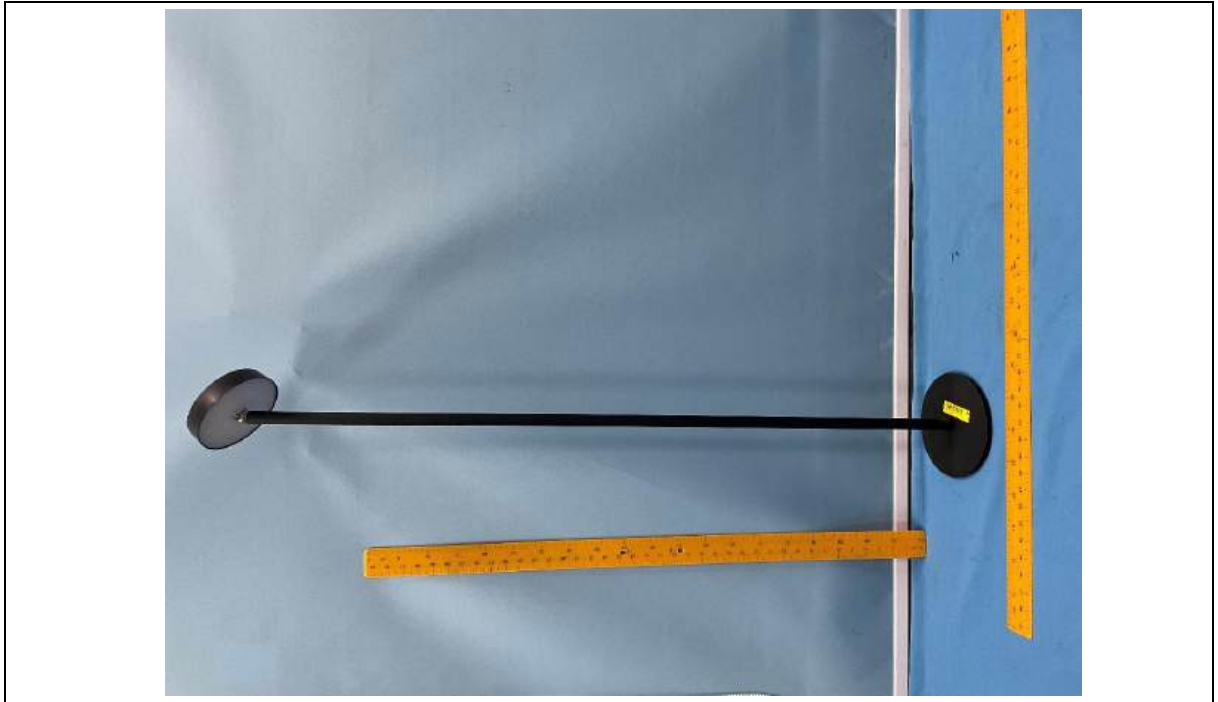
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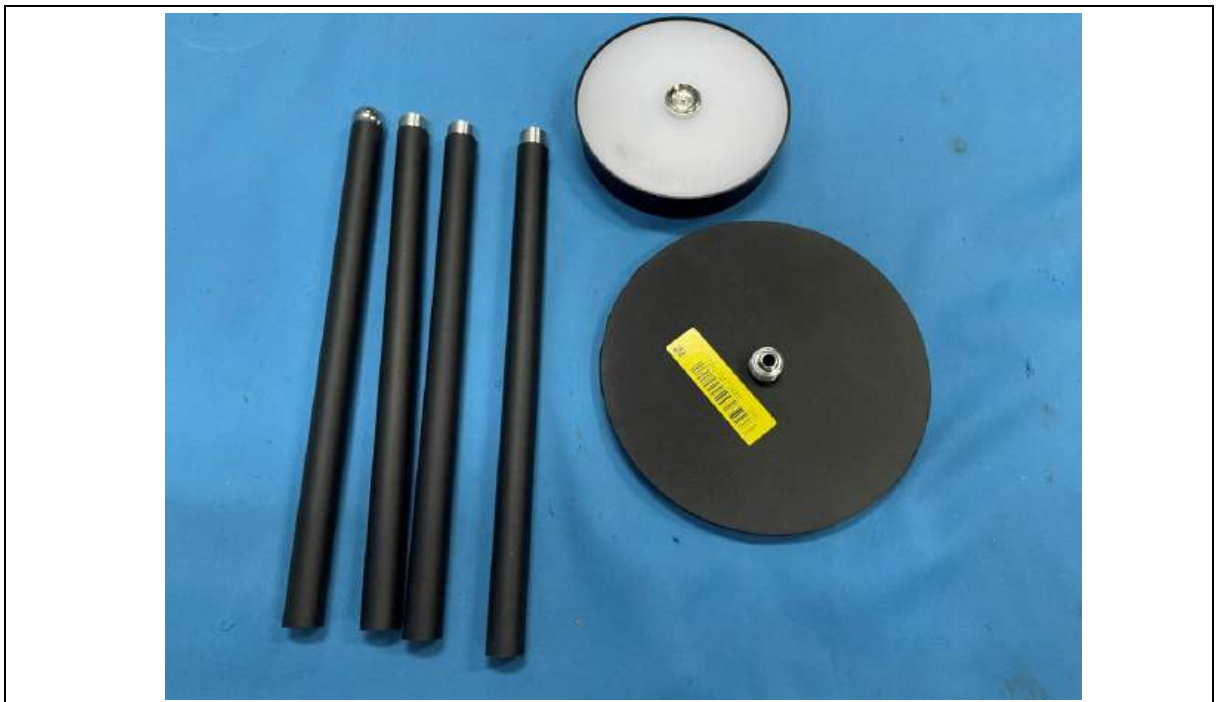
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Details of: Outlook for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh



Details of: Exploded view for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh



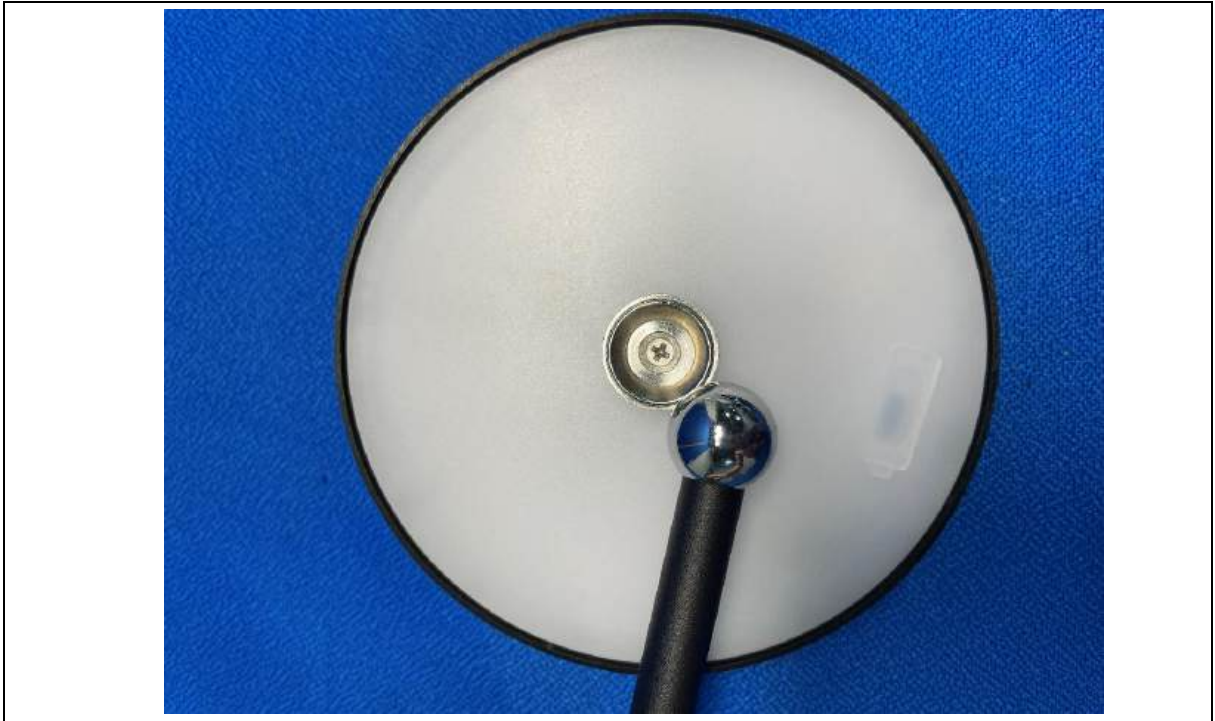
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Details of: ..Detail view for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh.....



Details of: ..Detail view for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh.....



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Details of: Detail view for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh



Details of: Base view for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh



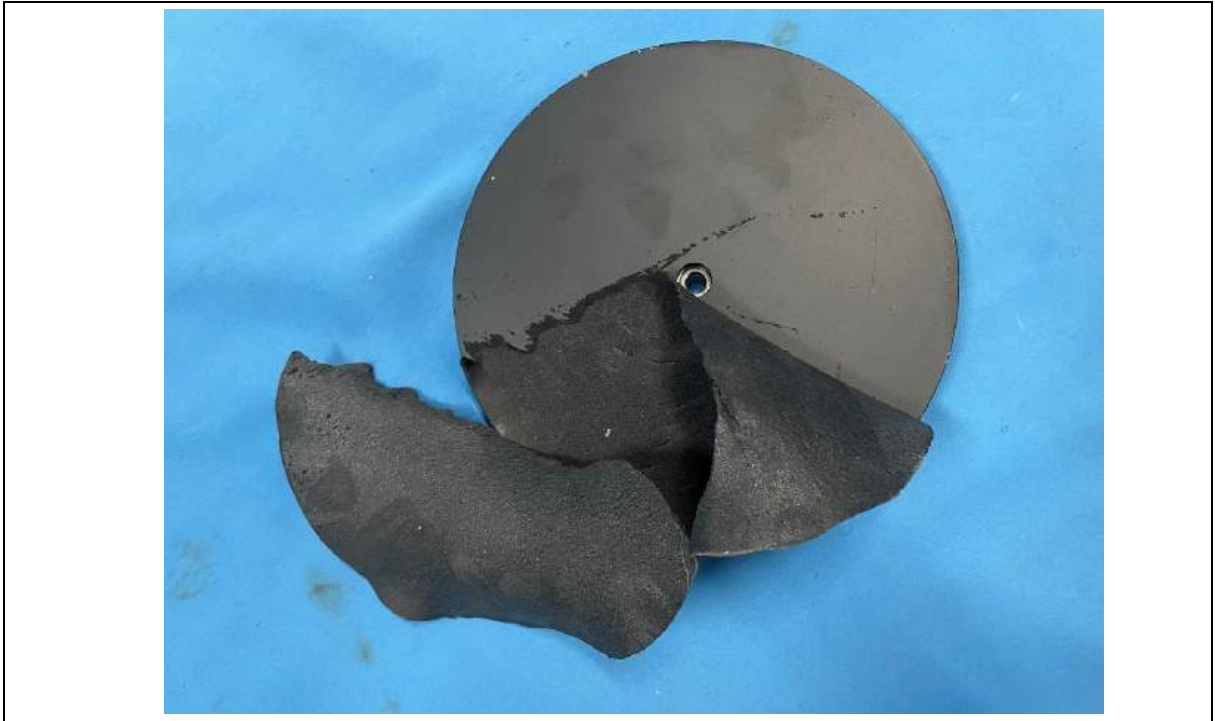
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Details of: Base view for TL-RL-1015-3000mAh, TL-RL-1015-2000mAh



Details of: Outlook for TL-RL-1016-3000mAh, TL-RL-1016-2000mAh



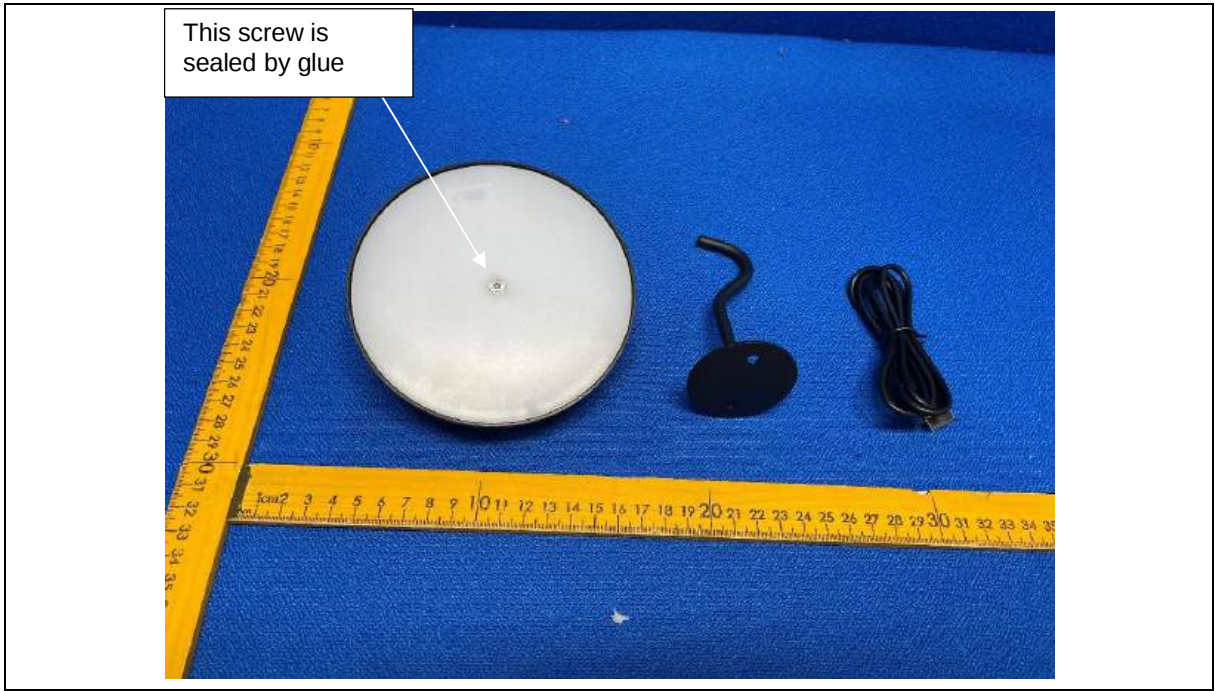
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Details of: Outlook for TL-RL-1016-3000mAh, TL-RL-1016-2000mAh



Details of: Outlook for TL-RL-1017-3000mAh, TL-RL-1017-2000mAh



Appendix 1

Photo documentation

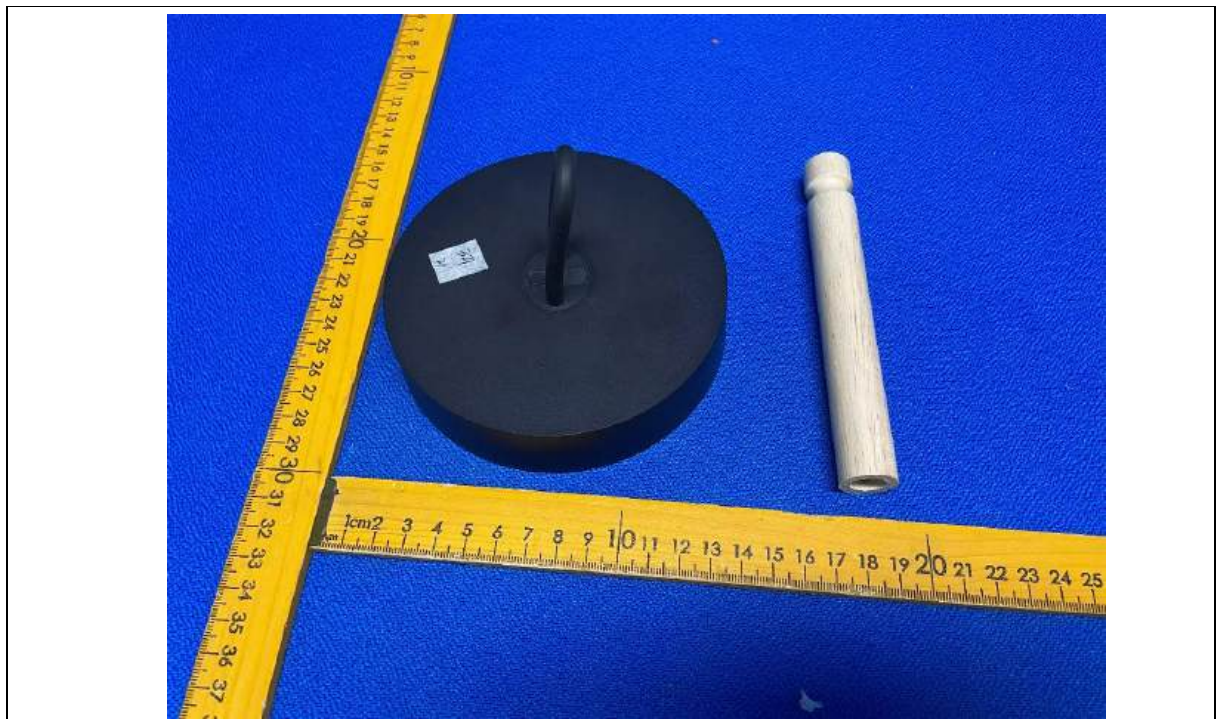
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Details of: Outlook for TL-RL-1017-3000mAh, TL-RL-1017-2000mAh



Details of: Outlook for TL-RL-1018-3000mAh, TL-RL-1018-2000mAh



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Details of: Outlook for TL-RL-1018-3000mAh, TL-RL-1018-2000mAh



Details of: Outlook for TL-RL-1019-3000mAh, TL-RL-1019-2000mAh



Appendix 1

Photo documentation

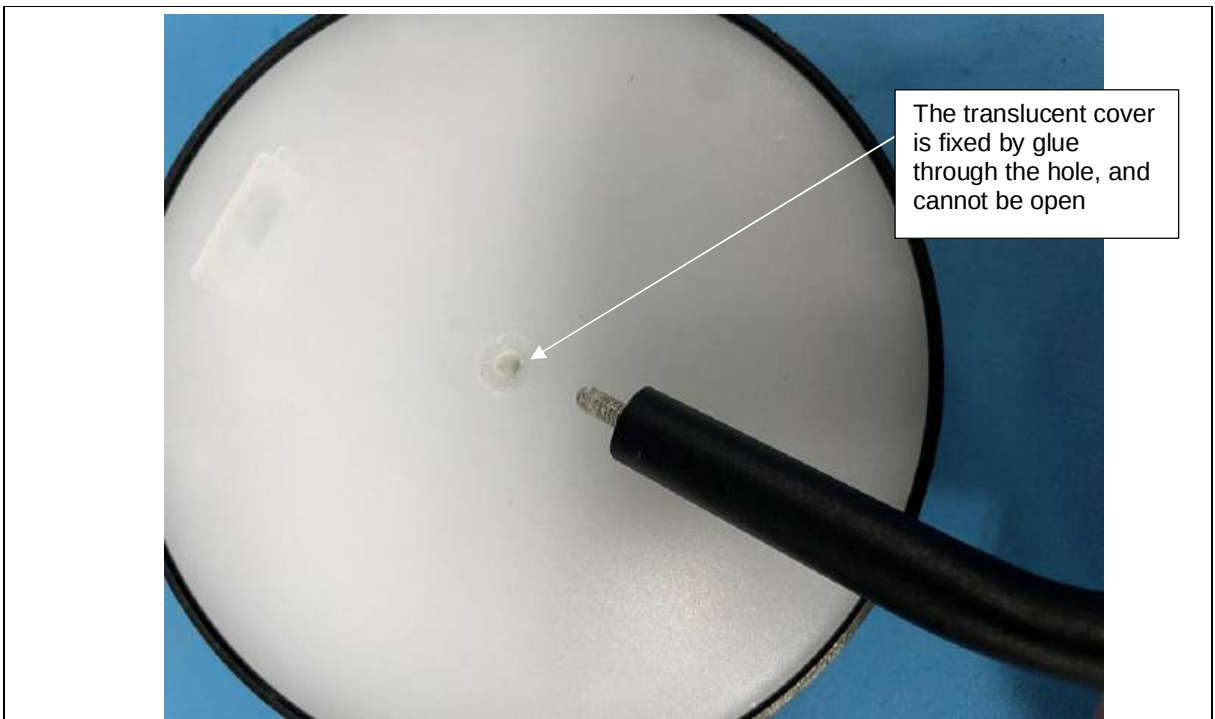
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Details of: Outlook for TL-RL-1019-3000mAh, TL-RL-1019-2000mAh



Details of: Outlook for TL-RL-1019-3000mAh, TL-RL-1019-2000mAh



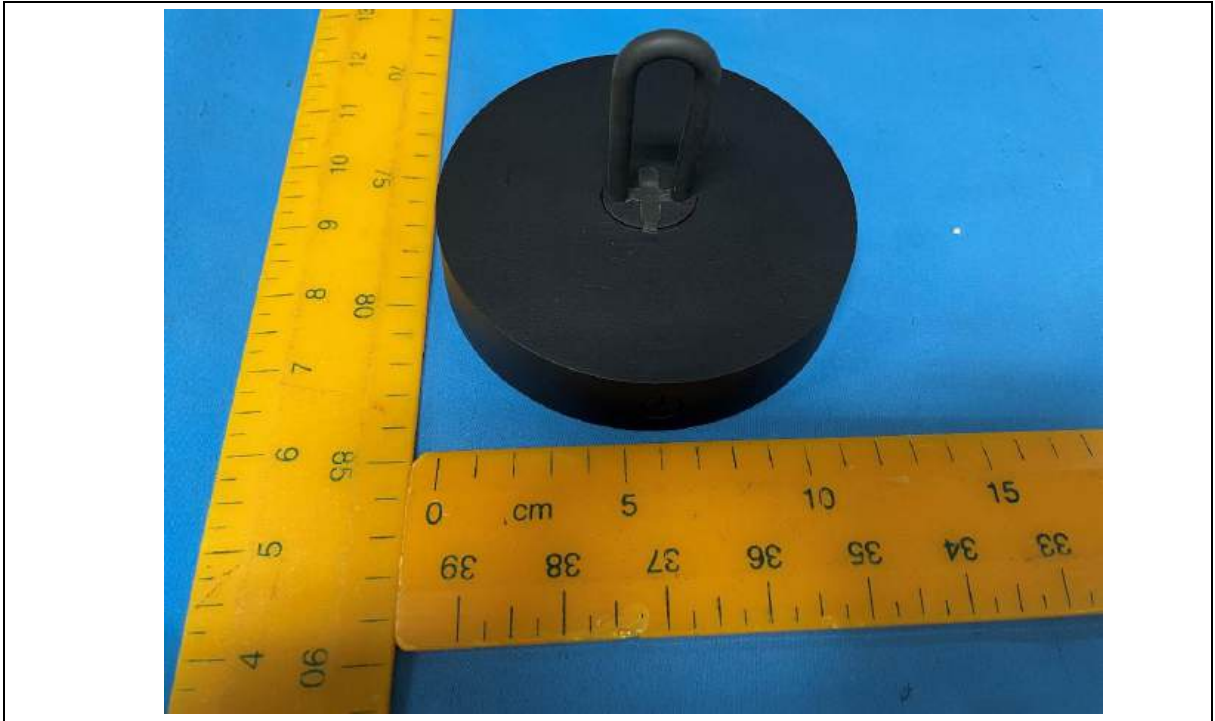
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Photo documentation

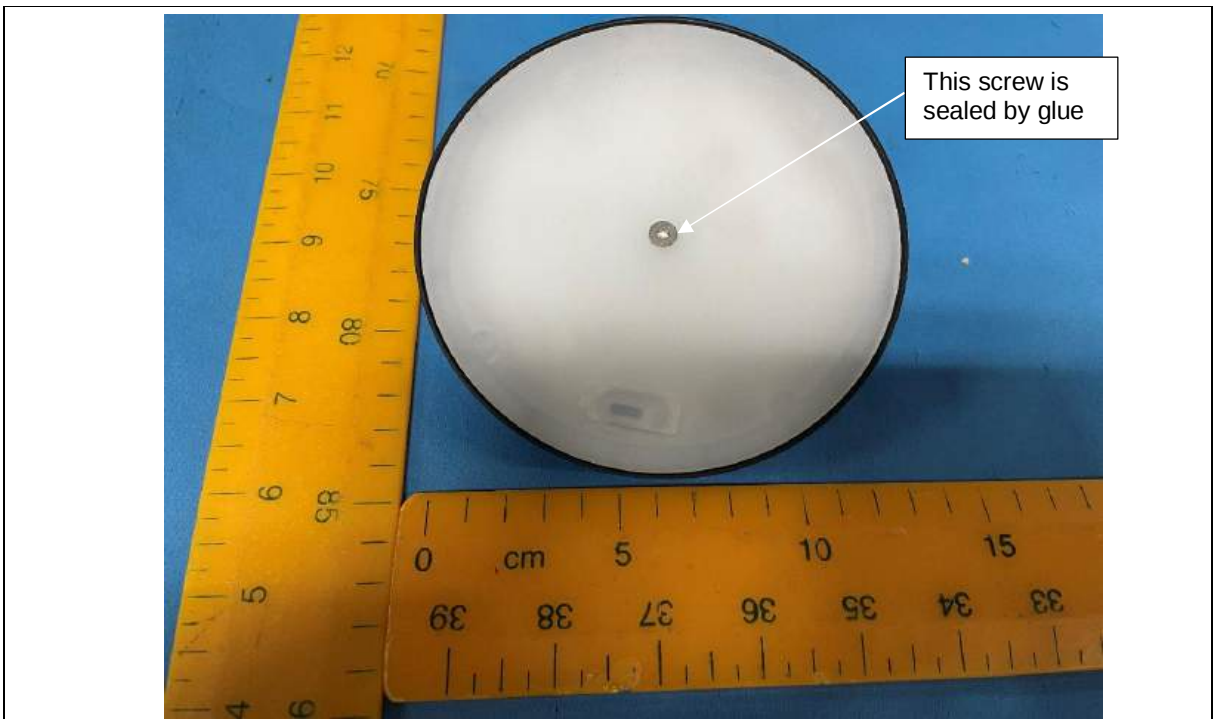
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Details of: Outlook for TL-RL-1022-3000mAh, TL-RL-1022-2000mAh



Details of: Outlook for TL-RL-1022-3000mAh, TL-RL-1022-2000mAh



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Details of: Detail view for all models



Details of: Detail view for all models



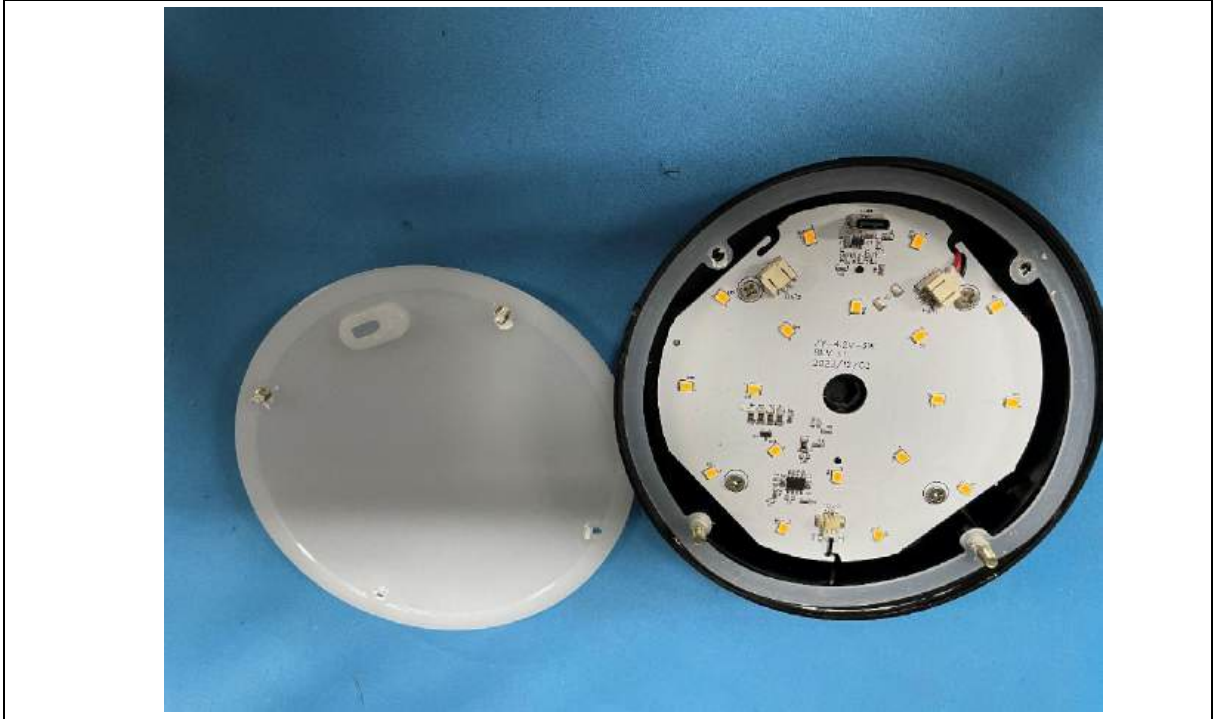
Appendix 1

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Details of: Internal view for all models
Representative model TL-RL-1006-2000mAh



Details of: Internal view for all models
Representative model TL-RL-1006-2000mAh



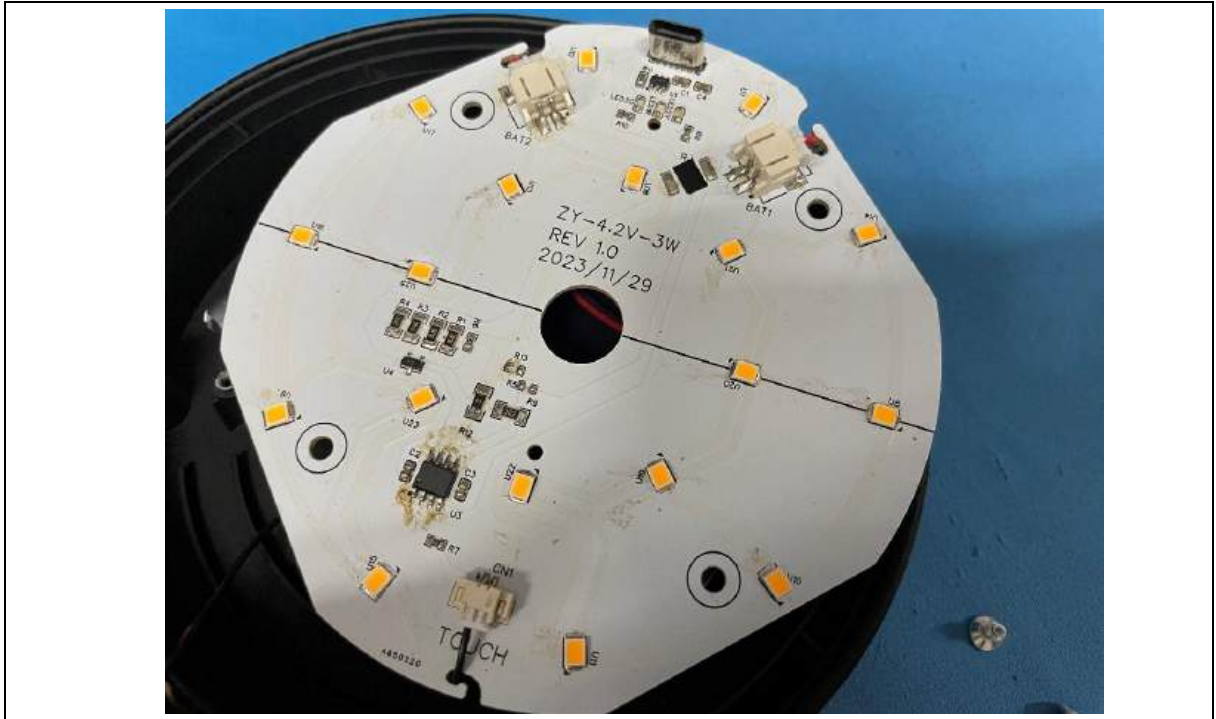
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Photo documentation

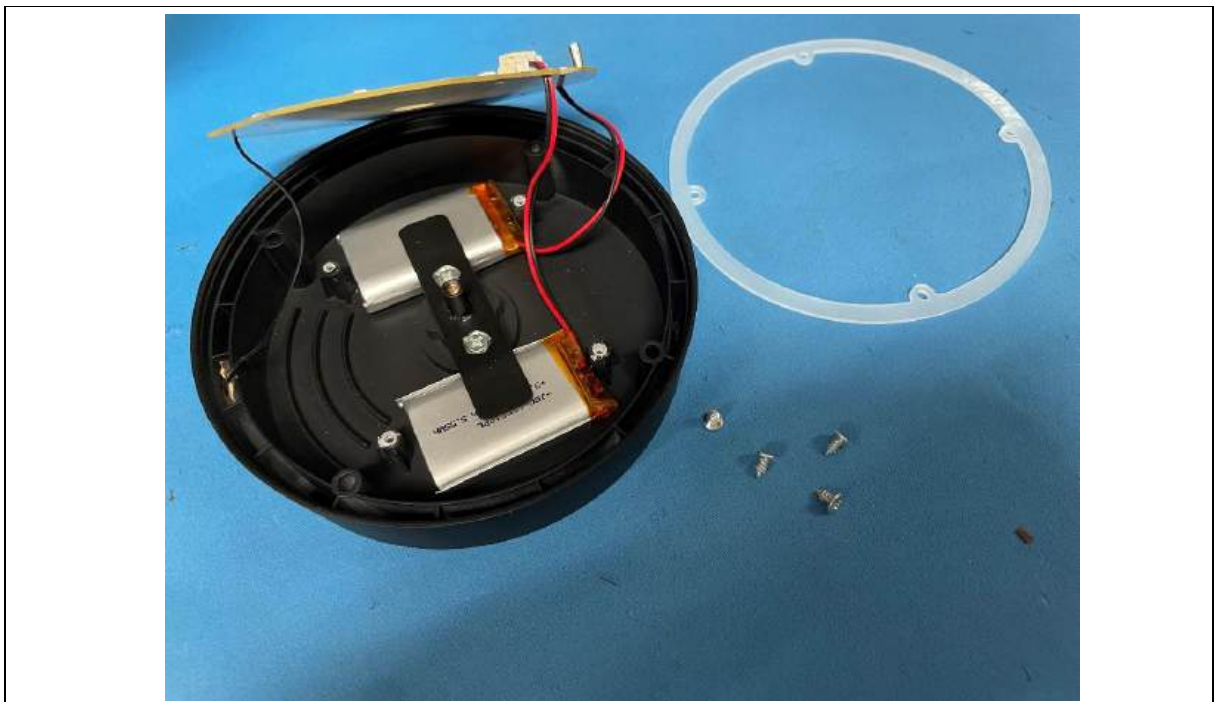
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Details of: LED module view for all models



Details of: Battery view (3.7V, 2x1500mAh) for models with suffix '3000mAh'



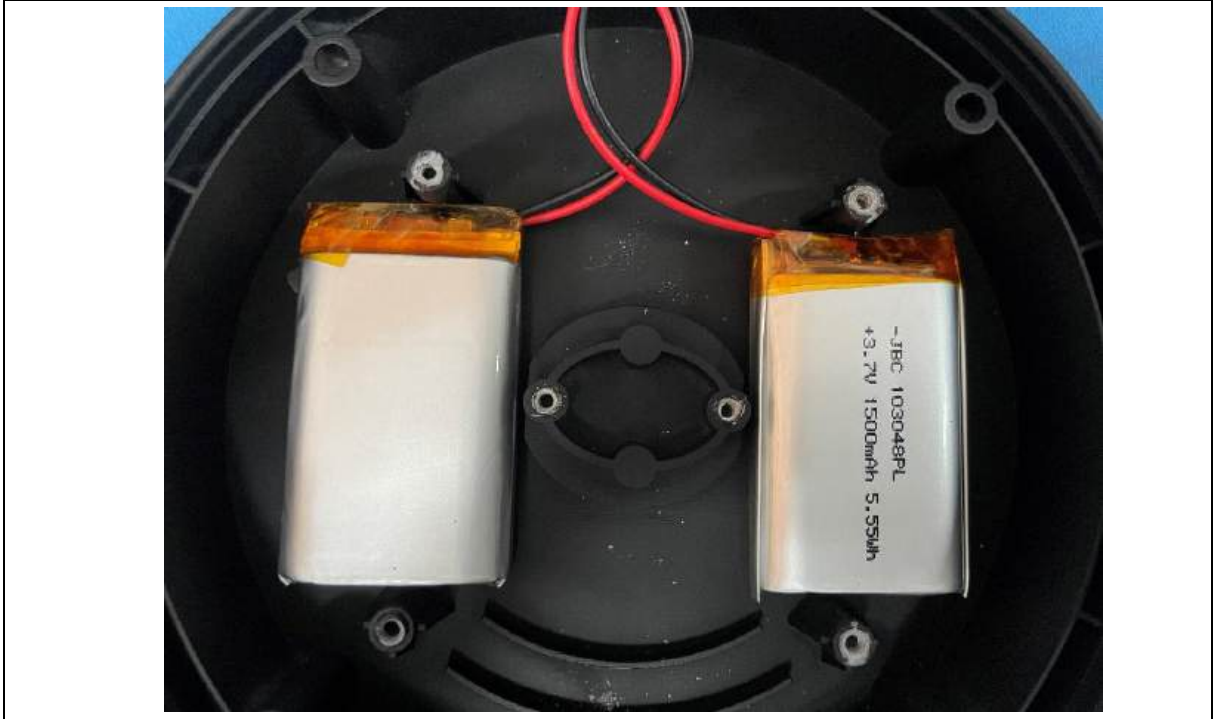
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Photo documentation

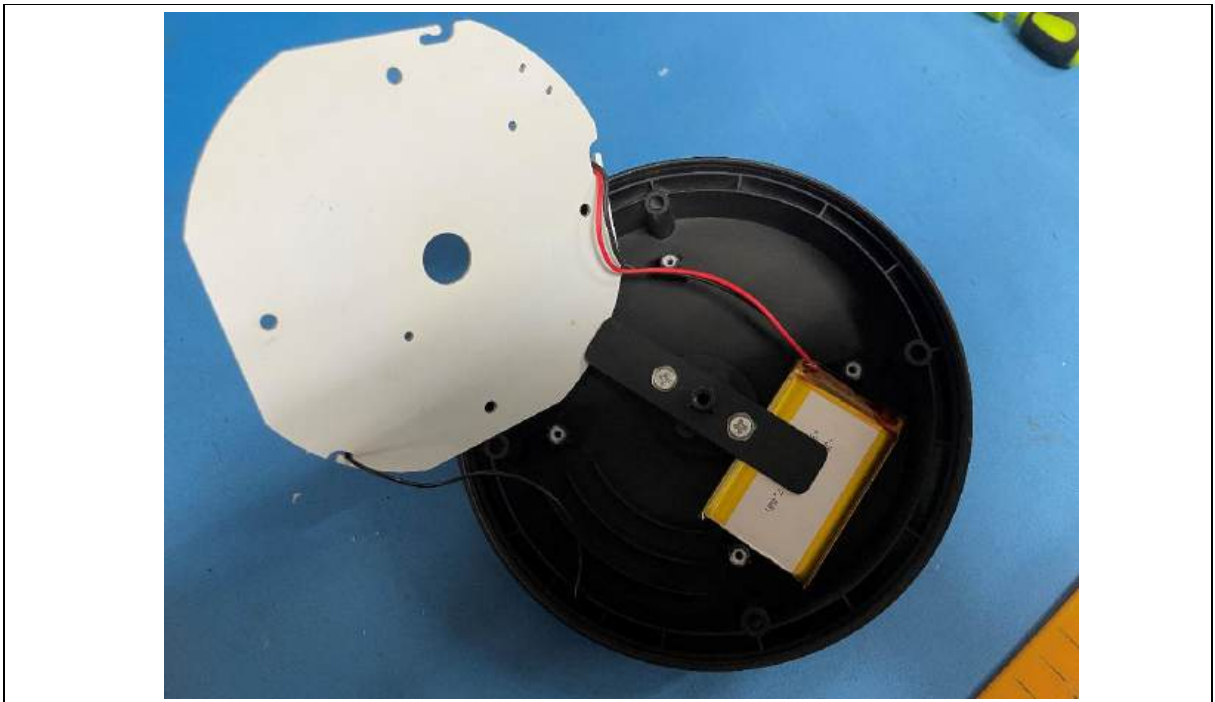
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Details of: .. Battery view (3.7V, 2x1500mAh) for models with suffix '3000mAh'



Details of: .. Battery view (3.7V, 2000mAh) for models with suffix '2000mAh'



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Details of: .. Battery view (3.7V, 2000mAh) for models with suffix '2000mAh'



Details of: .. USB cord



End of Report