

S P E C I F I C A T I O N

A l k a l i n e B a t t e r y

LR1130

MATSUSHITA BATTERY INDUSTRIAL CO., LTD.

LITHIUM & MICRO BATTERY DIVISION

ISSUANCE

SEP. 03. 1998

MBI

ALKALINE BATTERY LR1130

LR2808075(E)

1. MODEL NO. : LR1130 (44mAh)
 2. NOMINAL VOLTAGE : 1.5 V.
 3. AVERAGE WEIGHT : 1.2 g.
 4. DIMENSION : Shown in Figure.
 5. TERMINAL : ⊕ Case
 ⊖ Cap

6. CHARACTERISTICS

1) Open Circuit Voltage

Shown in Table.

2) Closed Circuit Voltage

Shown in Table.

3) Discharge Duration

Shown in Table.

4) Leakage

Battery does not show leakage
 after 30days storage at $45 \pm 2^\circ\text{C}$
 less than 70% Rh.

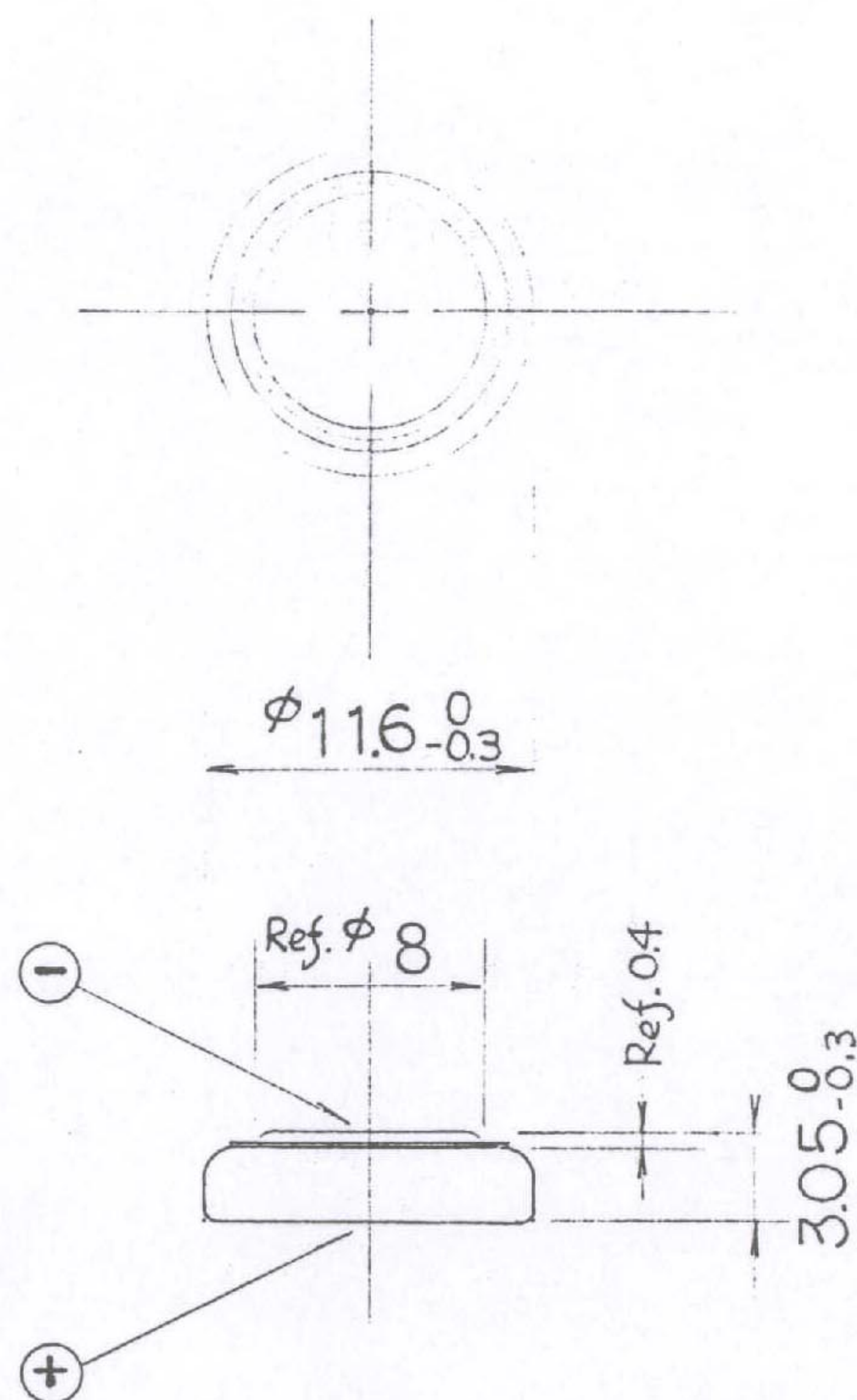
This is checked with the naked
 eyes.

7. APPEARANCE

Any dirt, scratch or deformation
 which cause any trouble at usage,
 does not show on the battery.

8. NOTES

Handling care is specified in
 I E C Pub. 86 - 1 - 9.



SCALE : 2/1

	I T E M	Initial	After 6 Months	After 12 Months
1	Open Circuit Voltage (Min. V.)	1.52	1.51	1.50
2	Closed Circuit Voltage (Min. V.) Load : 15k Ω (After 2 Seconds.)	1.50	1.49	1.48
	Average Hours Service at 20 $^\circ\text{C}$ Load : 15k Ω (End-Point 1.2 V.)	470h	460h	445 h
△				
△	Sept.15,1982	Service Time (300, 360, 340)		
△	Jan. 5, 1982	Characteristics After Storage.		
Sym.	Date of Revision	Remarks		
Date of stipulation:		Stipulated		Described
May. 15, 1981		<i>A. Hagon</i>	<i>St. Hagon</i>	<i>H. Hattori</i>

SPECIFICATION																																	
Precautions for Use																																	
<p>Please pay attention to the following points in order to maintain satisfactory operating conditions.</p> <p>Use nickel plated(steel or stainless steel) for power terminal contacts.</p> <p>To ensure stable contact, the contact pressure for power terminals must be at least 50 grams.</p> <p>When measuring battery voltage, use a meter with an internal resistance of 1 MΩ or greater. Correct voltage measurements cannot be obtained otherwise.</p> <p>Batteries are extremely sensitive to the adverse effects of humidity. Be sure to store them in a place which is dry and subject to little temperature change.</p> <p>Do not place near the boiler or radiator, nor expose to the direct sunlight.</p> <p>If button-type batteries are kept in contact with each other, the (+) and (-) terminals may short-circuit, greatly shortening their serviceable life.</p> <p>Button-type batteries may expand slightly during use. Therefore, sufficient space must be provided for this expansion when designing equipment.</p> <p>Before inserting batteries, check to confirm that the terminal contact surfaces on both the equipment and the batteries are clean and that they are not deformed.</p> <p>If the contact surfaces are dirty, clean and dry them thoroughly before inserting batteries.</p> <p>Batteries of the same size and shape may differ in type and grade. When exchanging batteries, confirm that they are the correct type by checking the identification symbol (designated by I.E.C. standards) provided on the battery.</p> <p>Alkaline primary batteries continue to register high voltage even toward the end of their serviceable life. As such, they may be mistakenly judged as yet being strong. If one of several batteries being used in a set is found to be exhausted, it can be assumed that there is very little life remaining in the others even though they may continue to register high voltage.</p> <p>It is therefore advisable to exchange all of the batteries at the same time.</p> <p>The direction of polarity in a battery may reverse as it nears the end of its serviceable life. This occurs when it is the first among several batteries being used in a set to be exhausted. It is not due to an abnormality in the battery itself.</p> <p>When a lithium battery is short-circuited, even slightly, a certain amount of time is required for its voltage output to recover completely. If the electrical characteristics of the battery are measured before a sufficient amount of time has passed, the battery may appear to be malfunctioning when actually it is merely in a state of recovery.</p> <p>The batteries should be used correctly, otherwise the set may be damaged due to leakage trouble. Therefore, keep the following precautions in mind.</p> <ul style="list-style-type: none">Do not charge, short-circuit, disassemble, heat or dispose the batteries in fire.Insert the batteries in correct polarity position.Do not directly solder to batteries.Do not use spent batteries with new ones. <div><p>Small-sized batteries can easily be swallowed.</p><p>They must be kept out of the reach of small children.</p><p>Also, in the design of battery powered equipment, care should be taken to ensure that batteries cannot be easily removed by children.</p></div> <table><tr><td>3</td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td></td><td></td><td></td><td></td></tr><tr><td>m.</td><td>Date of Revision</td><td colspan="3">Remarks</td></tr><tr><td></td><td>Date of stipulation</td><td>Stipulated</td><td></td><td>Described</td></tr><tr><td></td><td>May . 4. 1984</td><td></td><td></td><td>H. Hattori</td></tr></table> <p>MATSUSHITA BATTERY INDUSTRIAL CO., LTD.</p> <p>1 MATSUSHITA-CHO. MORIGUCHI-SHI, OSAKA. JAPAN</p> <p>(019-019)</p>				3					2					1					m.	Date of Revision	Remarks				Date of stipulation	Stipulated		Described		May . 4. 1984			H. Hattori
3																																	
2																																	
1																																	
m.	Date of Revision	Remarks																															
	Date of stipulation	Stipulated		Described																													
	May . 4. 1984			H. Hattori																													