

Our full range of industrial products.



We are in charge of batteries

We provide power to millions of different devices all over the world with the highest-quality batteries.

Future
Performance.
Today.

Our full range of industrial products.

Renata offers a wide range of primary and secondary micro batteries with high performance and reliability, taking advantage of 40+ years technology development and manufacturing expertise.

Industrial companies operate in many different business fields, such as Medical, Metering, POS and IoT, just to name a few of them. What do these companies all have in common? They all strive for their products to have the maximum reliability and the greatest-possible performance. Two big trends are involved with this: Miniaturization and Connectivity. Developers are facing new challenges with both of these trends. Applications are getting smaller and must be linked together. Often a wireless communication, such as WiFi, BLE, SigFox, NB-IoT and LoRa, is needed. These industrial products are requiring a tailored micro-battery solution to power the product.

Swiss precision and expertise

In addition to a broad portfolio of standard batteries, we also develop individualized products with quality Swiss precision and our years of experience, precisely matching to your requirements.

Our strengths

- High quality
- Excellence in service & manufacturing
- Flexible customized solutions



Medical

- Capsule endoscopy
- Insulin pumps
- CGM (Continuous Glucose Monitoring)
- Drug delivery systems
- Thermometers
- Wearable sensors



Industry

- Smart meters
- Remote controls
- POS systems
- Security systems
- Tracking devices



Consumer Goods

- KeyFob
- Glucose meters
- Watches
- Calculators
- Consumer electronics



Visit our website www.renata.com
for further information.

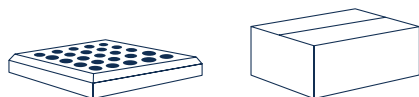
3V Lithium coin cells



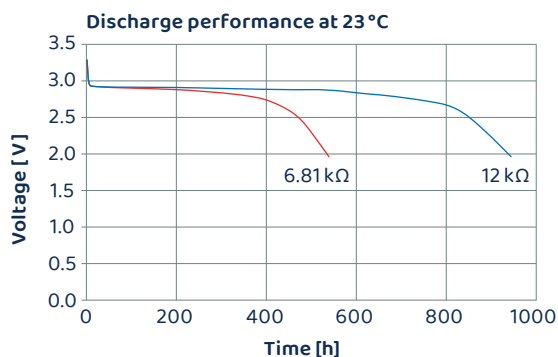
Features

- Low self discharge
- Shelf life up to 10 years at 23 °C
- More than 1000 variations of tabbed cells available
- Custom tabbed models and assemblies possible
- Industrial bulk available
- UL certified: file MH 14002

Industrial bulk



Typical discharge curve



Standard specifications

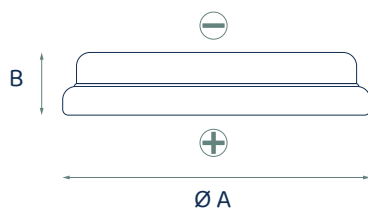
Chemical system	Li / MnO ₂
Nominal voltage	3 V
Capacity range	25–950 mAh

Customized solutions



Find details about our lithium coin cells on our website www.renata.com

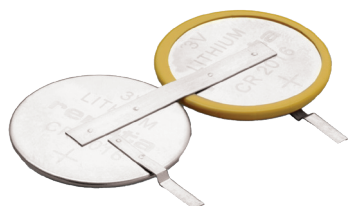
3V Lithium coin cells



Dimensions and electrical characteristics

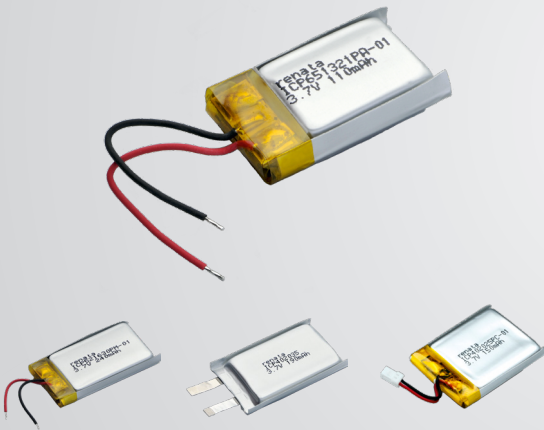
	Nominal voltage	Capacity mAh	Operating temp. in °C	Self discharge at 23 °C per year	Average weight in g	Diameter in mm	Height in mm
CR1025	3	30	-40 / +85	<1%	0.6	10.0	2.5
CR1216 MFR	3	25	-30 / +85	<1%	0.7	12.5	1.6
CR1220 MFR	3	35	-30 / +85	<1%	0.8	12.5	2.0
CR1225	3	48	-40 / +85	<1%	0.9	12.5	2.5
CR1616	3	50	-40 / +85	<1%	1.1	16.0	1.6
CR1620	3	68	-40 / +85	<1%	1.2	16.0	2.0
CR1632	3	137	-40 / +85	<1%	1.8	16.0	3.2
CR2016 MFR	3	90	-30 / +85	<1%	1.7	20.0	1.6
CR2016.MFR-E	3	104	-30 / +70	<1.5%	1.7	20.0	1.6
CR2025 MFR	3	165	-30 / +85	<1%	2.5	20.0	2.5
CR2025.MFR-E	3	180	-30 / +70	<1.5%	2.5	20.0	2.5
CR2032 MFR	3	225	-30 / +85	<1%	2.8	20.0	3.2
CR2032.MFR-E	3	260	-30 / +70	<1.5%	2.8	20.0	3.2
CR2320	3	150	-40 / +85	<1%	2.7	23.0	2.0
CR2325	3	190	-40 / +85	<1%	3.0	23.0	2.0
CR2430	3	285	-40 / +85	<1%	4.1	24.5	3.0
CR2450N	3	540	-40 / +85	<1%	5.9	24.5	5.0
CR2450N-MFR	3	580	-40 / +85	<1%	5.9	24.5	5.0
CR2477N	3	950	-40 / +85	<1%	8.3	24.5	7.7

Customized solutions



Find details about our lithium coin cells on our website www.renata.com

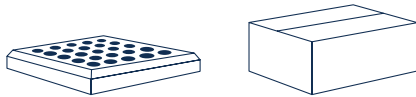
3.7V Lithium polymer batteries



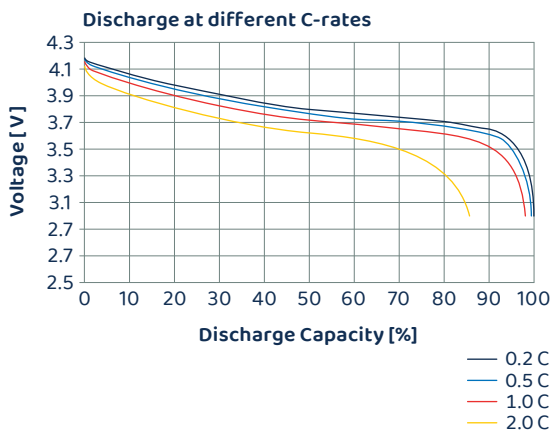
Features

- Best in class quality
- High energy density with a low profile
- Cobalt-oxide electrode technology
- Customization possible
- UL certified: file MH 14002
- Long cycle life with good capacity retention
- Technical expertise and guidance
- Including battery protection circuit
- Many models IEC62133 certified (some also BIS and KR approved)

Industrial bulk



Typical discharge curve



Charge: 0.5 C to 4.2 V & 5% cut-off
 Discharge: at various C-rates at CC to 3.0 V

Standard specifications

Nominal voltage	3.7–3.8 V
Capacity range	22–2800 mAh (0.2 C Cut off 3.0 V at 20 °C)
Storage temperature	-20 °C / +45 °C (0 °C / +30 °C for storage > 3 months)

Charging characteristics

Voltage	4.2–4.35 V
Current normal	0.5 C (Constant current)
Max. charging current	1.0 C (Constant current)
Temperature at charging	0 °C / +45 °C

Discharge characteristics

Max. discharge current	2.0 C (Non-cont. current) 1.0 (Cont. current)
Temperature at discharging	-20 °C / +60 °C
Cycle life at room temperature	500 cycles with > 80 % of min. capacity

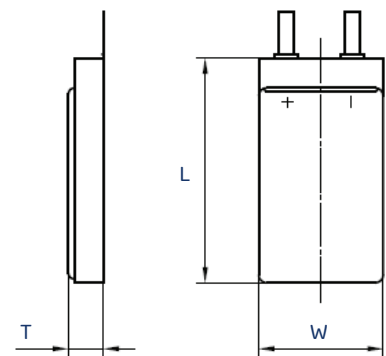
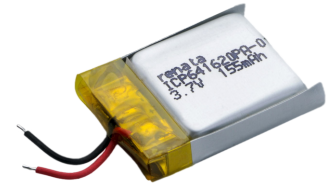


Find details about our lithium polymer batteries on our website www.renata.com

3.7V Lithium polymer batteries

Dimensions and electrical characteristics

Renata part	Cell model	Dimensions [mm]*			Capacity [mAh]		Contact
		T	W	L	Min.	Typical	
101053	ICP241019P-01	2.4	11.2	19.3	24	25	Tabs
100730	ICP341018PM	3.7	10.2	19.5	33	35	Wire
100735	ICP331319PM	3.75	12.6	20.3	45	50	Wire
101024	ICP281029HPG***	3.3	10.2	30.5	65	68	Tabs
101025	ICP390831PR	4.3	8.7	33.0	80	80	Wire
100640	ICP501022UPM	5.5	10.0	24.0	75	80	Wire
100694	ICP641414PE	6.8	14.9	16.8	85	95	Wire
100690	ICP501421PS	5.2	14.1	22.5	108	115	Wire
100696	ICP651321PA-01	7.0	13.2	23.5	110	120	Wire
100642	ICP401230UPR	4.5	12.7	31.0	125	130	Wire
100935	ICP521522PS**	5.7	15.5	23.5	125	130	Connector
100688	ICP501230PS-03	5.4	12.5	31.5	130	135	Wire
100692	ICP581323PA-01	6.2	13.2	25.0	140	145	Wire
100644	ICP402025PC-01	4.3	20.5	27.5	150	155	Connector
100695	ICP641620PA-01	6.9	16.2	21.5	155	165	Wire
100689	ICP501233PA-02	5.3	12.0	35.0	170	175	Wire
100645	ICP402035	4.4	20.0	35.0	190	195	Tab
101026	ICP401835TPRT**	4.4	18.2	37.0	205	215	Wire
100693	ICP621333PA-01	6.7	13.0	35.0	230	240	Wire
100691	ICP521630PM-01	5.7	17.0	31.5	240	250	Wire
101027	ICP621333HPMT***	6.8	13.0	35.0	260	270	Wire
101028	ICP403029PL-02	4.4	31.0	31.0	325	325	Wire
100648	ICP422339PR	4.6	23.7	40.5	330	340	Connector
101029	ICP582035PR-01	6.4	20.5	37.0	330	340	Wire
100697	ICP602823PA-01	6.4	28.2	25.5	335	350	Wire
100649	ICP402050PR	4.5	20.7	52.5	400	420	Wire
100650	ICP582930PR-01	6.2	29.5	32.0	430	450	Wire
100701	ICP303450PA-02	3.5	34.5	52.0	500	510	Wire
101030	ICP632136HPST***	6.95	21.5	39.5	500	520	Wire
101031	ICP682828HPMT***	7.5	28.0	30.0	530	560	Wire
100651	ICP622540PMT**	6.5	25.7	42.5	550	600	Wire
100652	ICP543759PMT**	5.95	37.5	61.0	1260	1320	Wire
100758	ICP606168PRT**	6.3	62.0	71.0	2700	2800	Wire



* Dimensions after 500 cycles
 ** NTC Temp Sensor built in
 *** 3.85 V model



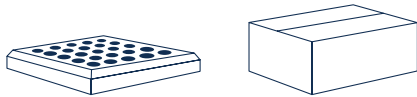
1.55V Silver oxide coin cells



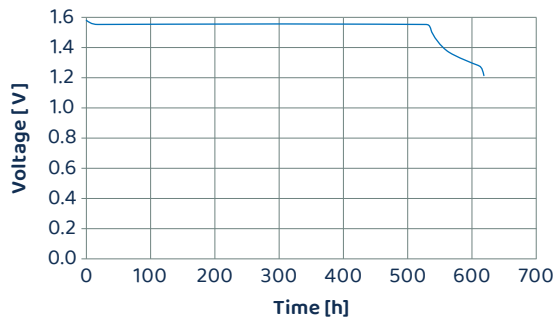
Features

- Extremely small dimensions possible
- Custom tabbed models possible
- > 40 different standard models
- High pulse versions available with > 10 mA pulse capability
- Shelf life up to 3 years at 23 °C
- Low and high drain as well as high pulse versions available

Industrial bulk



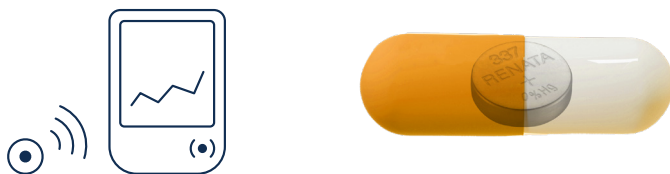
Typical discharge curve



Standard specifications

Chemical system	Ag ₂ O	
Nominal voltage	1.55 V	
Capacity range	6–190 mAh	
Typical standard discharge current range	20–300 µA	
Average weight range	0.13–2.3 g	
Temperature range	Low drain: -10 °C / +60 °C	High drain: -20 °C / +60 °C
Self discharge at 23 °C	Low drain: < 5 % / year	High drain: < 10 % / year

Application example



Find details about our silver oxide coin cells on our website www.renata.com

1.55V Silver oxide coin cells

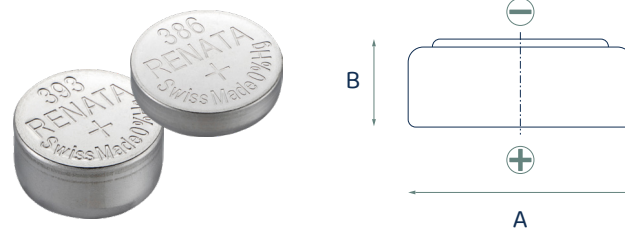
Dimensions and electrical characteristics

Low drain batteries

Cell model	Dimensions [mm]		Nominal capacity [mAh]
	A	B	
337	4.8	1.6	8
335	5.8	1.2	6
317	5.8	1.6	10.5
379	5.8	2.1	16
319	5.8	2.7	21
339	6.8	1.4	11
321	6.8	1.6	14.5
364	6.8	2.1	20
377	6.8	2.6	28
346	7.9	1.2	9.5
341	7.9	1.4	15
315	7.9	1.6	23
362	7.9	2.1	24
397	7.9	2.6	32
329	7.9	3.1	37
384	7.9	3.6	45
309	7.9	5.4	80
373	9.5	1.6	29
371	9.5	2.0	40
395	9.5	2.7	55
394	9.5	3.6	84
366	11.6	1.6	47
381	11.6	2.1	50
390	11.6	3.1	60
344	11.6	3.6	105
301	11.6	4.2	130
303	11.6	5.4	175

High drain batteries

Cell model	Dimensions [mm]		Nominal capacity [mAh]
	A	B	
376	6.8	2.6	27
361	7.9	2.1	24
396	7.9	2.6	32
392	7.9	3.6	45
393	7.9	5.4	80
370	9.5	2.1	40
399	9.5	2.7	55
380	9.5	3.6	82
365	11.6	1.6	47
391	11.6	2.1	50
389	11.6	3.1	80
350	11.6	3.6	105
386	11.6	4.2	130
357	11.6	5.4	190

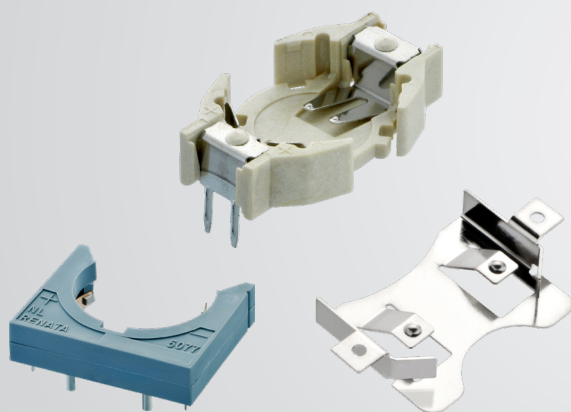


Customized solutions



Find details about our silver oxide coin cells on our website www.renata.com

Battery holders



Features

- Low profile for compact PCBs
- Lightweight material with robust design
- Dual spring contacts for low resistance (SMTM & SMTU, HU)
- Designed for automatic «pick & place» mounting
- Save retention of coin cell
- Protection against short circuits, inverse polarity and leak currents
- Suitable models for reflow/wave or high temperature soldering
- Easy and fast replacement of battery

Industrial bulk and tape & reel



Standard specifications

Holder material	Heat resistant, glass fiber filled LCP, polyamide or nickel plated phosphor bronze
Flammability rating	UL 94 V-0 (Except SMTM)
Battery contacts	Spring stainless steel AISI 301, nickel plated throughout, Solder areas tin-plated, other options available
Contact resistance between contacts and the cell	Less than 100 mΩ (measured through AC 1 kHz)

Details about our battery holders on our website

Surface Mounting Metal (SMTM) – low profile

Surface Mounting Technology (SMTU)

Through-hole mounting (HU) – horizontal

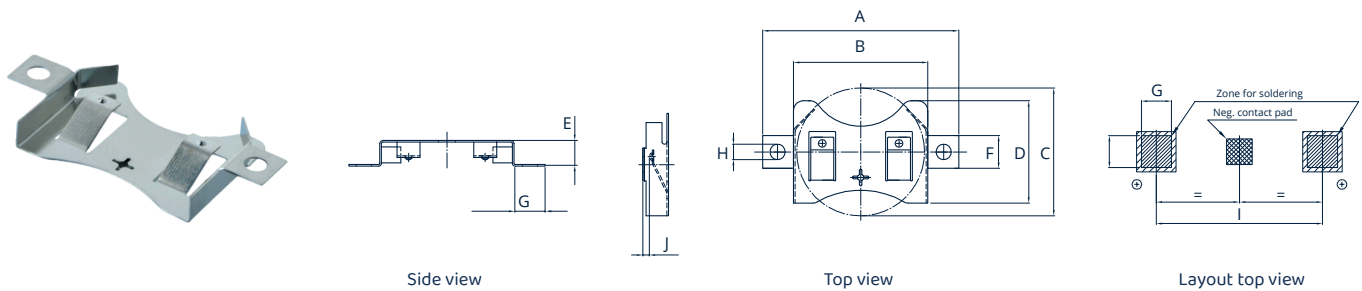
Through-hole mounting (VBH) – vertical

Through-hole mounting with positioning pins (NH/NL)



Find details about our battery holders on our website www.renata.com

Surface mounting metal



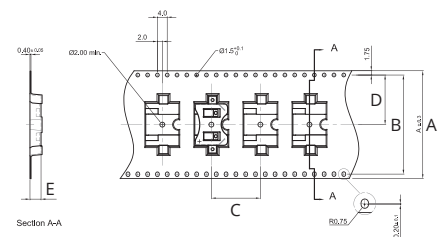
Dimensions and weights

Battery holders: Surface mounting metal

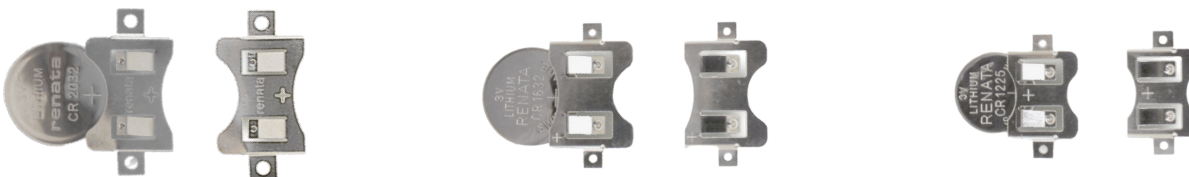
Renata part	Model	For use with Renata cell	Maximum dimensions [mm]										Weight [g]
			A	B	C	D	E	F	G	H	I	J	
100380	SMTM1225	CR1225	18.9	13.2	12.5	10.60	3.2	3.2	3.2	1.2	16.10	1.5	0.4
100390	SMTM1632	CR1632	23.2	16.9	16.0	13.25	4.0	3.2	3.0	1.2	20.05	1.0	0.7
100340	SMTM2032	CR2032	30.7	21.0	20.0	16.00	4.0	5.1	4.7	2.4	26.00	1.0	0.9

Tape and reel packaging

Renata part	Model	Quantity per reel	Maximum dimensions [mm]				
			A	B	C	D	E
100710	SMTM1225 TR	1000 pieces	32	28	16	14	3.8
100711	SMTM1632 TR	700 pieces	44	40	20	20	4.5
702100	SMTM2032 TR	600 pieces	44	40	24	20	4.5

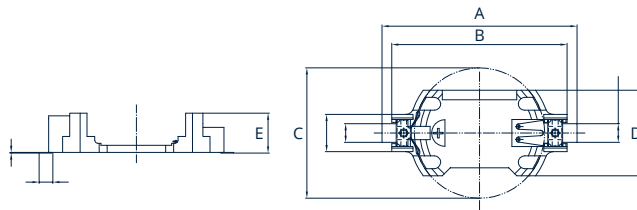
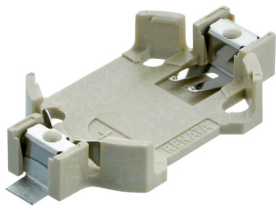


Product Images



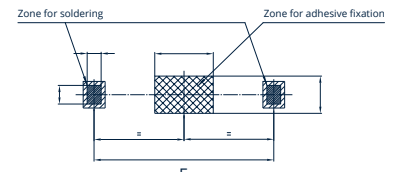
Find details about our battery holders on our website www.renata.com

Surface mounting technology



Side view

Top view



Layout top view

Dimensions and weights

Battery holders: Surface mounting technology

Renata part*	Model	For use with Renata cell	Dimensions [mm]						Weight [g]
			A	B	C	D	E	F	
701132	SMTU357-LF	357	23.6	19.9	11.6	12.0	7.55	20.7	0.85
701114	SMTU1220-LF	CR1220	23.7	20.3	12.5	12.7	4.8	21.1	0.80
701115	SMTU1225-LF	CR1225	23.7	20.3	12.5	12.7	4.8	21.1	0.70
701130	SMTU1632-LF	CR1632	27.7	24.3	16.0	14.5	5.4	25.1	0.80
701116	SMTU2032-LF	CR2032	32.0	28.5	20.0	16.1	5.4	29.4	0.95
701117	SMTU2430-LF	CR2430	36.4	33.0	24.5	16.1	4.9	33.8	1.05
701118**	SMTU2450N-LF	CR2450N	36.7	33.0	24.5	16.1	7.5	33.8	1.45
701119	SMTU2477N-LF	CR2477N	36.7	33.0	24.5	16.1	10.3	33.8	1.65
701113	SM2X2016-LF	CR2016	32.0	28.5	20.0	16.1	5.4	29.4	0.95
702080	SMTU2032-G***	CR2032	32.0	28.5	20.0	16.1	5.4	29.4	0.95

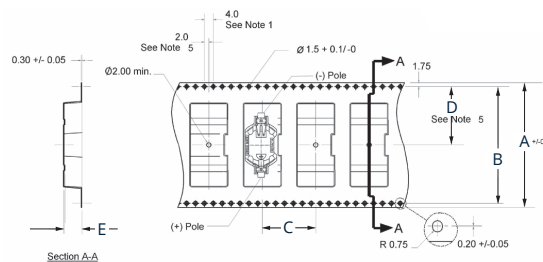
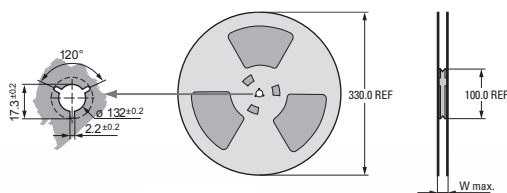
* Industrial bulk packaging

** Not suitable for CR2450HT

*** Gold plated contacts for increased conductivity (optional)

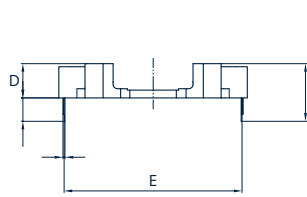
Tape and reel packaging

Renata part	Model	Quantity per reel	Dimensions [mm]				
			A	B	C	D	E
702450	SMTU1220-LF.TR	750 pieces	44	40.4	16	20.2	5.7
701230	SMTU1225-LF.TR	750 pieces	44	40.4	16	20.2	5.7
701231	SMTU1632-LF.TR	520 pieces	44	40.4	20	20.2	6.1
701232	SMTU2032-LF.TR	485 pieces	44	40.4	24	20.2	6.0
701233	SMTU2430-LF.TR	490 pieces	56	52.4	24	26.2	5.7
701234	SMTU2450N-LF.TR	350 pieces	56	52.4	24	26.2	8.2
701235	SMTU2477N-LF.TR	250 pieces	56	52.4	24	26.2	10.8
701236	SM2X2016-LF.TR	485 pieces	44	40.4	24	20.2	6.0

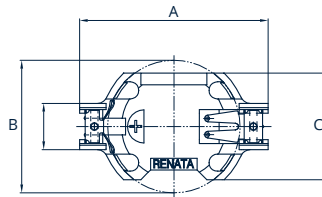


Find details about our battery holders on our website www.renata.com

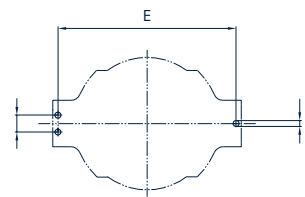
Through-hole mounting



Side view



Top view



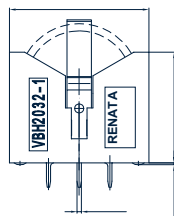
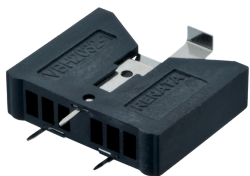
Layout top view

Dimensions and weights

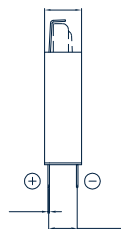
Battery holders: Through-hole mounting

Renata part	Model	For use with Renata cell	A	B	C	D	E	Weight [g]
701133	HU357-LF	357	19.9	11.6	12.0	7.4	18.65	0.84
701105	HU1225-LF	CR1225	20.3	12.5	12.7	4.6	19.10	0.70
701131	HU1632-LF	CR1632	24.3	16.0	14.5	5.2	23.00	0.80
701106	HU2032-LF	CR2032	28.5	20.0	16.1	5.2	27.20	0.95
701107	HU2430-LF	CR2430	33.0	24.5	16.1	4.7	31.70	1.05
701108	HU2450N-LF	CR2450N	33.0	24.5	16.1	7.3	31.75	1.45
701109	HU2477N-LF	CR2477N	33.0	24.5	16.1	10.1	31.80	1.65
703384	VBH2032-1	CR2032	-	-	-	-	-	1.86
701111	NH5077-LF	CR2450, CR2477	-	-	-	-	-	2.40
701112	NL5077-LF	CR2450, CR2477	-	-	-	-	-	2.90

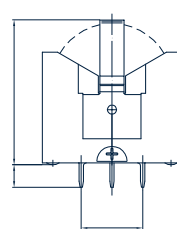
VBH2032-1



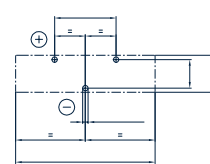
Front view from (-) pole side



Side view

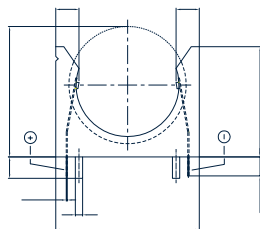


Front view from (+) pole side



Layout top view

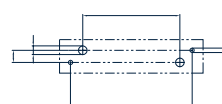
NH5077-LF



Front view

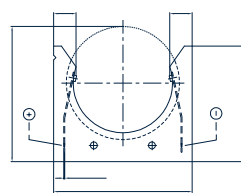


Side view

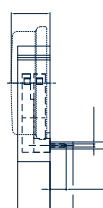


Layout top view

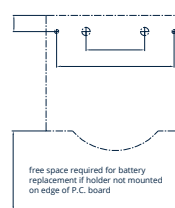
NL5077-LF



Front view



Side view



Layout top view

free space required for battery replacement if holder not mounted on edge of P.C. board



Find details about our battery holders on our website www.renata.com

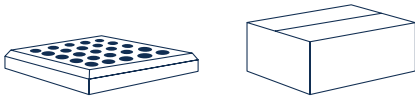
3V Thin-film primary cell



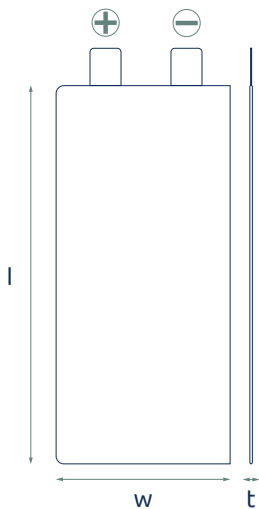
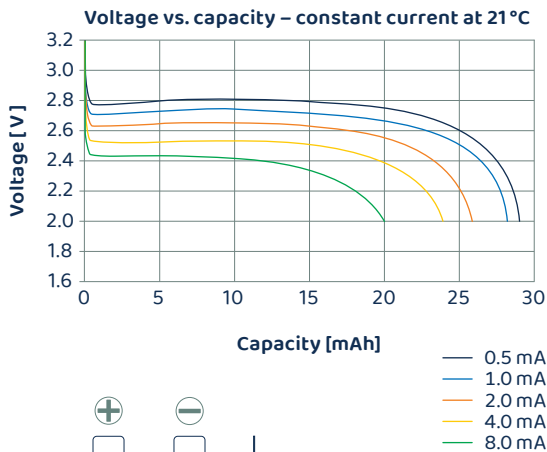
Features

- Extremely low profile
- High bendability (> 1000 cycles / Ø 50mm)
- Low self discharge at 5 % per year
- Shelf life up to 10 years at 23 °C
- Customization possible
- Connector tabs are stainless steel or optionally tin coated nickel

Industrial bulk



Typical discharge curve



Thickness (t)
0.42 mm (± 0.03 mm)

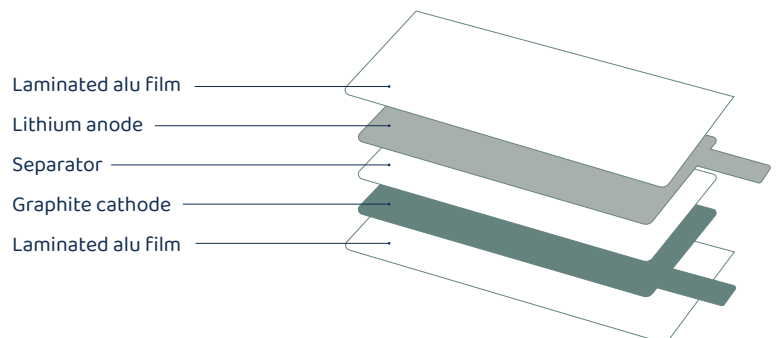
Length (l)
50.1 mm (± 0.2 mm)

Width (w)
23.1 mm (± 0.2 mm)

Standard specifications

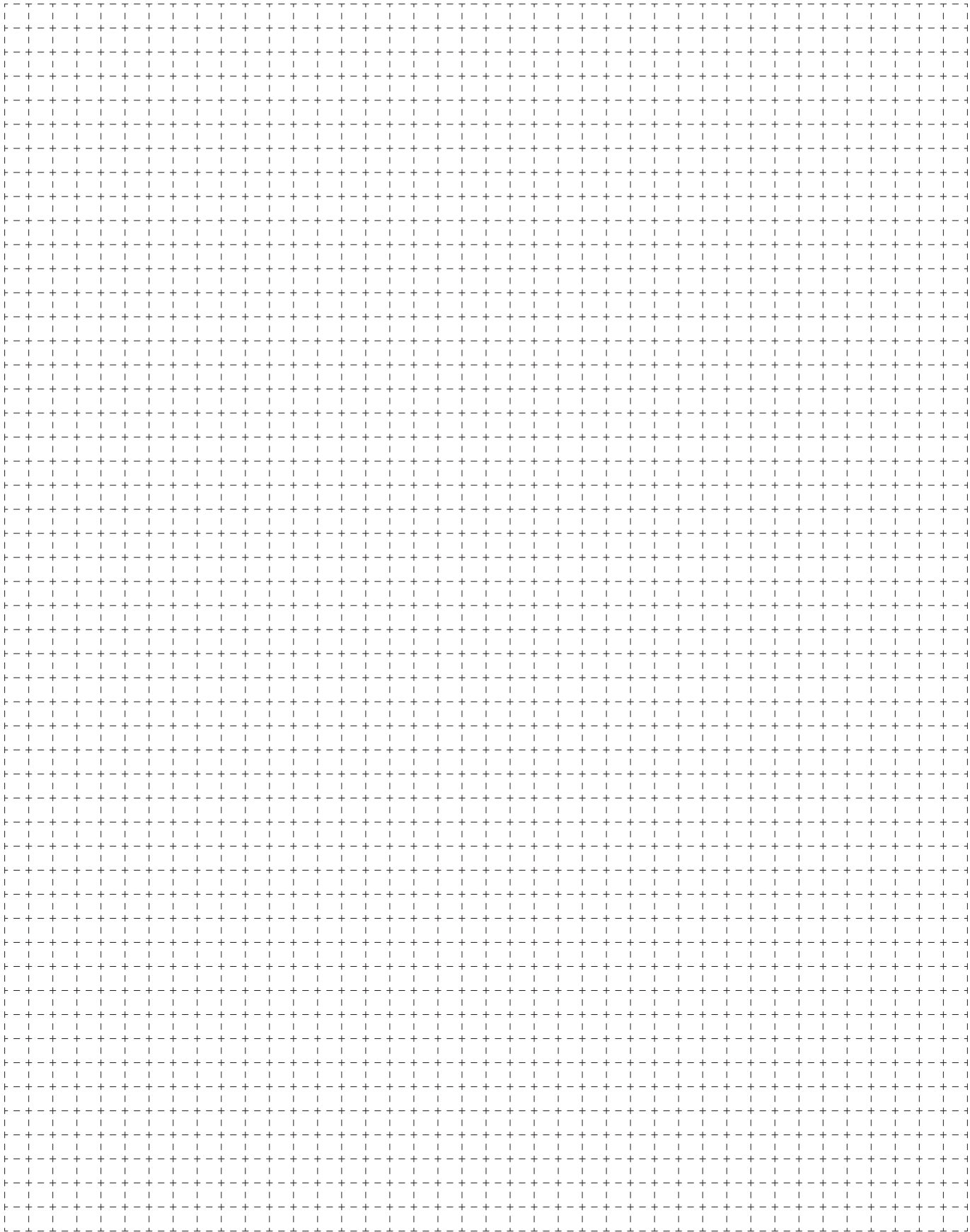
Cell model	CP042350
Chemical system	Li / MnO ₂
Nominal voltage	3 V
Cut-off voltage	2 V
Rated capacity	28 mAh
Internal resistance (at 50% SOC and 23°C)	< 30 Ω
Average weight	0.86 g
Maximum discharge current	0.625 mA
Maximum non continuous discharge*	12.4 mA
Operating and storage temperature range	-40 °C / +60 °C

*Pulses up to 40 mA depending on duration and frequency



Find details about our thin-film primary cells on our website www.renata.com

Notes





Renata – the world-class leader in coin cells.

Renata is a leading manufacturer and supplier of coin cells for medical devices, disposable medical sensors, watches and many electronic product areas. The company offers a broad portfolio of silver oxide, lithium and zinc-air batteries.

It also conducts the entire production process of batteries: from punching the battery housings, through the injection molded plastic seals, sourcing of raw materials, mixing the compounds of the cathode and anode material until the final assembly and quality control.

The offering focuses on the differentiation between high-drain and low-drain cells, vital to meet the high technical demands of the watch sector, among many other applications.

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