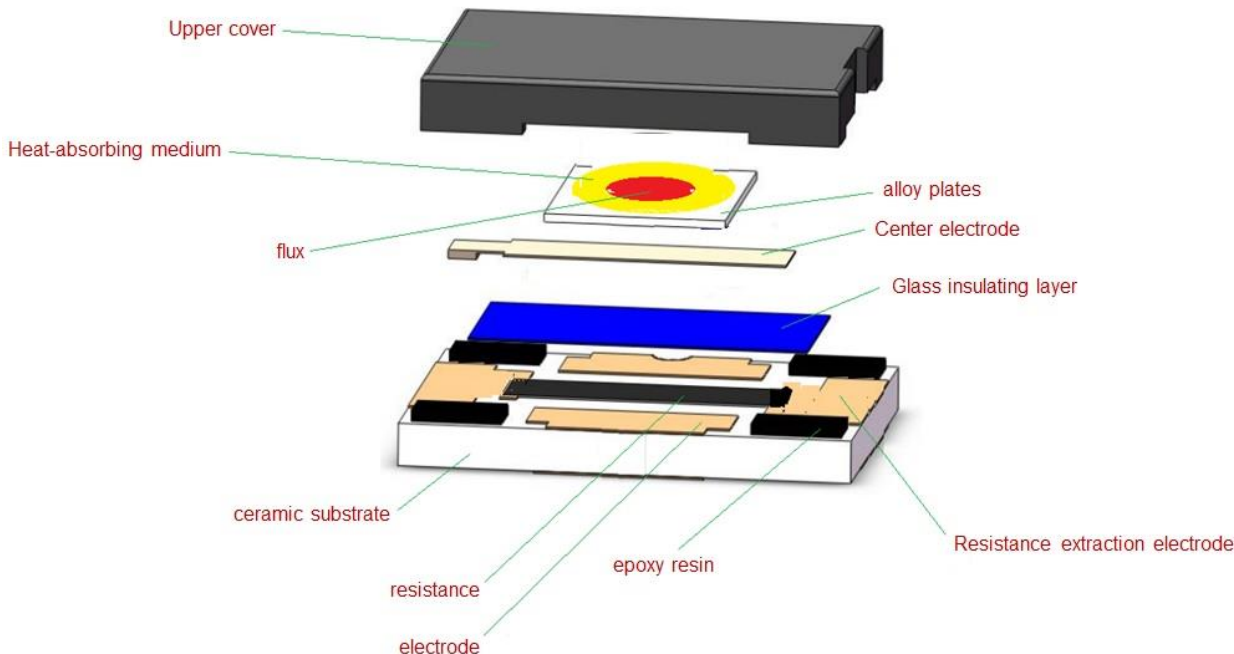


Ochranný prvek pro Li-Ion akumulátory

Společnost Hollyland přichází s produkty, které zajišťují ochranu Li-Ion akumulátorů. Tyto prvky současně chrání akumulátory proti nadproudu a přebíjení. Nadproudová ochrana a ochrana proti přebíjení je oproti BMS (Battery Management System) řešena jednou součástkou. Při zaznamenání nadproudu se přeruší pojistka uvnitř prvku. V případě přebíjení tzv. “heater“ aktivovaný z externího IC, anebo z tranzistoru FET zapůsobí tepelně na pojistku uvnitř komponenty, která se přeruší a zajistí odpojení od zátěže. Tyto produkty mají široké uplatnění v průmyslu i ve spotřební elektronice.



Vnitřní uspořádání prvku



Vybraná technická data

Product		LA	LB	LT
Dimensions [mm]	A	4	5,4	9,5
	B	3	3,2	5,0
	C	max. 0,95	max. 1,35	2,0
U [V]		36 ~ 62	36 ~ 62	80 / 62
I _{rated} [A]		12 ~ 22	12 ~ 30	30 ~ 60
I _{break} [A]		50 ~ 200	50 ~ 80	80 ~ 160
Cells in series		1 ~ 14	1 ~ 14	1 ~ 14
R _{heater} [Ω]		0,6 ~ 141,7	1,0 ~ 220	
R _{fuse} [mΩ]		0,5 ~ 3,5	0,5 ~ 3,5	

Vlastnosti

High stability

Can withstand 1.1 times the rated current stable operation. **(The general requirement is 1.0 times the rated current for an hour to continue to qualify)**

Strong pulse resistance

In addition to the traditional coating of flux on the alloy sheet, an additional **heat-absorbing medium layer** is added above, when the large current instantaneous pulse comes, it absorbs part of the heat generated by the large current pulse, effectively slowing down the instantaneous rapid rise of the alloy sheet temperature. The high current transient impulse impact resistance of the product is effectively improved.

The protection reaction speed is fast

Resistors generally fuse the alloy within 10 seconds after being energized. **(The general requirement is to fuse within 60 seconds to qualify)**

High reliability

The ceramic substrate is manufactured by a novel DPC-PCB process, and the surface is plated with nickel gold, which is stable and reliable.

Použití

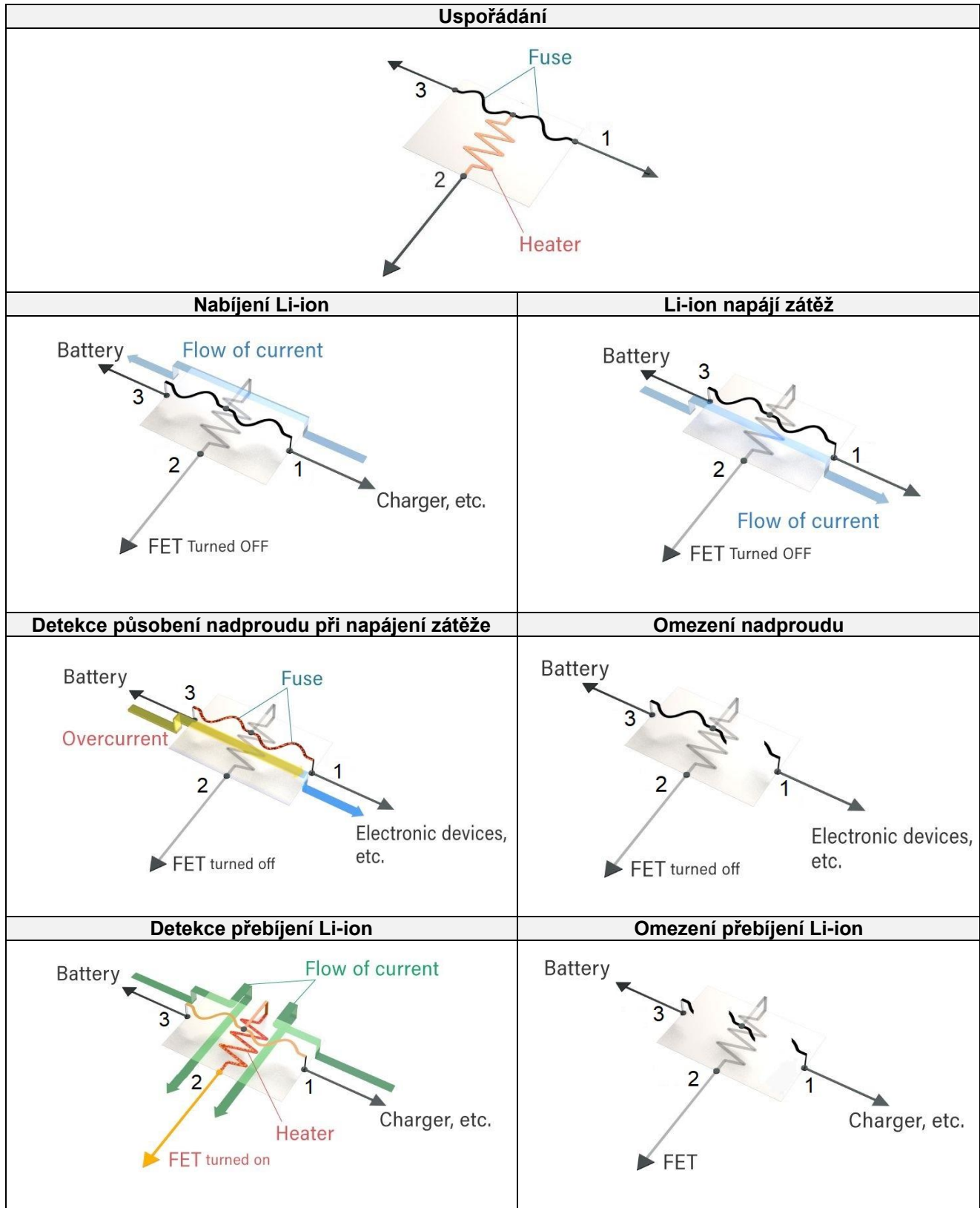
- aku nářadí
- spotřební elektronika
- jednostopá elektrovozidla

Odkazy

Stránka společnosti [Hollyland](#)

E-shop společnosti ECOM s.r.o. s přehledem [produktů](#) společnosti Hollyland

Princip funkce prvku



Dokument od výrobce Hollyland k produktu



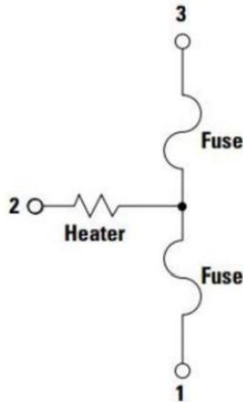
LT、LS fuse introduction

LT fuse provides full protection for electronic devices. Its product design and functionality can protect lithium-ion batteries from damage caused by **excessive current** and **overcharge voltage**



LT、LS fuse operating principle

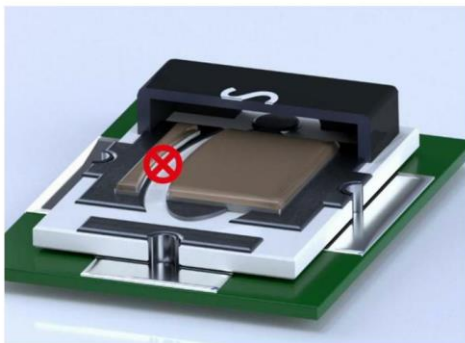
LT fuse contains three terminals



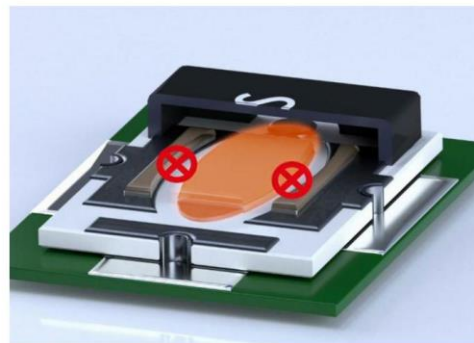
1,3 terminal fuses made of alloy metal in series can be blown when overcurrent or short circuit fault, cut off the circuit to play a protective role. (**overcurrent protection**)

2-terminal series resistance (Heater), its function is to form a series circuit with MOSFETs in the circuit. When the system detects overvoltage of the battery, the MOSFETs will be on, the resistance heater will start heating, and the alloy sheet will be fused, which plays a role in cutting off the circuit. (**overvoltage protection**)

LT、LS fuse protection mechanism

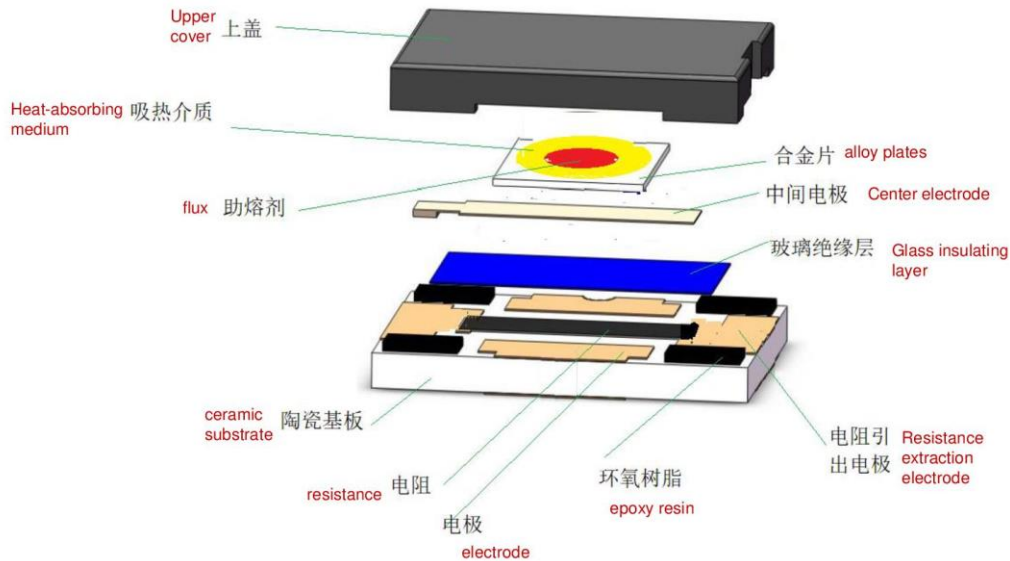


Overcurrent protection mechanism: under the impact of large current, the alloy is disconnected, and the breaking point is mostly one place, and the alloy is unilateral cracking .



Overvoltage protection mechanism: the heating layer caused by the current causes the alloy to melt, and the breaking point is two, and the alloy is molten and convex.

LT、LS fuse product mix



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Product advantage

High stability

Can withstand 1.1 times the rated current stable operation. (The general requirement is 1.0 times the rated current for an hour to continue to qualify)

Strong pulse resistance

In addition to the traditional coating of flux on the alloy sheet, an additional heat-absorbing medium layer is added above, when the large current instantaneous pulse comes, it absorbs part of the heat generated by the large current pulse, effectively slowing down the instantaneous rapid rise of the alloy sheet temperature. The high current transient impulse impact resistance of the product is effectively improved

The protection reaction speed is fast

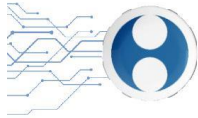
Resistors generally fuse the alloy within 10 seconds after being energized. (The general requirement is to fuse within 60 seconds to qualify)

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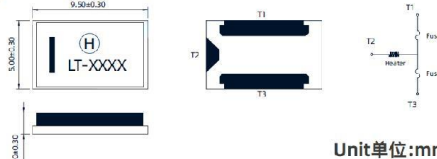
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specifications and models

优势特点
保护反应速度快 高稳定性

耐脉冲能力强 高可靠性



Unit单位:mm

Model 型号	Rated current 额定电流	Cells in Series 电池串数	Rated voltage 额定电压	Rated breaking capacity 分断能力	Operating voltage 动作电压	Fuse resistance 保险丝内电阻	Safety certification 安规认证	
	(A)	Cell	(Vdc)	(A)	(V)	(mΩ)	UR	TUV
LT-0630	30	1-2	80	80	4.0-9.6	0.5-2.5	●	●
LT-1230	30	3	80	80	8.4-19.1	0.5-2.5	●	●
LT-1830	30	4-5	80	80	10.5-23.5	0.5-2.5	●	●
LT-3030	30	6-9	80	80	20.2-46.3	0.5-2.5	●	●
LT-4030	30	10-14	80	80	28.0-62.0	0.5-2.5	●	●
LT-4530H	30	13	80	80	36.2-58.5	0.5-2.5	●	●
LT-5030	30	15-16	80	80	47.2-68.0	0.5-2.5	●	●
LT-6030	30	20	80	80	50-74	0.5-2.5	●	●
LT-1245	45	3	80	120	3.5-9.8	0.4-2.0	●	●
LT-1445	45	4	80	120	13.0-18.4	0.4-2.0	●	●
LT-2045	45	5	80	120	16.7-23.5	0.4-2.0	●	●
LT-3045	45	6-7	80	120	22.3-31.5	0.4-2.0	●	●
LT-4045	45	9-10	80	120	33.0-46.9	0.4-2.0	●	●
LT-5045	45	12-14	80	120	43.7-62.0	0.4-2.0	●	●
LT-5245H	45	13-14	80	120	47.2-62.0	0.4-2.0	●	●
LT-5545	45	16	80	120	36.0-62.0	0.4-2.0	●	●
LT-6045	45	20	80	120	50-74	0.4-2.0	●	●
LT-1260	60	3	80	160	3.5-9.8	0.2-1.5	●	●
LT-1460	60	4	80	160	13.0-18.4	0.2-1.5	●	●
LT-2060	60	5	80	160	16.7-23.5	0.2-1.5	●	●

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specifications and models

优势特点
保护反应速度快 高稳定性

耐脉冲能力强 高可靠性



Unit单位:mm

PART NO. 目录编号	CURRENT RATING 额定电流	CELLS IN SERIES 电池串数	RATED VOLTAGE 额定电压	RATED BREAKING CAPACITY 分断能力	OPERATING VOLTAGE 动作电压	Fuse resistance 保险丝内电阻	SAFETY APPROVALS 安全认证	
	(A)	Cell	(Vdc)	(A)	(V)	(mΩ)	cURus	TUV
LS-0412	12	1	36	50	3.0-4.5	1.5-3.5	○	○
LS-0812	12	2	36	50	4.0-9.0	1.5-3.5	○	○
LS-1212	12	3	36	50	7.4-13.8	1.5-3.5	○	○
LS-1412	12	4	36	50	10.5-19.6	1.5-3.5	○	○
LS-2012	12	5	36	50	14.4-23.5	1.5-3.5	○	○
LS-2412	12	6	36	50	15.6-27.0	1.5-3.5	○	○
LS-3012	12	7	36	50	18.2-31.5	1.5-3.5	○	○
LS-3212	12	8	36	50	20.3-36.0	1.5-3.5	○	○
LS-3512	12	9	48	200	28.5-40.5	1.5-3.5	○	○
LS-4012	12	10	48	200	30.0-45.0	1.5-3.5	○	○
LS-6012	12	9-14	62	50	31.5-62.0	1.5-3.5	○	○
LS-0415	15	1	36	50	3.0-4.5	1.0-3.0	○	○
LS-0815	15	2	36	50	5.0-9.0	1.0-3.0	○	○
LS-1215	15	3	36	50	7.4-13.8	1.0-3.0	○	○
LS-1415	15	4	36	50	10.5-19.6	1.0-3.0	○	○
LS-2015	15	5	36	50	14.4-23.5	1.0-3.0	○	○
LS-2415	15	6	48	200	17.3-28.0	1.0-3.0	○	○
LS-3015	15	7	48	200	20.2-32.9	1.0-3.0	○	○
LS-3215	15	8	48	200	23.1-36.0	1.0-3.0	○	○
LS-4015	15	10	48	200	29.0-45.0	1.0-3.0	○	○
LS-5015	15	13	62	50	41.0-56.0	1.5-3.0	○	○
LS-6015	15	9-14	62	50	31.5-62.0	1.0-3.0	○	○
LS-0422	22	1	36	50	3.5-4.7	0.8-2.5	○	○
LS-0822	22	2	36	50	6.0-9.0	0.8-2.5	○	○
LS-1222	22	3	36	50	9.0-13.8	0.8-2.5	○	○
LS-1422	22	4	36	50	12.0-18.5	0.8-2.5	○	○
LS-2022	22	5	36	50	17.5-23.5	0.8-2.5	○	○
LS-2422	22	6-7	36	50	18.0-27.0	0.8-2.5	○	○
LS-4022	22	10	36	50	32.0-45.0	0.8-2.5	○	○
LS-6022	22	9-14	62	50	31.5-62.0	0.8-2.5	○	○

○ DENONTES FOR PENDING

○ 表示正在申请安全认证

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Hollyland (Xiamen) Technology Corporation Limited

Add.: 829, Fangshan East 2nd Road, Xiang' an , Xiamen, China.

Tel: (86)592-577 2288

Fax: (86)592-577 3979

E-mail: sdxm@hollyfuse.com

www.hollyfuse.com

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