



Seiko Instruments Inc. Lithium Rechargeable Batteries

Dim. in mm

The HB Series features high capacity and long cycle life with a wide charging voltage range, which is most suitable for backup use of real time clock and SRAM etc. **Features:** • Pb-free reflowable • Superior heat resistance (260°C peak) allows reflow soldering by Pb-free solder • Wide range of charging voltage • High capacity • Long cycle life • Excellent over-discharge characteristics **Operating Temperature:** • -20°C ~ 60°C **Applications:** • Power supply backup use for cellular phones, wireless phones, digital still cameras, PHS, PDA and MD players

Digi-Key is not approved by any state or federal agency as an authorized supplier of product for medical, life support or life sustaining devices or systems.

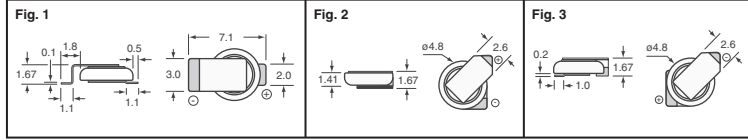


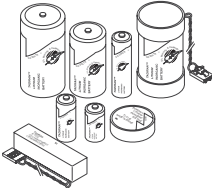
Fig. Type	Nominal Voltage	Charge Voltage	Nominal Capacity (mAh) (Voltage Range)	Internal Impedance	Standard Charge/Discharge Current	Cycle Life		Weight	Digi-Key Part No.	Cut Tape Price Each			Digi-Key Part No.	Tape and Reel Pricing	Seiko Instruments Part No.
						10% D.O.D	100% D.O.D			1	10	100			
1	3.0V	2.5V ~ 3.5V	0.3 (3.0 ~ 1.2)	280Ω	0.005mA	1000	100	0.07g	728-1040-1-ND	2.04	1.70	1.36	728-1040-2-ND	3427.20/3,600	HB414-I06E
2			0.2 (2.5 ~ 1.2)						728-1041-1-ND	1.92	1.60	1.28	728-1041-2-ND	3584.00/4,000	HB414-IV01E
3			0.14 (3.0 ~ 2.0)						728-1042-1-ND	2.04	1.70	1.36	728-1042-2-ND	3427.20/3,600	HB414-IV02E

TADIRAN Lithium Batteries

Lithium Thionyl Chloride (Li/SOCl₂) Cell: Non-Rechargeable
Tadiran Lithium Thionyl Chloride cells offer enduring quality. They are a superior power source, combining the highest energy density and voltage, longest service life, lowest self-discharge, plus the widest temperature range of any battery commercially available. These cells are ideally suited to provide long lasting power solutions for critical applications, including high tech electronics, military, consumer appliances, even state-of-the-art wireless communications. Tadiran batteries last by far longer than conventional cells, making them ideal for remote, portable, or seldom used equipment. **TL-51XX MBU Series:** • Very low self discharge rate • Suited for long-term operation at low current levels with long stands • Intermittent discharge with medium current level, provided that the average current exceeds the active current level **TL-2XXX XTRA™ Series:** • Excellent shelf life (10

years) • Very low self-discharge • Major improvement of voltage delay at the start of discharge at medium current levels (TMV) • Intermittent discharge at medium current levels **TL-59XX XTRA™ High Capacity Series:** • High capacity batteries for long term applications at low currents • For use in wireless sensors, utility meters, RFID tags, toll tags for toll road pricing, etc. **TLM-15XXMP and TLM-15XXHP Series:** • These two families, High Power and Medium Power, are specifically designed for applications requiring high power, long life and extended storage. **TLH-XXXX Extended Temperature Series:** • For Operation at Temperatures up to 125°C **Applications:** The following list represents actual applications where Tadiran Lithium cells and batteries are already being used as a main or backup source of energy: • Utility meters and A.M.R. equipment • PC computers and data loggers • CMOS memory and RTC backup • Toll tags and RFID transponders

• Programmable logic controllers
• Wireless alarm sensors • Sea buoys and remote monitoring systems • Military and Aerospace systems • Automatic External Defibrillators • Communications Systems • Telematics **UL Approval:** Tadiran Lithium Thionyl Chloride cells and batteries are UL recognized. UL File No. MH12193



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Dim. in mm

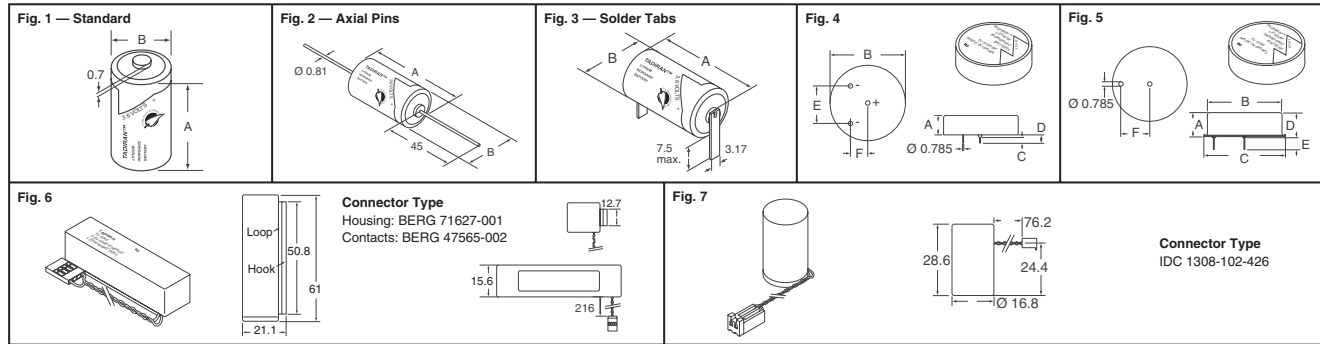


Fig.	Series	Type	Nom. (V)	Nominal Capacity (mAh)	Dimensions (mm)						Weight* (g)	Nominal Discharge Current (mA)	Digi-Key Part No.	Pricing			Tadiran Part No.	
					A	B	C	D	E	F				1	10	Carton		
1	High Power	AA	4	550	50.3	15.1					19.2	50	439-1042-ND	22.00	203.50	4306.50/270	TLM-1550HP	
		2/3AA	4	240	26.9	14.8					11	20	439-1045-ND	20.00	185.00	3625.00/250	TLM-1530HP	
		1/2AA	4	135	19.7	15.1					7.9	12	439-1046-ND	18.00	166.50	3262.50/250	TLM-1520HP	
		1/2AA	4	200	19.7	15.1					8.0	12	439-1047-ND	20.00	185.00	3625.00/250	TLM-1520MP	
		AA with Tab	4	800	50.5	14.8					20	50	439-1043-ND	24.00	222.00	4698.00/270	TLM-1550MP/22/T	
1	MBU	AA	3.6	950	25.2	14.5					9	0.5	439-1002-ND	4.72	43.66	1711.00/500	TL-5101/S	
		AA	3.6	2,100	50.5	14.5					17.4	2.0	439-1012-ND	5.78	53.47	2095.25/500	TL-5104/S	
		1/2AA with Leads	3.6	950	25.2	14.5					9	0.5	439-1003-ND	5.04	46.62	1096.20/300	TL-5101/P	
		AA with Leads	3.6	2,100	50.5	14.5					17.4	2.0	439-1013-ND	6.10	56.43	2211.25/500	TL-5104/P	
		1/10D	3.6	1,000	6.5	32.9	2	3.2	15.24	7.62	16.8	0.5	439-1023-ND	7.38	68.27	3745.35/700	TL-5134/P	
4	XTRA™	1/6D	3.6	1,700	10.2	32.9	2	3.2	15.24	7.62	21.5	0.5	439-1024-ND	9.76	90.28	3962.56/560	TL-5135/P	
		BEL	3.6	400	6.75	18.5	22.5	7.5	4.2	7.62	5.3	0.3	439-1025-ND	5.04	46.62	1827.00/500	TL-5186	
		1/2AA	3.6	1,000	25.2	14.5					9	1.0	439-1000-ND	4.94	45.70	1790.75/500	TL-2150/S	
		AA	3.6	2,100	50.5	14.5					17.4	2.0	439-1010-ND	6.10	56.43	2211.25/500	TL-2100/S	
		1/2AA with Leads	3.6	1,000	25.2	14.5					9	1.0	439-1001-ND	5.26	48.66	1144.05/300	TL-2150/P	
2	XTRA™ High Capacity	AA with Leads	3.6	2,100	50.5	14.5					17.4	2.0	439-1011-ND	6.40	59.20	2320.00/500	TL-2100/P	
		1/2AA	3.6	1,200	25.2	14.5					9.2	1.0	439-1004-ND	5.78	53.47	2095.25/500	TL-5902/S	
		2/3AA	3.6	1,650	33.5	14.5					11.8	1.3	439-1007-ND	6.52	60.31	2363.50/500	TL-5955/S	
		AA	3.6	2,400	50.5	14.5					17.6	2.0	439-1014-ND	7.24	66.97	1574.70/300	TL-5903/S	
		1/2AA with Leads	3.6	1,200	25.2	14.5					9.2	1.0	439-1005-ND	6.10	56.43	1326.75/300	TL-5902/P	
3	Extended Temperature	2/3AA with Leads	3.6	1,650	33.5	14.5					11.8	1.3	439-1008-ND	6.82	63.09	1236.13/250	TL-5955/P	
		AA with Leads	3.6	2,400	50.5	14.5					17.6	2.0	439-1015-ND	7.56	69.93	1370.25/250	TL-5903/P	
		1/2AA with Tabs	3.6	1,200	25.2	14.5					9.2	1.0	439-1006-ND	6.10	56.43	488.00/100	TL-5902/T	
		2/3AA with Tabs	3.6	1,650	33.5	14.5					11.8	1.3	439-1009-ND	6.82	63.09	2472.25/500	TL-5955/T	
		AA with Tabs	3.6	2,400	50.5	14.5					17.6	2.0	439-1016-ND	7.56	69.93	1644.30/300	TL-5903/T	
1	iXtra Waffers	1/2AA	3.6	900	25.2	14.5					9.6	1.0	439-1030-ND	6.96	64.38	2523.00/500	TLH-5902/S	
		2/3AA	3.6	1,400	33.5	14.5					12.5	1.3	439-1032-ND	7.86	72.71	2849.25/500	TLH-5955/S	
		AA	3.6	2,000	50.5	14.5					18	1.0	439-1034-ND	8.74	80.85	1900.95/300	TLH-5903/S	
		1/2AA with Leads	3.6	900	25.2	14.5					9.6	1.0	439-1031-ND	7.28	67.34	1593.40/300	TLH-5902/P	
		2/3AA with Leads	3.6	1,400	33.5	14.5					12.5	1.3	439-1033-ND	8.18	75.67	1482.63/250	TLH-5955/P	
4	Standard Battery Packs w/ Connectors	AA with Leads	3.6	2,000	50.5	14.5					18	1.0	439-1035-ND	9.06	83.81	1642.13/250	TLH-5903/P	
		1/10D	3.6	1,000	6.5	32.9	3.4	2.7	15.24	7.62	16.3	1.0	439-1037-ND	9.36	86.58	2035.80/300	TLH-5934/P	
		1/6D	3.6	1,500	10.2	32.9	3.5	2.7	15.24	7.62	21	1.0	439-1038-ND	12.36	114.33	2150.64/240	TLH-5935/P	
		1/10D	3.6	1,000	6.5	32.9	3.4	2.7	15.24	7.62	16.3	1.0	439-1040-ND	8.12	75.11	1766.10/300	TLH-5934/P	
		1/6D	3.6	1,700	10.2	32.9	3.5	2.7	15.24	7.62	21	1.0	439-1041-ND	10.74	99.35	1868.76/240	TLH-5935/P	
5	Standard Battery Packs w/ Connectors	2450	3.6	550	6.2	24			5.8	4.8	7.62	8.8	0.5	439-1036-ND	5.32	49.21	1851.36/480	TLH-2450/P
		2450	3.6	550	6.2	24			5.8	4.8	7.62	8.8	0.5	439-1039-ND	4.20	38.85	1461.60/480	TLH-2450/P
6	Standard Battery Packs w/ Connectors	MBU - AA	3.6	2,100						27	2.0	439-1026-ND	10.50	97.13	2283.75/300	TL-5242/W		
7	Standard Battery Packs w/ Connectors	XTRA™ - 1/2AA	3.6	1,000						12.5	1.0	439-1027-ND	8.30	76.78	3429.98/570	TL-5276/W		

* See "Ordering Information" for note on shipping charges on prepaid orders. Due to possible restrictions, a change in shipping method may be required.

More Product Available Online: www.digkey.com

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