

## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION

**A. PRODUCT IDENTIFICATION**

Lithium ion Rechargeable Battery Pack

**B. Battery Product Matrix**

**Customer (HP)**

<u>Battery Name</u>	<u>RMN</u>	<u>Customer P/N</u>	<u>WJ P/N</u>	<u>KS P/N</u>	<u>Cell applied</u>
AA06096XL	HSTNN-DB7L	852527-221	DAK128420-W090701HT DAK128420-W090702HA		LGC 606080A2 (PM)
		852527-241	DAK128420-W020702HT DAK128420-W020701HA		SDI 596080C (PM)
		852527-222	DAK128420-W090704HT DAK128420-W090703HA		LGC 606080A2 (PM)
		852527-242	DAK128420-W020703HT DAK128420-W020704HA		SDI 596080C (PM)
AB06053XL	HSTNN-DB8C	921408-2C1	DAK196793-W0P0701HT DAK196793-W0P0702HA		COS 316772, 307154 (PY)
		921408-271	DAK196793-W0G0702HT DAK196793-W0G0701HA		ATL 306771, 307053 (PY)
AD03051XL	HSTNN-DB8D	921409-271	DAK124450-W0G0701HT DAK124450-W0G0703HA		ATL506480 (PY)
		921409-2C1	DAK124450-W0P0702HT DAK124450-W0P0701HA		Coslight CA506479G (PY)
AH04041XL	HSTNN-DB7S	902402-2C2	DAK825400-W0P0701HT DAK825400-W0P0702HA		PL;COSLIGHT316581,2.7Ah (PY)
		902402-2B2	DAK825400-W0H0701HT DAK825400-W0H0702HA		PL;LISHEN316581,2.7Ah (PY)
AS03044XL	HSTNN-DB7Z	918340-271	DAK124050-W0G0701HT DAK124050-W0G0702HA		ATL 595490 (PY)
		918340-2C1	DAK124050-W0P0701HT DAK124050-W0P0702HA		Coslight CA595490 (PY)
BA06060XL	HSTNN-DB4E	696398-271	DAK122600-W0G0701HT DAK122600-W0G0702HA	DAK120260-K0G0701LH DAK120260-K0GRC01LH	ATL 426385 2.7Ah (PY)
BB09100	HSTNN-DB2O	632115-221		DAK100885-K090701LH DAK100885-K09RC02LH	LGC ICR18650 D1 (CL)
		632115-241		DAK100885-K020701LH	SDI ICR18650-30A (CL)

				DAK100885-K02RC01LH	
		632115-242		DAK108500-K020701HT DAK108500-K020702HA	SDI ICR18650-30A (CL)
BE06067XL	HSTNN-DB7Y	918045-2C1	DAK125150-W0P0701HT DAK125150-W0P0702HA		COSLIGHT416760,2.9Ah (PY)
		918045-271	DAK125150-W0G0701HT DAK125150-W0G0702HA		ATL416760,2.9Ah (PY)
BL04056XL	HSTNN-DB8M	L07353-2C1	DAK127300-W0P0703HT DAK127300-W0P0704HA		Coslight CA446872G, 3.75Ah (PY)
		L07353-241	DAK127300-W020703HT DAK127300-W020704HA		SDI PGF446872H, 3.75Ah (PY)
BM04056XL	HSTNN-DB8L	L02031-2C1	DAK127300-W0P0701HT DAK127300-W0P0702HA		Coslight CA446872G, 3.75Ah (PY)
		L02031-241	DAK127300-W020701HT DAK127300-W020702HA		SDI PGF446872H, 3.75Ah (PY)
BO04040XL	HSTNN-DB7H	826004-2C1	DAK125270-W0P0701HT DAK125270-W0P0702HA	DAK105270-K0P0702HA DAK105270-K0P0701HT	COSLIGHT CA336975-1 (PY)
		826004-2B1	DAK125270-W0H0701HT DAK125270-W0H0702HA	DAK105270-K0H0702HA DAK105270-K0H0701HT	LISHEN SP336975SK (PY)
BT04052XL	HSTNN-DB3Z	687517-2C1	DAK123515-W0P0701HT DAK123515-W0P0702HA	DAK120351-K0P0701LH DAK120351-K0PRC01LH	Coslight - CA605585 3.55Ah (PY)
		687517-241	DAK123570-W020701HT DAK123570-W020702HA	DAK120357-K020701LH DAK120357-K02RC01LH	SDI PGF 605586A (PY)
CA06055	HSTNN-DB4X	718676-241	DAK105100-W020701HT DAK105100-W020702HA	DAK100510-K020702LH DAK100510-K02RC03LH	SDI Li-i ICR18650-26H (CL)
		718676-221	DAK105100-W090702HT DAK105100-W090701HA	DAK100510-K090702LH DAK100510-K09RC02LH	LGC Li-i ICR18650-B4 (CL)
CA06055XL	HSTNN-DB4Y	718677-241	DAK105100-W020703HT DAK105100-W020704HA	DAK100510-K020701LH DAK100510-K02RC02LH	SDI Li-i ICR18650-28A (CL)
		718677-221	DAK105100-W090703HT DAK105100-W090704HA	DAK100510-K090703LH DAK100510-K09RC01LH	LGC ICR18650 C2 (CL)
		718677-222	DAK105400-W090701HT DAK105400-W090702HA	DAK105400-K090701HT DAK105400-K090702HA	LGC Li-i ICR18650 C4 2.8 (CL)
CA09100	HSTNN-DB4Z	718678-241	DAK108850-W020701HT DAK108850-W020702HA	DAK100885-K020702LH DAK100885-K02RC02LH	SDI ICR18650-30A (CL)
		718678-221	DAK108850-W090701HT DAK108850-W090702HA	DAK100885-K090702LH DAK100885-K09RC01LH	LGC ICR18650 D1 (CL)
CC03031	HSTNN-DB2E	628367-221	DAK102800-W090708HT DAK102800-W090707HA	DAK100280-K090706LH DAK100280-K09RC04LH	LGC Li-i ICR18650 C2 2.8 (CL)

		628367-251	DAK102800-W010708HT DAK102800-W010707HA	DAK100280-K010700LH DAK100280-K01RC02LH	Sanyo 18650ZT3 2.8Ah (CL)
CM03024XL	HSTNN-DB4Q	716723-271	DAK122200-W0G0701HT DAK122200-W0G0702HA	DAK120220-K0G0701LH DAK120220-K0GRC01LH	ATL564869 (PY)
		716723-2C1	DAK122200-W0P0702HT DAK122200-W0P0701HA	DAK120220-K0P0701LH DAK120220-K0PRC01LH	Coslight CA564868 (PY)
CO06060XL	HSTNN-DB5A	719320-271	DAK125400-W0G0702HT DAK125400-W0G0701HA	DAK120540-K0G0701LH DAK120540-K0G0702HA	ATL426385 (PY)
		719320-2C1	DAK125400-W0P0701HT DAK125400-W0P0703HA	DAK120540-K0P0701LH DAK120540-K0P0702HA	COSLIGHT426385 (PY)
		719320-2C2	DAK125400-W0P0704HT DAK125400-W0P0702HA	DAK125400-K0P0701HT DAK125400-K0P0702HA	COSLIGHT426385 (PY)
CS03046XL	HSTNN-DB6U	800231-271	DAK124080-W0G0701HT DAK124080-W0G0702HA	DAK124080-K0G0702HT DAK124080-K0G0701HA	ATL 506480,4.08AH (PY)
		800231-2C1	DAK124080-W0P0701HT DAK124080-W0P0702HA	DAK124080-K0P0701HT DAK124080-K0P0702HA	Coslight 506480,4.08AH (PY)
CI03048XL	HSTNN-DB7N	801517-221	DAK104220-W090703HA DAK104220-W090702HT		LG 606080 A2 4.22Ah (PM)
		801517-241	DAK104210-W020701HT DAK104210-W020702HA		SDI 596080C 4.212Ah (PM)
		801517-231	DAK104385-W070701HA DAK104385-W070702HT		PAN NCA596080SA 4.385Ah (PM)
		801517-222	DAK104220-W090706HA DAK104220-W090705HT		LG 606080 A2 4.22Ah (PM)
		801517-242	DAK104210-W020704HA DAK104210-W020703HT		SDI 596080C 4.212Ah (PM)
		801517-232	DAK104385-W070704HA DAK104385-W070703HT		PAN NCA596080SA 4.385Ah (PM)
DN02037	HSTNH-C412D-SD	780731-271	DAK829990-W0G0701HA DAK829990-W0G0701HT	DAK829990-K0G0702HA DAK829990-K0G0701HT	ATL 29A8C5 (PY)
		780731-2C1	DAK829990-W0P0701HT DAK829990-W0P0702HA	DAK829990-K0P0702HA DAK829990-K0P0701HT	Coslight CA29A8C5HV (PY)
DN04070XL	HSTNN-DB7P	856301-2C1	DAK124550-W0P0701HT DAK124550-W0P0702HA		Coslight CA606072G (PY)
DV04046XL	HSTNH-W612-DP	863693-2C1	DAK126180-W0P0703HT DAK126180-W0P0702HA		COSLIGHT CA2662C0G (PY)
		863693-2B1	DAK126180-W0H0703HT DAK126180-W0H0702HA		Lishen SP2763C1SF (PY)
DG06099XL	HSTNN-DB8G	925197-271	DAK128572-W0G0701HA		ATL606072,4.55Ah (PY)

			DAK128572-W0G0702HT		
EA02021	HSTNH-C408M-SD	799499-2B1	DAK825530-W0H0702HT DAK825530-W0H0701HA	DAK825530-K0H0703HT DAK825530-K0H0704HA	Lishen SP308576SE (PY)
		799499-2C1	DAK825530-W0P0701HT DAK825530-W0P0702HA	DAK825530-K0P0703HT DAK825530-K0P0704HA	Coslight CA308476HV (PY)
FC01015	HSTNH-F606-DP	838266-2C1	DAK824150-W0P0702HA DAK824150-W0P0701HT		Coslight CA466284G (PY)
GM02047XL	HSTNN-DB7X	917679-271	DAK126150-W0G0701HT DAK126150-W0G0702HA		ATL4473A9,6.15Ah (PY)
		917679-2C1	DAK126150-W0P0701HA DAK126150-W0P0702HT		COSLIGHT4473A9,6.15Ah (PY)
		917679-241	DAK126150-W020701HA DAK126150-W020702HT		SDI 4473A9, 6.15Ah (PY)
HT03041XL	HSTNN-DB8S	L11421-2C1	DAK123600-W0P0704HA DAK123600-W0P0703HT DAK123600-W0P0707HT DAK123600-W0P0708HA		COSLIGHT515974,3.72Ah (PY)
			HSTNN-DB8R	L11421-2C2	DAK123600-W0P0702HA DAK123600-W0P0701HT DAK123600-W0P0706HT DAK123600-W0P0705HA
	L11421-2D1	DAK123600-W110702HA DAK123600-W110701HT DAK123600-W110703HT DAK123600-W110704HA			
JC03031	HSTNN-DB8A	919681-241	DAK102800-W020709HT DAK102800-W020710HA		SDI 18650 28A 2.8Ah (CL)
	HSTNN-DB8E	919681-221	DAK102850-W090701HT DAK102850-W090704HA		LGC 18650 2.85Ah C4 (CL)
	HSTNN-DB8A	919681-231	DAK102800-W010711HT DAK102800-W010710HA		Sanyo 18650ZT 2.8Ah (CL)
JC04041	HSTNN-DB8B	919682-241	DAK102800-W020708HT DAK102800-W020707HA		SDI 18650 28A 2.8Ah (CL)
	HSTNN-DB8F	919682-221	DAK102850-W090703HT DAK102850-W090702HA		LGC 18650 2.85Ah C4 (CL)
	HSTNN-DB8B	919682-231	DAK102800-W010709HT DAK102800-W010712HA		Sanyo 18650ZT 2.8Ah (CL)
J104047XL	HSTNN-DB8I	901307-2C1	DAK826110-W0P0701HT DAK826110-W0P0702HA		Coslight CA386671G (PY)

KB06079XL	HSTNN-DB7R	902401-2C1	DAK126860-W0P0702HA DAK126860-W0P0701HT		COSLIGHT475083,3.43Ah (PY)
KC04053XL	HSTNN-DB8P	L08544-2B1	DAK123454-W0H0701HT DAK123454-W0H0702HA		LISHEN486566,3.54Ah (PY)
LA03031DF	HSTNN-DB6N	775625-221	DAK102792-W090701HT DAK102792-W090702HA	DAK102792-K090701HA DAK102792-K090702HT	LGC ICR18650C2 2.8Ah (CL)
		775625-222	DAK102800-W090709HT DAK102800-W090710HA	DAK102800-K090704HA DAK102800-K090703HT	LGC INR18650C4 2.8Ah (CL)
LA04048	HSTNN-DB5N	728249-241		DAK100320-K020702HA DAK100320-K020701HT	SDI LI-ION ICR18650-32A (CL)
LP03048XL	HSTNN-DB7C	807211-241	DAK104212-W020701HT DAK104212-W020702HA	DAK104212-K020701HA DAK104212-K020702HT	SDI 596080C 4.212Ah (PM)
		807211-221	DAK104220-W090701HT DAK104220-W090704HA	DAK104220-K090702HA DAK104220-K090701HT	LG 606080 A2 4.22Ah (PM)
MG04040XL	HSTNN-DB7F	812060-2C1	DAK125200-W0P0701HA DAK125200-W0P0702HT DAK825200-W0P0701HT DAK825200-W0P0702HA	DAK125200-K0P0702HA DAK125200-K0P0701HT	Coslight 316581 (PY)
		812060-2B1	DAK125200-W0H0701HA DAK125200-W0H0702HT DAK825200-W0H0702HT DAK825200-W0H0701HA	DAK125200-K0H0702HA DAK125200-K0H0701HT	Lishen 316581 (PY)
MM02021	HSTNH-C408M-SD	780730-2B1	DAK825530-W0H0703HT DAK825530-W0H0704HA	DAK825530-K0H0701HA DAK825530-K0H0702HT	Lishen SP308576SE (PY)
		780730-2C1	DAK825530-W0P0704HT DAK825530-W0P0703HA	DAK825530-K0P0701HA DAK825530-K0P0702HT	Coslight CA308476HV (PY)
MU06047	HSTNN-DB0W	586007-2A1	DAK100440-W0L0701LH	DAK100440-K0L0701LH	BAK C4 2.2Ah (CL)
		586007-2A2	DAK100440-W0L0702LH	DAK100440-K0L0703LH	BAK C4 2.2Ah (CL)
		586007-2A3		DAK100450-K0L0700LH	BAK CA 2.25Ah (CL)
		586007-251	DAK100440-W010701LH	DAK100440-K010701LH	SANYO A 2.2Ah (CL)
		586007-252	DAK100440-W010702LH	DAK100440-K010703LH	
			DAK100440-W01RC02LH	DAK100440-K01RC03LH	SANYO A 2.2Ah (CL)
		586007-253	DAK100440-W010703LH	DAK100440-K010706LH	
			DAK100440-W01RC01LH	DAK100440-K01RC02LH	SAN AY 2.25Ah(CL)
		586007-241	DAK100440-W020701LH	DAK100440-K020701LH	SDI 22F 2.2Ah (CL)
586007-242	DAK100440-W020702LH	DAK100440-K020703LH			
	DAK100440-W02RC01LH	DAK100440-K02RC02LH	SDI 22F 2.2Ah (CL)		
586007-243		DAK100440-K020709LH DAK100440-K020710HA	SDI 22FM 2.2Ah (CL)		

		586007-221	DAK100440-W090701LH	DAK100440-K090701LH	LGC S3 2.2Ah (CL)
		586007-222	DAK100440-W090702LH DAK100440-W09RC01LH	DAK100440-K090702LH DAK100440-K09RC01LH	LGC S3 2.2Ah (CL)
NB02028XL	HSTNN-DB5K	726241-2C1		DAK120400-K0P0702HT DAK120400-K0P0703HA	COSLIGHT CA3976A8, 4.05Ah (PY)
OL02033XL	HSTNN-DB5Z	750334-2C1	DAK124460-W0P0702HT DAK124460-W0P0701HA	DAK120446-K0P0701HT DAK120446-K0P0702HA	COSLIGHT4165B8,4.56AH (PY)
		750334-2B1	DAK124460-W0H0702HT DAK124460-W0H0701HA	DAK120446-K0H0702HT DAK120446-K0H0701HA	LISHEN4165B8,4.56AH (PY)
OY06021XL	HSTNN-DB6A	750335-2C1	DAK122850-W0P0701HT DAK122850-W0P0702HA	DAK120285-K0P0702HT DAK120285-K0P0701HA	COSLIGHT264568,0.95AH (PY)
		750335-2B1	DAK122850-W0H0702HT DAK122850-W0H0701HA	DAK120285-K0H0702HT DAK120285-K0H0701HA	LISHEN264568,0.95AH (PY)
PA06062	HSTNN-DB7K	849571-221	DAK105700-W090701HT DAK105700-W090702HA		LGC INR18650 C4 (CL)
		849571-251	DAK105600-W010701HT DAK105600-W010702HA		SAN Li-i UR18650ZT (SUZ) (CL)
PI06047	HSTNN-DB4N	709988-241	DAK104400-W020701HT DAK104400-W020702HA	DAK100440-K020705LH DAK100440-K02RC04LH	SDI ICR18650-22F (CL)
		709988-242	DAK104400-W020704HT DAK104400-W020703HA	DAK100440-K020707LH DAK100440-K020712HA	SDI ICR18650-22FM (CL)
		709988-251	DAK104400-W010703HT DAK104400-W010704HA	DAK100440-K010711LH DAK100440-K01RC04LH	Sanyo UR 18650 AY (CL)
		709988-252	DAK104400-W010701HT DAK104400-W010702HA	DAK100440-K010714HT DAK100440-K010713HA	Sanyo UR 18650 AY (Suzhou) (CL)
		709988-221	DAK104400-W090702HT DAK104400-W090701HA	DAK100440-K090703LH DAK100440-K09RC02LH	LGC ICR18650S3 (CL)
PI06062	HSTNN-DB4O	709989-241	DAK105585-W020704HT DAK105585-W020703HA	DAK100558-K020704LH DAK100558-K02RC01LH	SDI ICR18650-28A (CL)
		709989-221	DAK105585-W090702HT DAK105585-W090703HA	DAK100558-K090704LH DAK100558-K09RC02LH	LGC ICR 18650C2 (CL)
PK03056XL	HSTNN-DB6S	788237-2C1	DAK124960-W0P0701HT DAK124960-W0P0702HA	DAK124960-K0P0701HT DAK124960-K0P0702HA	Coslight CA3674C0HV-2 (PY)
		788237-2C2	DAK124960-W0P0703HT DAK124960-W0P0704HA		
		788237-2C3	DAK124960-W0P0706HT DAK124960-W0P0705HA		
PL03043	HSTNN-DB6O	778813-221	DAK103820-W090701HT DAK103820-W090702HA	DAK123820-K090701HT DAK123820-K090702HA	LGC 606080L1 3.82AH (PM)

		778813-231	DAK104180-W070701HT DAK104180-W070702HA	DAK124180-K070701HT DAK124180-K070702HA	PANASONIC NCA596080 4.18AH (PM)
PS03043XL	HSTNN-DB6R	787088-221	DAK103820-W090703HT DAK103820-W090704HA	DAK123820-K090703HT DAK123820-K090704HA	LGC 606080L1 3.82AH (PM)
		787088-241	DAK103900-W020701HT DAK103900-W020702HA	DAK123900-K020701HT DAK123900-K020702HA	SDI 596080A 3.90AH (PM)
PO02037XL	HSTNN-DB7G	823908-2C1	DAK124870-W0P0701HT DAK124870-W0P0702HA	DAK124870-K0P0702HA DAK124870-K0P0701HT	Coslight CA3674C0HV-2 (PY)
		823908-2D1	DAK124950-W110702HA DAK124950-W110701HT		Highpower HPP3674120AB (PY)
PF06095XL	HSTNN-DB7M	852801-2C1	DAK128300-W0P0702HT DAK128300-W0P0701HA		Coslight 466484G (PY)
RO04040XL	HSTNN-DB6Y	805044-251	DAK102710-W010702HT DAK102710-W010701HA		SAN UR18650ZTA(SUZ) (CL)
		805044-221	DAK102710-W090703HT DAK102710-W090704HA		LGC ICR18650 D1 (CL)
RO04041	HSTNN-DB8N	L07348-221	DAK102850-W090707HT DAK102850-W090708HA		LGC INR18650 C4 (CL)
RO04044	HSTNN-DB7A	805045-241	DAK102950-W020702HT DAK102950-W020701HA	DAK102950-K020703HT DAK102950-K020704HA	SDI ICR18650-30A (CL)
		805045-221	DAK102950-W090701HT DAK102950-W090702HA	DAK102950-K090701HT DAK102950-K090702HA	LGC ICR18650 D1 (CL)
		805045-222	DAK103015-W090703HT DAK103015-W090702HA		LGC INR18650 D2 (CL)
		805045-251	DAK102950-W010703HT DAK102950-W010704HA		SAN UR18650ZTA(SUZ) (CL)
RI04041	HSTNN-DB8O	L07349-221	DAK102850-W090705HT DAK102850-W090706HA		LGC INR18650 C4 (CL)
RI04044	HSTNN-DB7B	805047-241	DAK102950-W020703HT DAK102950-W020704HA	DAK102950-K020701HT DAK102950-K020702HA	SDI ICR18650-30A (CL)
		805047-221	DAK102950-W090704HT DAK102950-W090703HA	DAK102950-K090703HT DAK102950-K090704HA	LGC ICR18650 D1 (CL)
		805047-222	DAK103015-W090704HT DAK103015-W090701HA		LGC INR18650 D2 (CL)
		805047-251	DAK102950-W010702HT DAK102950-W010701HA		SAN UR18650ZTA(SUZ) (CL)
SE04041XL	HSTNN-DB7Q	860724-2C1	DAK825460-W0P0702HT DAK825460-W0P0701HA		Coslight CA316581G-H (PY)
		860724-2B1	DAK825460-W0H0702HT		Lishen SP316581SG-C (PY)

			DAK825460-W0H0701HA			
SS03050XL	HSTNN-DB8J	932823-271	DAK124330-W0G0702HA DAK124330-W0G0701HT		ATL 614882, 4.33Ah (PY)	
		932823-2C1	DAK124330-W0P0702HA DAK124330-W0P0701HT		Coslight 614882G, 4.33Ah (PY)	
SX03031	HSTNN-DB2J	632014-241		DAK100280-K020704LH	SDI Li-i ICR18650-28A (CL)	
		632014-221		DAK100280-K090707LH	LGC ICR18650C2 (CL)	
SX03031PCR		632014-242		DAK100280-K020706LH DAK100280-K02RC02LH	SDI Li-i ICR18650-28A (CL)	
		632014-222		DAK100280-K090708LH DAK100280-K09RC03LH	LGC ICR18650C2 (CL)	
SX09100		HSTNN-DB2M	632017-241		DAK100900-K020701LH	SDI Li-I ICR 18650-30A (CL)
			632017-221		DAK100900-K090701LH	LGC ICR18650 D1 (CL)
SX09100PCR	632017-242			DAK100900-K020702LH DAK100900-K02RC01LH	SDI Li-I ICR 18650-30A (CL)	
	632017-222			DAK100900-K090703LH DAK100900-K09RC01LH	LGC ICR18650 D1 (CL)	
SK02030XL	HSTNN-DB6G	756186-271		DAK120415-K0G0702HA DAK120415-K0G0701HT	ATL556787,4.15Ah (PY)	
		756186-2C1		DAK120415-K0P0702HA DAK120415-K0P0701HT	COSLIGHT556787,4.15Ah (PY)	
SN03044XL	HSTNN-DB6V	800232-271	DAK123910-W0G0702HT DAK123910-W0G0701HA	DAK123910-K0G0701HT DAK123910-K0G0702HA	ATL505295,3.91AH (PY)	
		800232-241	DAK123910-W020702HT DAK123910-W020701HA	DAK123910-K020701HT DAK123910-K020702HA	SDI505295,3.91AH (PY)	
SR04070XL	HSTNN-DB7W	917678-271	DAK124550-W0G0701HA DAK124550-W0G0702HT		ATL606072,4.55Ah (PY)	
		917678-2B1	DAK124550-W0H0701HA DAK124550-W0H0702HT		LISHEN606072,4.55Ah (PY)	
SR03052XL	HSTNN-DB8Q	L08934-2B1	DAK124550-W0H0704HT DAK124550-W0H0703HA		LISHEN606072,4.55Ah (PY)	
		L08934-2C1	DAK124550-W0P0704HA DAK124550-W0P0703HT		COSLIGHT606072,4.55Ah (PY)	
TA03051XL	HSTNN-DB7O	854047-271	DAK124420-W0G0702HA DAK124420-W0G0701HT		ATL 506480 4.42Ah (PY)	
		854047-2C1	DAK124420-W0P0702HA DAK124420-W0P0701HT		Coslight 506479G 4.42Ah (PY)	
		854047-221	DAK124420-W090702HA DAK124420-W090701HT		LG 506480 4.42Ah (PY)	



TE04063XL	HSTNN-DB7T	905175-2C1	DAK124112-W0P0701HT DAK124112-W0P0702HA		Coslight CA664878G (PY)
		905175-271	DAK124112-W0G0702HT DAK124112-W0G0701HA		ATL664878 (PY)
TE04061XL	HSTNN-DB8T	L15188-2C1	DAK123993-W0P0701HT DAK123993-W0P0702HA		Coslight CA664878G (PY)
TT03056XL	HSTNN-DB8K	932824-2C1	DAK124850-W0P0701HA DAK124850-W0P0702HT		Coslight CA615383G, 4.85Ah (PY)
VI04040XL	HSTNN-DB6L	756481-241	DAK102710-W020701HT DAK102710-W020702HA	DAK100271-K020702HT DAK100271-K020701HA	SDI ICR18650-30A (CL)
		756481-221	DAK102710-W090701HT DAK102710-W090702HA	DAK100271-K090702HT DAK100271-K090701HA	LGC ICR18650 D1 (CL)
VK04041	HSTNN-DB4M	708358-241		DAK100280-K020703LH DAK100280-K02RC01LH	SDI ICR18650-28A (CL)
		708358-221		DAK100280-K090703LH DAK100280-K09RC02LH	LGC ICR18650C2 (CL)
VV09090XL	HSTNN-DB7D	808398-2C1	DAK127905-W0P0702HA DAK127905-W0P0701HT	DAK107905-K0P0702HA DAK107905-K0P0701HT	COSLIGHT336975 (PY)
		808398-2B1	DAK127905-W0H0702HA DAK127905-W0H0701HT	DAK107905-K0H0701HT DAK107905-K0H0H01HA	LISHEN336975 (PY)
		808398-2C2	DAK127905-W0P0704HT DAK127905-W0P0703HA		COSLIGHT336975 (PY)
		808398-2B2	DAK127905-W0H0704HT DAK127905-W0H0703HA		LISHEN336975 (PY)
YB06084XL	HSTNN-DB8H	928427-271	DAK127260-W0G0702HA DAK127260-W0G0701HT		ATL485083,3.64Ah (PY)
ZN08092XL	HSTNN-DB7U	907428-2C1	DAK125975-W0P0701HT DAK125975-W0P0702HA		Coslight CA336975G (PY)

**Notice 1: CL – Cylindrical type; PM – Prismatic type; PY – Polymer type**

**Notice 2:**

- \* Lithium ion cells and batteries may be offered for transport if they meet the following :
- \* for cells, the Watt-hour rating is not more than 20 Wh;
- \* for batteries, Watt-hour rating is not more than 100 Wh. The Watt-hour rating must be marked on the outside of the battery case except those manufactured before 1 January 2009 which may be transported without this marking until 31 December 2010;

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**2. Hazards Identification**

Hazard classification:

The product is not classified for GHS. The batteries are defined as "articles", they are exempt from the requirements of the Hazard Communication Standard.

Primary routes of entry: Skin contact. Skin absorption, eye contact, inhalation and ingestion: NO

Symptoms of exposure: Skin contact. No effect under routine handling and use.

Skin absorption: No effect under routine handling and use.

Eye contact: No effect under routine handling and use.

Inhalation: No effect under routine handling and use.

Reported as carcinogen: Not applicable

According to the OSHA Hazard Communication Standard (29 CFR 1910.1200) this product is not classified as hazardous.

**3. Composition/information on ingredients**

Composition

CAS number: Not specified (A-1 and A-2):

A-1. Cases: Plastic or Metal Not dangerous

A-2. Printed Circuit Board Assembly Not dangerous

A-3. Lithium Ion Cell:				CAS No.
Aluminum	2%	-	10%	7429-90-5
Metal Oxide (proprietary)	20%	-	50%	12190-79-3
Polyvinylidene fluoride (PVDF)	0%	-	5%	24937-79-9
Copper	2%	-	10%	7440-50-8
Carbon (proprietary)	10%	-	30%	1333-86-4
Electrolyte (proprietary)	10%	-	20%	Main Component: 96-49-1, 623-53-0, 108-32-7

#### 4. First Aid Measures

**IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING , THE FOLLOWING ACTIONS ARE RECOMMENDED.**

Inhalation: Leave area immediately and seek medical attention.

Eye contact: Rinse eyes with water for 15 minutes and seek medical attention.

Skin contact: Wash area thoroughly with soap and water and seek medical attention.

Ingestion: Drink milk/water and induce vomiting; seek medical attention

#### 5. Fire Fighting Measures

Extinguishing Media: Use extinguishing media suitable for the materials that are burning. Use metal fire extinction powder or dry sand if only few cells are involved.

Firefighting Equipment: Use NIOSH/MSHA approved full-face self-contained breathing apparatus ( SCBA) with full protective gear.

#### 6. Accidental Release Measures

On Land: Place material into suitable containers and call local fire/police department.

In water: If possible. Remove from water and call local fire/police department

#### 7. Handling and Storage

Handling:

Do not expose the battery to excessive physical shock or vibration. Short-circuiting should be avoided. However, accidental short-circuiting for a few seconds will not seriously affect the battery. Prolonged short circuits will cause the battery to rapidly lose energy, could generate enough heat to burn skin. Sources of short circuits include jumbled batteries in bulk containers, coins, metal jewelry, metal covered tables, or metal belts used for assembly of batteries in devices. To minimize risk of short-circuiting, the protective case supplied with the battery should be used to cover the terminals when transporting or storing the battery. Do not

disassemble or deform the battery. Should an individual cell within a battery become ruptured, do not allow contact with water.

Storage:

The lithium ion battery should be between 25% and 75% of full charge when stored for a long period of time. Store in a cool, dry, well ventilated area. And temperature above 100 degrees Celsius can result in loss of battery performance, leakage, or rust. Do not expose the battery to open flames.

## 8. Exposure Controls / Personal Protection

Engineering Controls : Keep away from heat and open flame. Store in a cool dry place.

Personal Protection :

Respirator : Not required during normal operations. SCBA required in the event of a fire.

Eye/Face Protection : Not required beyond safety practices of employer.

Gloves : Not required for handling of battery

Foot Protection: Steel toed shoes recommended for large container handling.

## 9. Physical and Chemical Properties

State	solid
Odor	N/A
PH	N/A
Vapor pressure	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

## 10. Stability and Reactivity

Reactivity: None

Incompatibilities: None during normal operation. Avoid exposure to heat, open flame, and corrosives.

Conditions To Avoid: Avoid exposure to heat and open flame. Don not puncture, crush or incinerate.

## 11. Toxicological Information

This product does not elicit toxicological properties during routine handling and use.

## 12. Ecological Information

Lithium ion battery pack can be disposable in accordance with appropriate federal, state and local regulations.

## 13. Disposal Considerations

Recommended methods for safe and environmentally preferred disposal:

Product(waste from residues)

Do not throw out a used battery. Recycle it through the recycling company.

Contaminated packaging

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery contaminates, dispose as industrial wastes subject to special control.

## 14. Transport Information

Lithium ion batteries containing no more than 1.5g/cell and 8g/battery pack and also power is no more than 20Wh/cell and 100Wh/battery pack of lithium can be treated as “Non-dangerous goods” under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, provided that packaging is strong and prevent the products from short-circuit.

With regard to air transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions (2017-2018 Edition)
- The International Air Transport Association (IATA) Dangerous Goods Regulations (59<sup>th</sup> Edition, 2018) Special Provisions A154, A164& package instruction Section II of 965, 966 and 967 for lithium ion batteries), or package instruction Section IB of 965.
- The International Maritime Dangerous Goods (IMDG) Code (2016 Edition), Special Provision 188.
- The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA (Part 49 CFR Sections 100-185),
- The Office of Hazardous Materials Safety within the US Department of Transportation’s (DOT) Research and Special Programs Administration (RSPA), and
- The UN Recommendations on the Transport of Dangerous Goods Model Regulations

and the Manual of Tests and Criteria.

Our products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations 38.3 (T1-T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Testes and Criteria that can be treated as “Non-Dangerous Goods”.

Lithium ion batteries only transport by air in accordance with PI965 at a state of charge (SOC) not to exceed 30 percent of rated design capacity.

UN# for this shipment is 3480, Haz-Mat class is 9, Proper DOT shipping name is Lithium ion batteries. Packing group IB

**15. Regulatory Information**

OSHA Hazard communication standard (29 CFR 1910.1200)

Hazardous                       Non-hazardous

**16. Other information -- UN Test Result**

There is no hazards in accordance with the UN recommendations tests (Manual of Tests and Criteria , Part III , sub-section 38.3 ). This product passed 1.2 M drop test and comply with UN 38.3.

No	ITEMS	RESULT	REMARKS
1	Altitude Simulation	Pass	
2	Thermal Test	Pass	
3	Vibration	Pass	
4	Shock	Pass	
5	External Short Circuit	Pass	
6	Impact	Pass	For cell only
7	Overcharge	Pass	
8	Forced discharge	Pass	