

Create a first-class industrial battery organization

创建世界一流工业电池企业



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Company Profile
& Battery Catalogue



公司简介 PROFILE

- ◆香港独资公司，外資管理。
- ◆公司前身是香港万通科技有限公司，成立于1986年。
- ◆德万是广东惠阳市的大型密封铅酸蓄电池厂。
- ◆生产厂房占地超过七万平方米，建筑面积底层超过5万多平方米，厂房长550米，总投资价值超过5000万美元。
- ◆生产DiaMec牌全系列密封铅酸蓄电池2V,4V,6V,12V。
- ◆铅粉、极板、装配（包括电池壳）全部一条龙自主配套生产。
- ◆德万拥有先进的瑞士进口的ARL金属光谱分析仪、化验室、德国迪卡龙电池实验室测试仪器及迪卡龙充放电生产系统，作为品保及研发的宝贵资源。
- ◆德万已获得UL、俄罗斯GOST、CE证书。
- ◆德万工厂同时也获得土耳其TSE认可及德国VDS认证。
- ◆德万为ISO9001:2008 认可机构。
- ◆年销售额达6000多万美元。
- ◆年生产能力为密封式铅酸蓄电池约3000万个、约1,500,000KVA。
- ◆Registered Company in HK, managed with foreign mentality
- ◆Former company is Manton Technology Limited established in 1986.
- ◆Our China factory shall be the biggest sealed lead acid battery factory in Guangdong-HuiYang City.
- ◆Total site over 70000 square meter , construction land over 50000 square meter and 550 meter long.
- ◆Total investment value is over USD50 million.
- ◆Manufacture full range of DiaMec brand sealed lead acid rechargeable battery 2V,4V,6V and 12V series.
- ◆We control quality from the material production process of oxidation, plate production, to battery assembly (including in-house plastic case injection & moulding dept).
- ◆DiaMec has in-house advanced Swiss ARL Spectrometer, Chemical Lab, Germany Digatron full set battery-testing Laboratory Equipment & Digatron charge-discharge production system to ensure quality & support R&D.
- ◆DiaMec batteries are honourably recognized by UL, VDS and Russian GOST, and also have CE mark.
- ◆Besides, DiaMec factory has been recognized by Turkey TSE.
- ◆ISO 9001:2008 Certified.
- ◆Annual sales turn over is over USD60 million
- ◆Annual production capacity is 30 million pieces and 1,500,000KVA power.





AUTOMATIC GRID CASTING



AUTOMATIC LEAD OXIDE MACHINE
◇12 tonne + 12 tonne



CURING STATIONS
◇Temperature & humidity regulated



**AUTOMATIC ACTIVE MATERIAL MIXING
& PASTING PLANT**



IN-HOUSE MOULDING DEPT.



COMPUTERIZED FORMATION PLANT
◇24 formation tanks in double rows



IN-HOUSE PLASTICS INJECTION



EXTENSIVE ASSEMBLY LINES



100% IN-PRODUCTION FQC MULTI-TESTING



COMPUTERIZED CHARGE-DISCHARGE STATION
◇over 1800 charging circuits & over 50 chargers



TEMPORARY STORAGE BATTERY



ADVANCED QC TESTING EQUIPMENT



DMD Deep Cycle GEL series

GEL electrolyte with less self-discharge & longer cycle life
2V200AH-3000AH/10HR
12V 24AH/20HR
12V 33AH-200AH/10HR



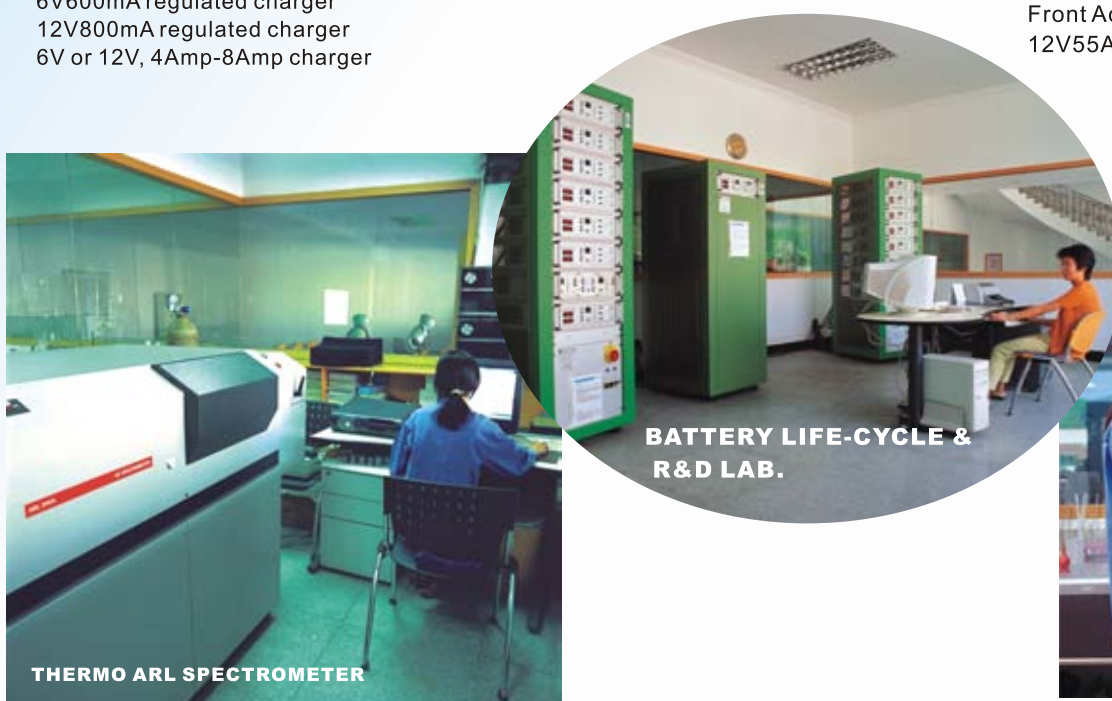
Regulated Charger

specialy designed for lead acid battery
6V600mA regulated charger
12V800mA regulated charger
6V or 12V, 4Amp-8Amp charger



FT Front Terminal Series (8-10 years life)

Front Access Terminal for 19",21",23" rack
12V55AH-150AH/10HR



THERMO ARL SPECTROMETER

BATTERY LIFE-CYCLE & R&D LAB.

CHEMICAL LAB.



Micro Series

(3-5 years life)

DM: For general use
DMC: For cycle use
DMS: For security use
DMU: For UPS or other
High Rate discharge use

4V3.5AH/20HR
6V1AH~6V12AH/20HR
12V0.8AH~12V26AH/20HR



Macro-Series

DML Long life series
DML MACRO : 2V100AH-2V3000AH/10HR (12-15 years life)
DM MACRO : 6V100AH-6V225AH/10HR (8-10 years life)



DMU Series

DMU High Rate of discharge series
DMU Micro: 12V5AH-28AH /20HR (3-5 years life)
DMU Medium: 12V33AH-200AH/10HR (8-10 years life)



DM MICRO series (3–5 years floating life)



DM MICRO series is the most popular range used in a wide range of products. It is designed to provide 3-5 years float charge service life at 20°C/68°F in standby charging use, or more than 250 cycles with 100% DOD (depth of discharge) in cycle use.

Applications

DM : for general applications (including UPS, security system...etc)

DMC : specially for cycle use or other applications with longer cycle life (e.g. ride-on toy cars)

DMS : mainly for security applications ("E" refer to economical models)

DMU : Higher power density, specially superior in HR high discharge rate applications, like UPS and power tool.

MICRO Battery Model	Nominal Voltage	Rated Capacity at 20HR to 1.75V/Cell	Dimension (mm)				Approx Weight ± 3%	Standard Terminal	Terminal Position
			Length	Width	Case Height	Total Height including terminal			
			L ± 1mm	W ± 1mm	H ± 2mm	TH ± 2mm	Kg		
DM 4-3.5	4V	3.5AH	90.5	34.5	56.5	60.5	0.52	F4-TAB 187B	C
DM4-4.5	4V	4.5AH	47.1	46.6	101.5	108	0.52	F1-TAB 187E	C
DM 6-1.1	6V	1.1AH	97	24.5	51.5	56.5	0.28	F9-TAB 189B	C
DM 6-1.3		1.3AH					0.30		
DM 6-2.8	6V	2.8AH	66.5	33.5	100	103	0.52	F1-TAB 187E	C
DM 6-3.2	6V	3.2AH	125	33	60	65	0.62	F1-TAB 187E	C
DM 6-3.3	6V	3.3AH	134.5	35	60	65	0.66		
DM 6-2.4	6V	2.4AH	70	47	101	106	0.58	F1-TAB 187E	C
DM 6-4		4AH					0.68		
DM 6-4.2		4.2AH					0.70		
DM 6-4.5		4.5AH					0.75		
DMC 6-4.5		4.5AH					0.80		
DMU 6-5		5AH					0.80		
DM 6-5S	6V	4.2AH	67	67	96.5	112	0.70	S1-Spring	J
DM 6-7	6V	7AH	151	34	94	99	1.05	F1-TAB 187E	C
DM 6-7.5		7.5AH					1.15		
DM 6-8		8AH					1.20		
DM 6-10		10AH					1.64		
DM 6-12	6V	12AH	151	51	95	99	1.77	F1-TAB 187E	C
DM 12-0.8	12V	0.8AH	96	25	62	62	0.31	C1-Wire& Connector	I
DM 12-1.1	12V	1.1AH	97	43	52	57	0.50	F8-TAB 188C	F
DM 12-1.3		1.3AH					0.57		
DM 12-1.8	12V	1.8AH	177.5	35	61.5	66	0.84	F3-TAB 187A	C
DM 12-2.2		2.2AH					0.91		
DM 12-3	12V	3AH	134	67	61	66	1.23	F1-TAB 187E	E
DM 12-3.3		3.3AH					1.30		
DM 12-3.5		3.5AH					1.42		
DM 12-4		4AH					1.34		
DM 12-4.2	12V	4.2AH	89.5	70	100	105.5	1.35	F1-TAB 187E	C
DM 12-4.5		4.5AH					1.50		
DMU 12-5		5AH					1.63		
DMS 12-6.5E1		5.3AH					1.85		
DMS 12-6.5E2	12V	6AH	151	65	93.5	99	1.93	F1-TAB 187E	E
DM 12-6.5		6.5AH					1.95	F1-TAB 187E	
DM 12-7		7AH					2.05		
DM 12-7.2		7.2AH					2.07		
DMU 12-7.5		7.5AH					2.26		
DMC 12-7.5		7.5AH					2.38	F2-TAB 250A	
DMU 12-8		8AH					2.38		
DMU 12-9		9AH					2.57		
DM 12-10 V		12V					10AH	151	
DM 12-10	12V	10AH	151	99	95	100	3.23	F1-TAB 187E	E
DM 12-12		12AH					3.51		E
DMC 12-12		13AH					3.51		F2-TAB 250A
DM 12-15	12V	15AH	181	76	167	167	4.85	B1-M5	D
DM 12-17		17AH					4.90		
DM 12-18		18AH					5.37		
DMU 12-20		20AH					5.72		
DMU 12-22	22AH	6.05	I2-M5						
DMU 12-24	12V	24AH	175	166	127	127	7.20	B1-M5	
DMU 12-26A		26AH					7.84		
DMU 12-26B		26AH					166		127

Like all DIAMEC models (except GEL batteries), with the adoption of valve-regulated AGM (Absorbed Glass Mat) technology and high performance plates, it is leak proof, maintenance-free and automatic pressure release.

All DIAMEC series are classified as "non-spillable" and meet all requirements of IATA for air transportation.

DMU High Rate Discharge series

DMU MICRO series (3–5 years floating life)

DMU MEDIUM series (8–10 years floating life)



DMU medium High Rate discharge series has been developed with high efficiency active material and high density construction to stimulate higher power output with lower internal resistance. It is designed to provide 8-10 years float charge service life at 20°C/68°F in standby charging use. With valve-regulated AGM technology, it is leak proof, maintenance-free and automatic pressure release. It shows superior high power efficiency in UPS and other high discharge rate applications, and it is also used in general applications.



DMU MICRO High Rate discharge: 5AH-28AH /20HR , provide 3-5 years designed life
DMU MEDIUM High Rate discharge: 33AH-200AH/10HR , provide 8-10 years designed life

Applications

UPS (Uninterruptible Power Supply)
Electric Vehicle, like wheelchair
Photovoltaic Solar System
Telecommunication System

Power tool
Power Generator
Medical Equipment
Marine Application



DMU MICRO Battery Model	Nominal Voltage	Rated Capacity at 20HR to 1.75V/Cell	Discharge Watt/cell @15min to 1.67V/cell (Watt/cell)	Dimension (mm)				Approx Weight ±3%	Standard Terminal	Terminal Position
				Length	Width	Case Height	Total Height including terminal			
				L ±2mm	W ±2mm	H ±3mm	TH ±3mm			
DMU 12-5	12V	5AH	23W	89.5	70	100	105.5	1.63	F2-TAB 250A	C
DMU 12-7.5	12V	7.5AH	27W	151	65	93.5	99	2.26	F1-TAB 187E	E
DMU 12-8		8AH	30W					2.38	F2-TAB 250A	
DMU 12-9		9AH	33W					2.57	F2-TAB 250A	
DMU 12-12	12V	12AH	52W	151	99	95	100	3.51	F2-TAB 250A	E
DMU 12-20	12V	20AH	75W	181	76	167	167	5.72	I2-M5	D
DMU 12-22	12V	22AH	79W					6.05	I2-M5	D
DMU 12-26A	12V	26AH	87W	175	166	127	127	7.84	B1-M5	D
DMU 12-26B	12V	26AH	87W	166	127	175	184	7.84	B1-M5	D
DMU MEDIUM Battery Model	Nominal Voltage	Rated Capacity at 10HR to 1.75V/Cell	Discharge Watt/cell @15min to 1.67V/cell (Watt/cell)	Dimension (mm)				Approx Weight ±3%	Standard Terminal	Terminal Position
				Length	Width	Case Height	Total Height including terminal			
				L ±2mm	W ±2mm	H ±3mm	TH ±3mm			
DMU 12-33	12V	33AH	100W	195	130.5	154	184	10.1	B2-M5	D
DMU 12-35	12V	35AH	140W	197.5	165	170	170	11.8	I1-M6	D
DMU 12-40		40AH	160W					12.4		
DMU 12-44		44AH	176W					13.4		
DMU 12-60	12V	60AH	235W	330	173	167	173	19.5	I3-M8 Threaded Insert Terminal Stud	D
DMU 12-65		65AH	255W					20.3		
DMU 12-80		80AH	310W					22.4		
DMU 12-90	12V	90AH	300W	330	173	217	223	26.2	I3-M8 Threaded Insert Terminal Stud	C
DMU 12-100		100AH	390W					29.6		
DMU 12-120	12V	120AH	468W	485	170	242	242	37.8	I3-M8 Threaded Insert Terminal Stud	C
DMU 12-150		150AH	580W					43.2		
DMU 12-180		180AH	700W					53.2		
DMU 12-200	12V	200AH	780W	523	239	217	223	59.2		F



DML MACRO Long life Stationery series

DML MACRO 2V Series (12-15 years floating life)

DM MACRO 6V Series (8-10 years floating life)



DML MACRO 2V Long life series utilizes thick electrode grid and micro porous AGM separator which reduce corrosion rate, hence are designed to provide long designed float charge service life of 12-15 years at 20 °C/68 °F in standby charging use; and DM MACRO 6V batteries has 8-10 years designed float service life. They are leak proof, maintenance-free and automatic pressure release. It is used in high end stationery applications.

Applications

Photovoltaic Solar System
Wind Power System

Power Generator
Telecommunication system



Battery Model	Nominal Voltage	Rated Capacity at 10HR to 1.75V/Cell	Dimension (mm)				Approx Weight ± 5%
			Length	Width	Case Height	Total Height including terminal	
			L ± 5mm	W ± 5mm	H ± 5mm	TH ± 8mm	Kg
DML 2-100	2V	100AH	171	72	205	205	6.7
DML 2-150	2V	150AH	172	102	205	227	9.5
DML 2-200	2V	200AH	175	115	335	370	15
DML 2-250	2V	250AH	175	115	335	370	16
DML 2-300	2V	300AH	175	155	335	370	19.5
DML 2-350	2V	350AH	171	155	335	370	24
DML 2-400	2V	400AH	211	176	330	367	29
DML 2-450	2V	450AH	223	187	351	373	33
DML 2-500	2V	500AH	242	172	330	367	32
DML 2-570	2V	570AH	223	187	351	373	37
DML 2-600	2V	600AH	301	175	331	366	40
DML 2-750	2V	750AH	301	175	331	366	48
DML 2-800	2V	800AH	410	175	330	366	60
DML 2-1000	2V	1000AH	475	175	328	365	69
DML 2-1200	2V	1200AH	475	175	328	365	77
DML 2-1500	2V	1500AH	401	351	342	378	115
DML 2-2000	2V	2000AH	491	351	344	383	138
DML 2-3000	2V	3000AH	712	353	341	382	215
DM 6-100	6V	100AH	194	170	205	210	16.5
DM 6-150	6V	150AH	260	180	247	250	23.5
DM 6-180	6V	180AH	306	168	222	225	28
DM 6-200A	6V	200AH	322	178	226	250	30
DM 6-200B	6V	200AH	260	180	247	250	32
DM 6-225A	6V	225AH	322	178	226	250	32
DM 6-225B	6V	225AH	243	188	275	290	32

DM FT Front Terminal series (8-10 years floating life)



DM FT Front access Terminal series is designed with 8-10 years float charge service life Eurobat standard at 20 °C/68 °F in standby charging use. The front access terminal characteristics occupy less less space and enable easy installation and is suitable for 19", 21" 23" and ETSI rack for UPS and telecom applications. It features leak proof and maintenance-free.

Applications

UPS
Railroad Signal Control equipment
Telecommunication system

FT Battery Model	Nominal Voltage	Rated Capacity at 10HR to 1.75V/Cell	Dimension (mm)				Approx Weight ± 5%	Standard Terminal	Terminal Position
			Length	Width	Case Height	Total Height including terminal			
			L ± 3mm	W ± 3mm	H ± 5mm	TH ± 5mm	Kg		
DM 12-55 FT	12V	55AH	277	106	222	222	17	M5	Front Access
DM 12-80 FT	12V	80AH	394	109	285	285	28	M8	
DM 12-100 FT	12V	100AH	394	109	285	285	33	M8	
DM 12-105 FT	12V	105AH	508	111	223	223	34	M6	
DM 12-125FT	12V	125AH	551	105	288	288	43	M8	
DM 12-150FT	12V	150AH	551	105	288	288	49	M8	





DMD Deep Cycle GEL series has been developed with strong electrode with special alloy, special additives paste and imported key component of GEL electrolyte. It adopts vacuum filling of GEL electrolyte to ensure complete penetration through active paste material. These ensure low self-discharge, long cyclic life, low float charge voltage and current. It is leak proof, maintenance-free and automatic pressure release. Besides in standby applications, it shows superior high discharge performance in cycle applications, and could be recovery charge to normal level even after deep discharge.

Applications

Wind Power system
Photovoltaic Solar System
Telecommunication system

Medical equipment
Cable TV & Broadband
Electric Vehicle, like wheelchair

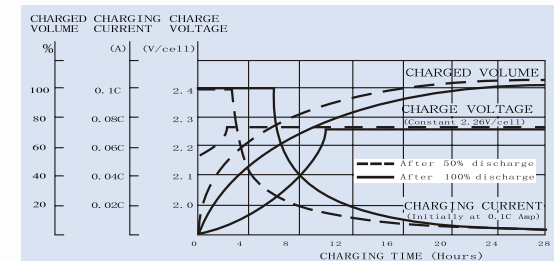
DMD GEL Battery Model	Nominal Voltage	Rated Capacity at 10HR to 1.75V/Cell	Dimension (mm)				Approx Weight $\pm 5\%$
			Length	Width	Case Height	Total Height including terminal	
			L (2V) $\pm 5\text{mm}$ L (12V) $\pm 3\text{mm}$	W $\pm 5\text{mm}$ W $\pm 3\text{mm}$	H $\pm 8\text{mm}$ H $\pm 5\text{mm}$	TH $\pm 8\text{mm}$ TH $\pm 5\text{mm}$	Kg
DMD 2-200 GEL	2V	200AH	175	115	335	370	14.2
DMD 2-300 GEL	2V	300AH	175	155	335	370	19.8
DMD 2-400 GEL	2V	400AH	211	176	330	367	30
DMD 2-500 GEL	2V	500AH	242	172	330	367	32
DMD 2-570 GEL	2V	570AH	223	187	351	373	35
DMD 2-600 GEL	2V	600AH	301	175	331	366	40
DMD 2-800 GEL	2V	800AH	410	175	330	366	53
DMD 2-1000 GEL	2V	1000AH	475	175	328	365	65
DMD 2-1200 GEL	2V	1200AH	475	175	328	365	76
DMD 2-1500 GEL	2V	1500AH	401	353	342	378	100
DMD 2-2000 GEL	2V	2000AH	491	351	344	383	132
DMD 2-3000 GEL	2V	3000AH	712	353	341	382	200
DMD 12-24 GEL	12V	24AH	175	166	126	126	7.3
DMD 12-32 GEL	12V	32AH	196	131	155	184	10.2
DMD 12-38 GEL	12V	38AH	198	165	170	170	13.5
DMD 12-55 GEL	12V	55AH	229	138	208	230	18.5
DMD 12-65 GEL	12V	65AH	330	173	167	173	20.5
DMD 12-70 GEL	12V	70AH	259	169	208	231	26
DMD 12-80 GEL	12V	80AH	259	169	208	231	27
DMD 12-90 GEL	12V	90AH	330	173	217	223	29.6
DMD 12-150 GEL	12V	150AH	485	170	242	242	43.5
DMD 12-180 GEL	12V	180AH	523	239	217	223	62
DMD 12-200 GEL	12V	200AH	523	239	217	223	63



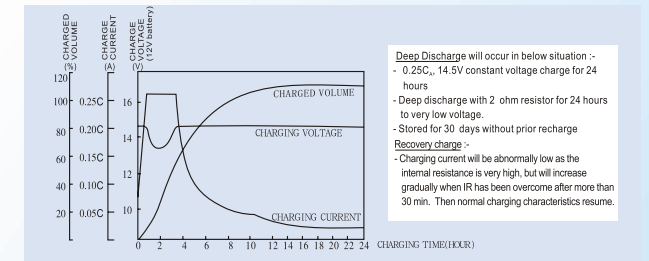
Charging method for different battery application

Application Charging method	Standby/Backup use		Cycle use	During Storage
	Trickle Charge Operation	Float Charge Operation	Cycle Charge Operation	Refresh Charge During Storage
Constant Voltage Charge	Regulation range of controlled voltage at 25°C/77°F: 6V battery: 6.75V to 6.9V 8V battery: 9.00V to 9.20V 12V battery: 13.5 to 13.8V		Regulation range of controlled voltage at 25°C/77°F: 6V battery: 7.2V to 7.5V 8V battery: 9.6V to 10V 12V battery: 14.4V to 15V	
	Same model batteries under the same storage time can be charged in series. Otherwise, they shall be recharged in separate groups.		Attention: The Maximum charge voltage must be controlled. Otherwise, battery may be overcharged. The charge voltage shall be temperature compensated if battery will be charged in a wide range of ambient temperature.	
	Not recommended		Charging current approx. 0.1C _A or less. Charging time control is strictly recommended. Otherwise, overcharge may occur. No Temperature compensation is needed.	
Constant Current Charge	Not recommended	Not applicable	Not recommended	Not recommended
Tapered Current Charge	Not recommended	Not applicable	Not recommended	Not recommended
Two-Steps Combination Charge	Not applicable		Two-Step constant current charge is highly recommended:- 1) Approx. 0.4C _A in the first step 2) 0.002C _A -0.005C _A in the second step A time control or a charging voltage detection device is required to transfer from the first step to the second.	

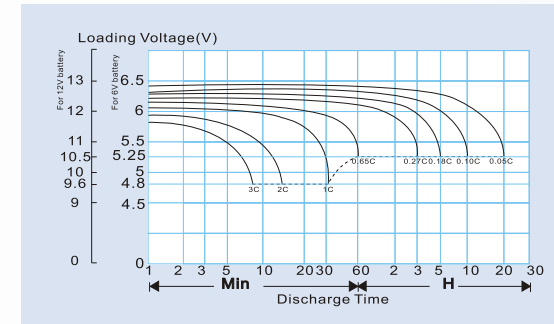
Constant-voltage Charge characteristics



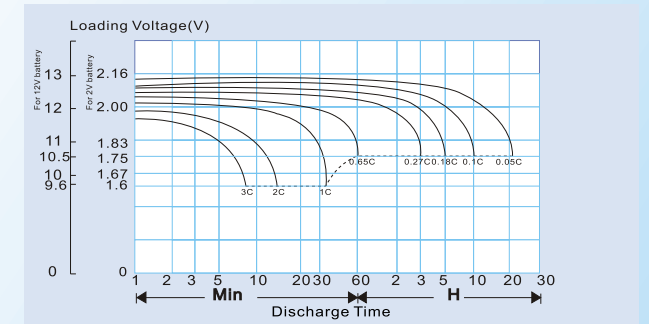
Recovery charge after over-discharge



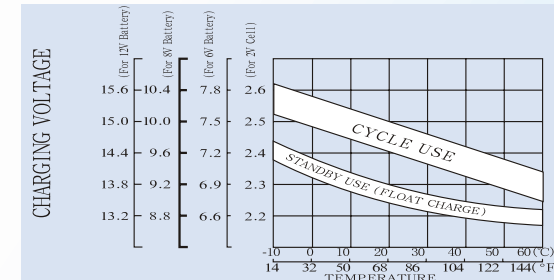
Discharge Curves for MICRO series at various rate(at 25°C, 77°F)



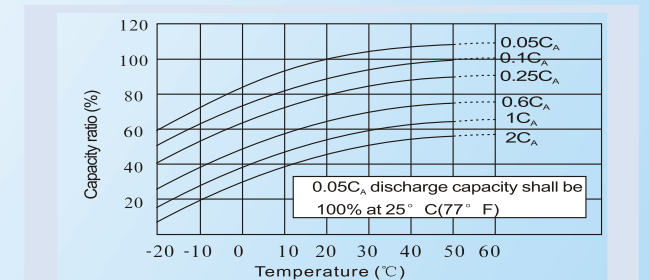
Discharge Curves for MEDIUM & MACRO series at various rate(at 25°C, 77°F)



Charging voltage at different temperature



Temperature effect on Discharge Capacity

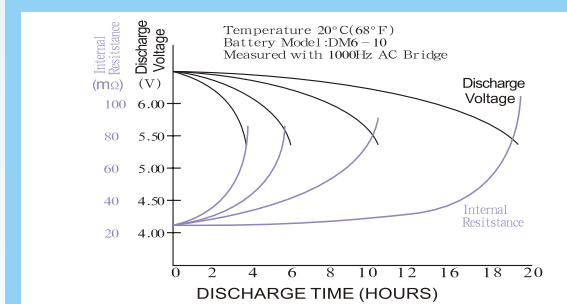


Discharge current and final discharge voltage

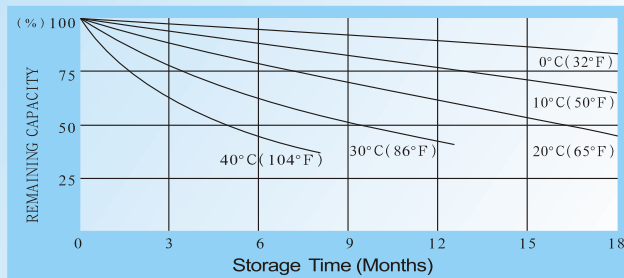
Discharge Current (A)	Final Discharge Voltage			
	For 2V Battery	For 6V Battery	For 8V Battery	For 12V Battery
(A) < 1.0C	1.75V	5.25V	7.0 V	10.5 V
(A) ≥ 1.0C	1.6 V	4.8 V	6.4V	9.6 V

Note: Discharge shall be cut-off when discharge voltage reach the above specified final discharge voltage to avoid overdischarge.

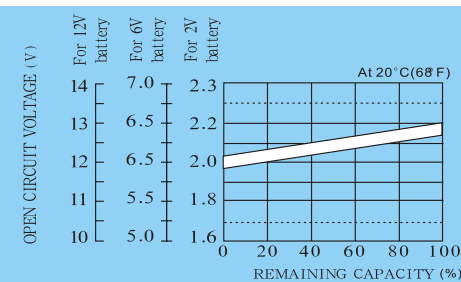
Internal resistance change



Self-discharge characteristics



Open circuit voltage & remaining capacity



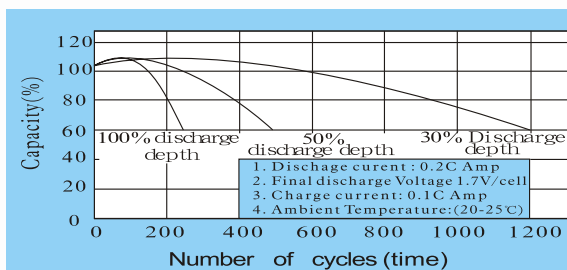
Supplementary Charge Interval and Charge Method Storage Temperature

Storage Temperature	Recommended Supplementary Charge Interval	Supplementary Charge Method
Below 20° C (< 68° F)	Every six months	16-24 hours with a constant voltage of 2.275 V/cell
20° C to 30° C (68° F to 86° F)	Every three months	5-8 hours with a constant voltage of 2.34 V/cell
Over 30° C (> 86° F)	Storage to be avoided	5-8 hours with a constant current of 0.065CV

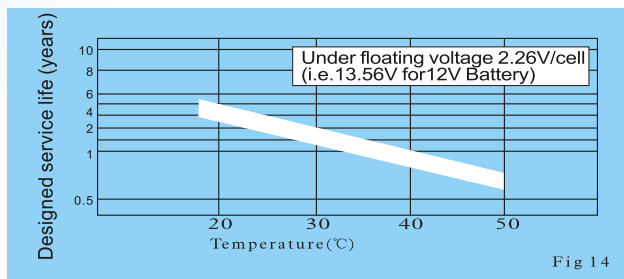
Storage Shelf life at various temperature

Temperature	Shelf life without recharge
0° C (32° F) to 20° C (68° F)	12 months
21° C (70° F) to 30° C (86° F)	9 months
31° C (88° F) to 40° C (104° F)	5 months
41° C (108° F) to 50° C (122° F)	2.5 months

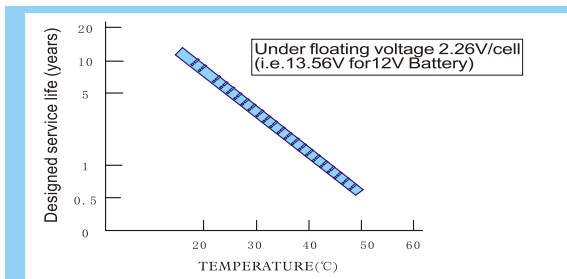
Cycle service life to 60% Capacity



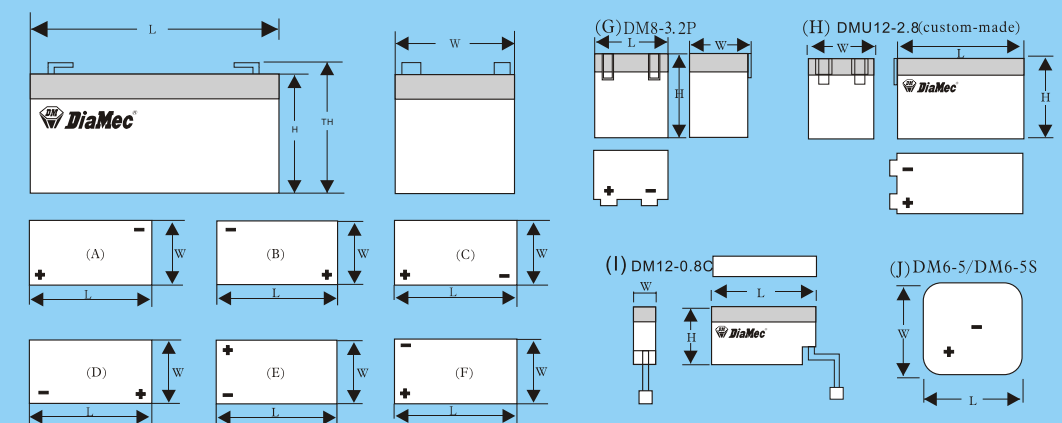
Float service life of MICRO series



Float service life of MEDIUM & MACRO series

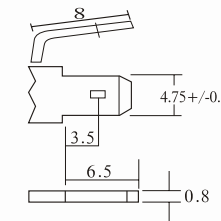


7. TERMINAL POSITION

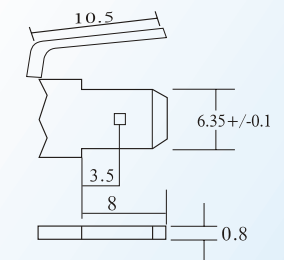


8. TERMINAL TYPE (+/-1mm) with examples of common applicable models

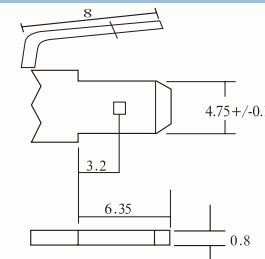
F1 (Fasten Tab No.187E)



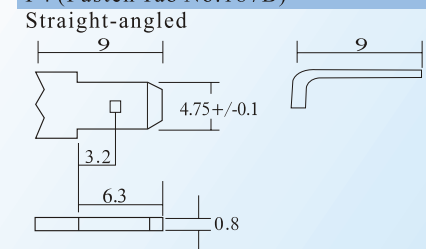
F2 (Fasten Tab No.250A)



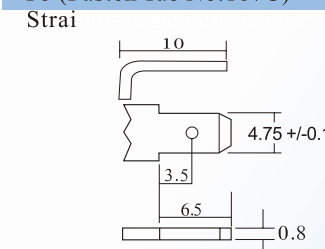
F3 (Fasten Tab No.187A)



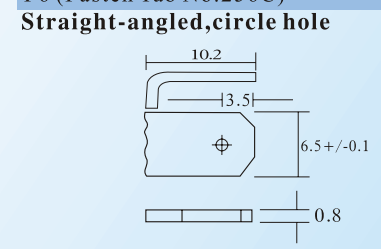
F4 (Fasten Tab No.187B)



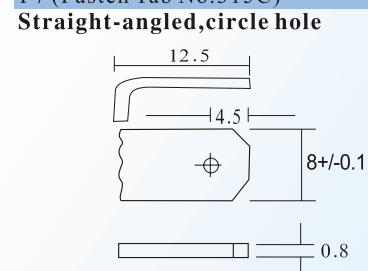
F5 (Fasten Tab No.187C)



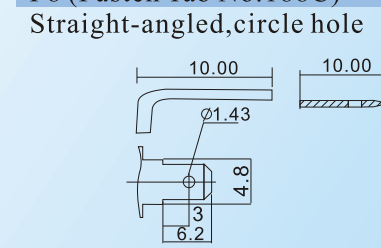
F6 (Fasten Tab No.256C)



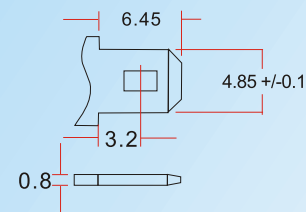
F7 (Fasten Tab No.315C)



F8 (Fasten Tab No.188C)

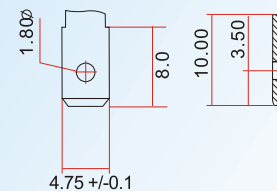


F9 (Fasten Tab No.189B)



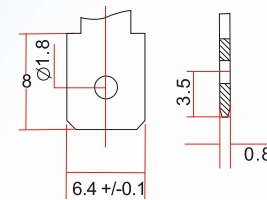
F10 (Fasten Tab No.187D)

Straight-angled, circle hole



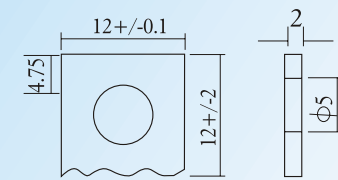
F11(Fasten Tab No.252D)

Straight-angled, circle hole



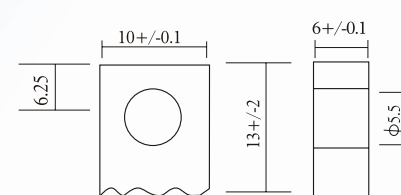
B1 (Bolt-and-nut copper terminal)

Bolt Type: M5



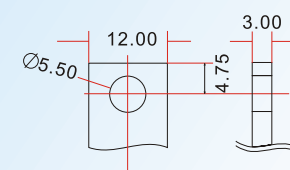
B2(Bolt-and-nut Lead calcium terminal)

Bolt Type: M5



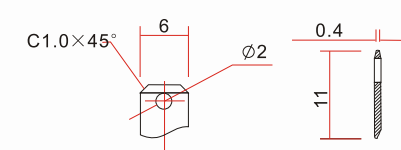
B3(Bolt-and-nut copper terminal)

Bolt Type: M5



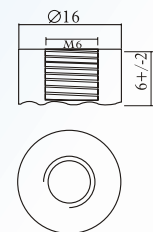
B4(Bolt-and-nut copper terminal)

Bolt Type: M2



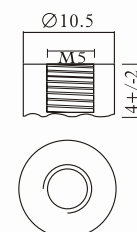
I1 (Threaded Insert terminal 6mm stud)

Bolt Type: M6



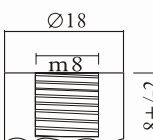
I2 (Threaded Insert terminal 5mm stud)

Bolt Type: M5

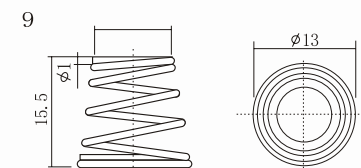


I3 (Threaded Insert terminal 8mm stud)

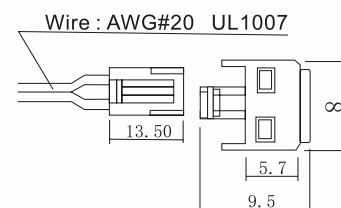
Bolt Type: M8



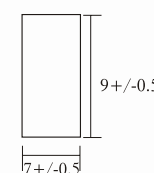
S1 (Spring Terminal)



C2 (cable-and-connector type)



P1 (Pressure Contact No.386P)



6V600mA regulated charger
12V800mA regulated charger
6V or 12V, 4Amp-8Amp charger

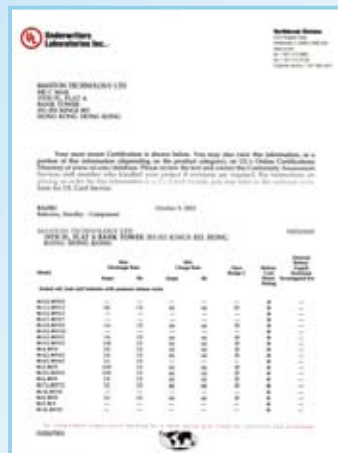
Table 1. Charging method & battery application

Application Charging Method	Standby/Backup use		Standby use	During Storage
	I Trickle Charge Operation	II Float Charge Operation	III Cyclic Charge Operation	IV Refresh Charge During Storage
Constant Voltage Charging	Regulation range of controlled voltage (20°C, 68°F):- 6V Batteries: 6.75V to 6.9V 8V Batteries: 9.00V to 9.20V 12V Batteries: 13.5V to 13.8V		Regulation range of controlled voltage(20°C, 68°F):- 6V Batteries: 7.2V to 7.5V 8V Batteries: 9.6V to 10V 12V Batteries: 14.4V to 15.0V	
	This method can provide a short-time charge	The charge's current capacity must be big enough to maintain the specified charging voltage during float	Short-time charge allowed	
			Same model batteries, under the same storage, can be charged in series, Otherwise,they should be recharged in separate groups	
	The charge voltage must be stabilized. Otherwise, battery may be overcharged or discharged. The charger should be temperature compensated when using battery in a wide range of ambient temperature			
Constant Current Charging	Not Recommended	Not applicable	Not Recommended	Charging current:- approx.0.1C Charging time control is strictly recommended. Otherwise, charge may occur. No temperature compensation is needed.
Tapered Current Charging	Not Recommended	Not applicable	Not Recommended	Not Recommended
Two-Steps combination charging	Two-step constant current charge is highly recommended 1) approx.0.4C at the first step. 2)0.002C-0.005C at the second step A time control or a charging voltage detection device is required to transfer from the first step to the second			

ISO9001:2008



UL : MH 25408



CE Certificate :
T2M20509-0593-E-16



PCT (Russian GOST Certificate) : POCC CN.BZ02.B06338



MH 25408



品质是我们的生命，先科创新是我们的精神
环保是我们的任务，成为“花园电池企业”是我们的理想

QUALITY IS OUR LIFE
TECHNOLOGICAL ADVANCE IS OUR MENTALITY
ENVIRONMENTAL PROTECTION IS OUR MISSION
TO BE A GARDEN BATTERY ORGANIZATION IS OUR TARGET