

SOLAR DEEP CYCLE GEL BATTERY



Features:

- User Friendly
- Low Maintenance
- High Performance
- Ultra Long Life Service
- High Recovery Capability
- High Charge Acceptability
- No Water Topping Required
- Maintenance-Free Operation
- Low Pressure Venting System
- Non-Spill Sealed Construction
- Low Self-Discharge - Long Shelf Life
- Wide Operating Temperature Range



SPECIFICATIONS	EUR10012 12V 100AH
Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@10hr-rate to 1.75V per cell@25°C
Weight	Approx. 29.5kg
Max. Discharge Current	800A (5sec)
Internal Resistance	Approx. 3.5mΩ
Operating Temperature Range	Discharge: -40°C ~ 50°C Charge: -20°C ~ 50°C Storage: -20°C ~ 50°C
Normal Operating Temperature Range	25°C ± 5°C
Float charging Voltage	13.50 to 13.80V DC/unit Average at 25°C
Max. Charging Current	25.0A
Equalization and Cycle service	14.70 to 15.00V DC/unit Average at 25°C
Self Discharge	The batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For high temperature, the time interval will be shorter.
Terminal	T14
Container Material	ABS(UL94-HB) Flammability resistance of UL94-V0 is available on request.
Box Dimension	330 x 172 x 225 mm
Product Weight	N. W - 29.5 KG / G. W - 30 KG

APPLICATION

- Electric tools
- Vehicle in place of walking
- Lawn mowers
- Golf trolleys and golf cart
- Portable apparatus, lights and instruments;
- Electric toys
- Illumination light
- Fire alarms
- Portable power
- Wheelchairs
- Medical equipments.



UPS SYSTEM



EMERGENCY LIGHTING



GENERAL PURPOSE



FIRE & SECURITY



MEDICAL



ISO9001

Constant Current Discharge Characteristics Unit:A(25 °C, 77 °F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	307.1	210.8	152.1	91.9	67.3	56.3	25.5	17.3	10.3	5.38
1.65V/cell	294.6	191.0	148.8	90.3	66.5	55.8	25.4	17.2	10.2	5.30
1.70V/cell	267.4	184.3	146.7	89.6	65.7	55.3	25.3	17.1	10.1	5.25
1.75V/cell	241.5	169.7	142.6	88.9	63.6	55.0	25.0	17.0	10.0	5.20
1.80V/cell	219.6	157.6	132.3	83.6	63.0	52.3	23.8	16.3	8.8	4.75

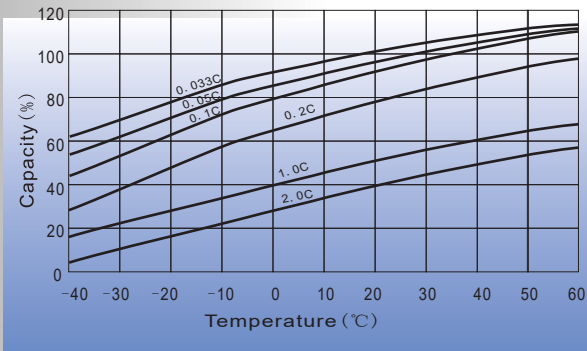
Constant Power Discharge Characteristics Unit:W(25 °C, 77 °F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	506.9	348.5	274.6	174.2	131.4	109.9	54.4	33.6	20.0	10.5
1.65V/cell	485.8	346.3	272.8	169.0	130.2	108.8	53.8	33.6	19.8	10.0
1.70V/cell	454.1	337.9	267.5	165.4	126.7	108.3	53.5	33.3	19.6	9.90
1.75V/cell	422.4	316.8	249.9	156.6	125.6	107.2	53.4	33.2	19.5	9.88
1.80V/cell	380.2	295.7	235.8	154.9	122.1	101.9	49.5	31.6	17.2	9.30

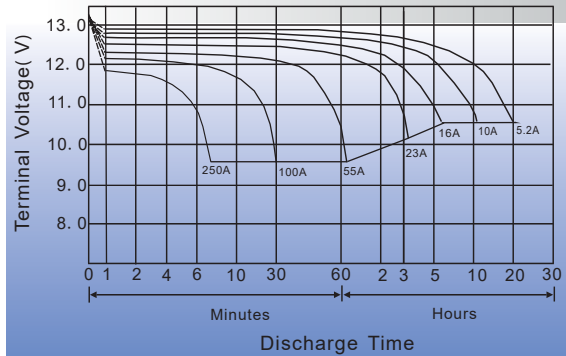
SOLAR DEEP CYCLE GEL BATTERY



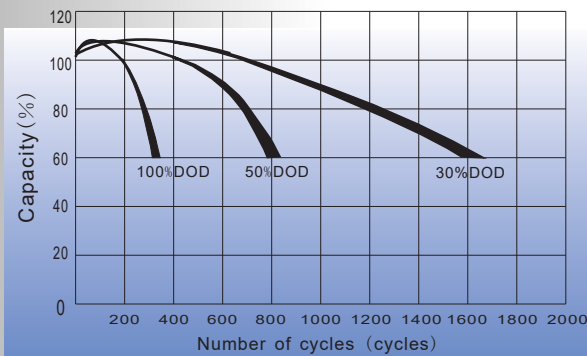
TEMPERATURE EFFECTS CURVE



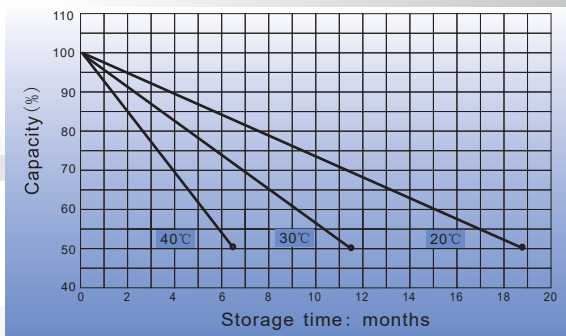
DISCHARGE TIME VS DISCHARGE CURRENT 25 (°C)



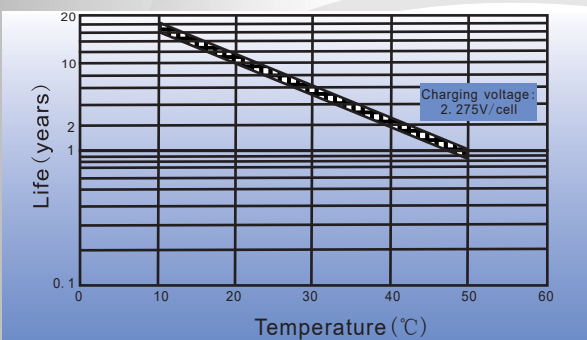
LIFE CHARACTERISTICS OF CYCLIC USE



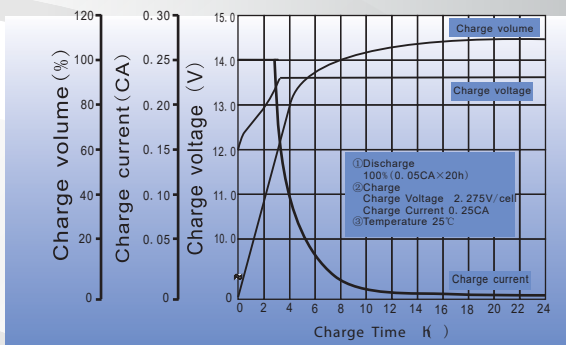
SELF DISCHARGE CHARACTERISTIC



EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



CHARGE CHARACTERISTIC CURVE FOR STANDBY USE



Charging Procedures

Application	Charge Voltage (V/cell)			Max. Charge Current
	Temperature	Set Point	Allow able Range	
Cycle Use	25°C	2.475	2.45~2.50	0.25C
Standby Use	25°C	2.275	2.25~2.30	

Discharge Current VS Discharge Voltage

Final Discharge Voltage V/cell	1.75	1.7	1.6	1.3
Discharge Current(A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

Charge the batteries at least once every 6 months, if they are stored at 25 °C.

Charging Method

Constant Voltage	14.7~15.0V, 5~11h, Max. Current 0.25CA
Constant Current	0.1CA×5h
Fast	0.25CA×1.7h

SEALED RECHARGEABLE SOLAR GEL BATTERY



Features:

- User Friendly
- Low Maintenance
- High Performance
- Ultra Long Life Service
- High Recovery Capability
- High Charge Acceptability
- No Water Topping Required
- Maintenance-Free Operation
- Low Pressure Venting System
- Non-Spill Sealed Construction
- Low Self-Discharge - Long Shelf Life
- Wide Operating Temperature Range



SPECIFICATIONS	EUR15012 12V 150AH
Cells Per Unit	6
Voltage Per Unit	12
Capacity	150Ah@10hr-rateto1.85Vpercell@25 °C
Max. Discharge Current	1000A (5 sec)
Internal Resistance	Approx.2.6 mΩ
Operating Temperature Range	Discharge: -40°C~50°C Charge: -20°C~50°C Storage: -20°C~50°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.50 to 13.80V DC/unit Average at 25°C
Max. Charging Current	37.5A
Equalization and Cycle service	14.70 to 15.00V DC/unit Average at 25°C
Self Discharge	The batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For high temperature, the time interval will be shorter.
Terminal	T14
Constainer Material	ABS(UL94-HB) Flammability resistance of UL94-V0 is available on request.
Box Dimension	485 x 240 x 172 mm
Product Weight	N. W - 44 KG / G. W - 44.5 KG

APPLICATION

- Solar systems
- UPS systems
- IT systems
- Data centers
- Power generation plants and substations
- Telecommunication equipments



UPS SYSTEM



EMERGENCY LIGHTING



GENERAL PURPOSE



FIRE & SECURITY



MEDICAL



ISO9001

Constant Current Discharge Characteristics Unit:A(25°C,77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	445.3	337.3	243.4	147.0	107.6	84.4	41.7	25.9	15.5	7.92
1.65V/cell	427.2	305.5	238.1	144.4	106.4	83.6	41.5	25.7	15.4	7.88
1.70V/cell	387.7	294.9	234.7	143.4	105.2	82.9	41.4	25.6	15.2	7.80
1.75V/cell	350.2	271.5	228.1	142.2	101.8	82.5	41.3	25.5	15.0	7.70
1.80V/cell	318.4	252.2	211.6	133.8	100.8	78.4	38.3	24.4	13.1	7.13

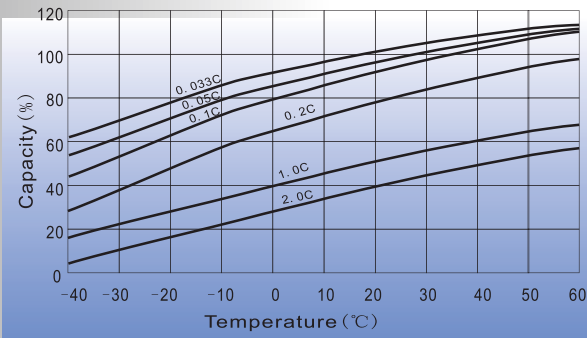
Constant Power Discharge Characteristics Unit:W(25°C,77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	735.0	557.6	439.3	278.8	210.2	164.8	81.0	50.4	30.0	15.8
1.65V/cell	704.4	554.1	436.5	270.3	208.4	163.2	80.7	50.3	29.6	15.5
1.70V/cell	658.4	540.7	428.0	264.7	202.8	162.4	80.3	49.9	29.4	15.2
1.75V/cell	612.5	506.9	399.9	250.6	200.9	160.8	80.0	49.7	29.2	14.8
1.80V/cell	551.2	473.1	377.3	247.8	195.3	152.8	74.3	47.4	25.7	14.0

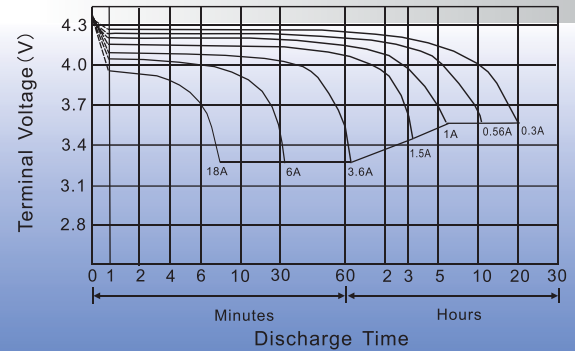
SEALED RECHARGEABLE LEAD ACID BATTERY



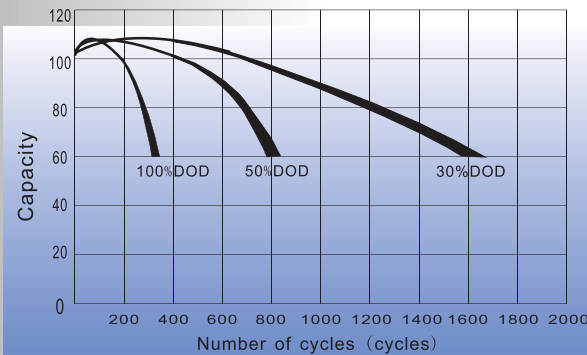
TEMPERATURE EFFECTS CURVE



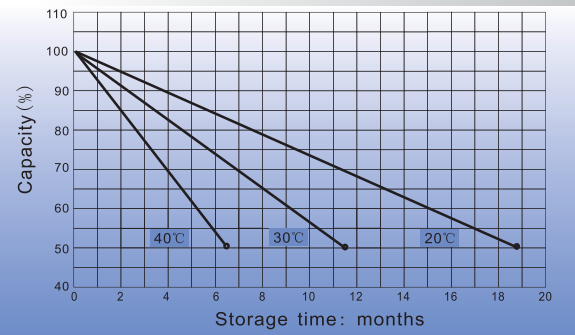
DISCHARGE TIME VS. DISCHARGE CURRENT (25°C)



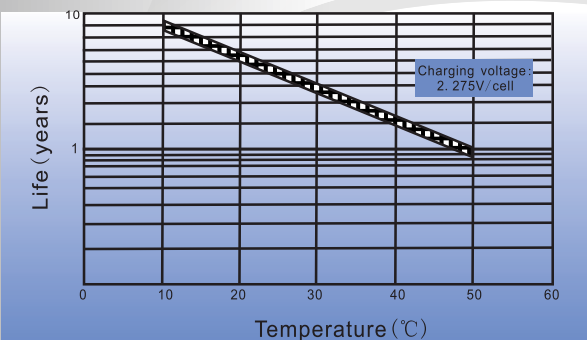
LIFE CHARACTERISTICS OF CYCLIC USE



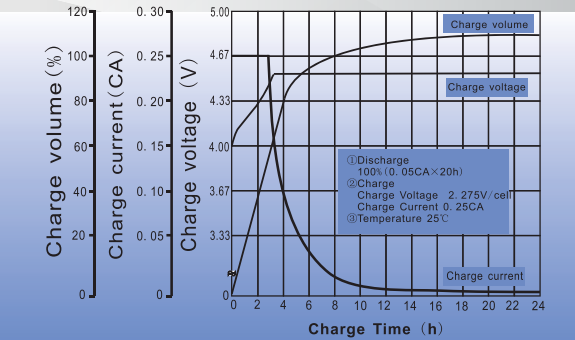
SELF-DISCHARGE CHARACTERISTIC



EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



CHARGE CHARACTERISTIC CURVE FOR STANDBY USE



Charging Procedures

Application	Charge Voltage (V/cell)		Max. Charge Current
	Temperature	Set Point Allow able Range	
Cycle Use	25°C	2.475 2.45~2.50	0.3C
Standby Use	25°C	2.275 2.25~2.30	

Charge the batteries at least once every 6 months, if they are stored at 25°C.

Charging Method

Constant Voltage	4.90~5.00V, 5~11h, Max. Current 0.3CA
Constant Current	0.1CA×5h
Fast	0.3CA×1.7h

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75	1.7	1.6	1.3
Discharge Current(A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

SOLAR DEEP CYCLE GEL BATTERY



Features:

- User Friendly
- Low Maintenance
- High Performance
- Ultra Long Life Service
- High Recovery Capability
- High Charge Acceptability
- No Water Topping Required
- Maintenance-Free Operation
- Low Pressure Venting System
- Non-Spill Sealed Construction
- Low Self-Discharge - Long Shelf Life
- Wide Operating Temperature Range



SPECIFICATIONS	EUR20012 12V 200AH
Cells Per Unit	6
Voltage Per Unit	12
Capacity	200Ah@10hr-rateto1.80Vpercell@25 °C
Max. Discharge Current	1200A (5 sec)
Internal Resistance	Approx.2.6 mΩ
Operating Temperature Range	Discharge: -40°C ~50°C Charge: -20°C ~50°C Storage: -20°C ~50°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.50 to 13.80V DC/unit Average at 25°C
Max. Charging Current	50A
Equalization and Cycle service	14.70 to 15.00V DC/unit Average at 25°C
Self Discharge	The batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For high temperature, the time interval will be shorter.
Terminal	T9/T14
Constainer Material	ABS(UL94-HB) Flammability resistance of UL94-V0 is available on request.
Box Dimension	522 x 236 x 238 mm
Product Weight	N. W - 60 KG / G. W - 60.5 KG

APPLICATION

- Electric tools
- Vehicle in place of walking
- Lawn mowers
- Golf trolleys and golf cart
- Portable apparatus, lights and instruments;
- Electric toys
- Illumination light
- Fire alarms
- Portable power
- Wheelchairs
- Medical equipments.



UPS SYSTEM



EMERGENCY LIGHTING



GENERAL PURPOSE



FIRE & SECURITY



MEDICAL



Constant Current Discharge Characteristics Unit:A(25°C,77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	570.0	451.9	345.1	208.5	152.6	112.5	55.7	34.5	20.6	10.7
1.65V/cell	546.8	409.4	337.7	204.8	150.9	111.5	55.5	34.4	20.5	10.5
1.70V/cell	496.3	395.1	332.8	203.4	149.1	110.5	55.2	34.2	20.2	10.4
1.75V/cell	448.2	363.8	323.4	201.6	144.3	110.0	55.0	34.0	20.0	10.2
1.80V/cell	407.6	337.9	300.1	189.7	142.9	104.5	51.0	32.5	17.5	9.5

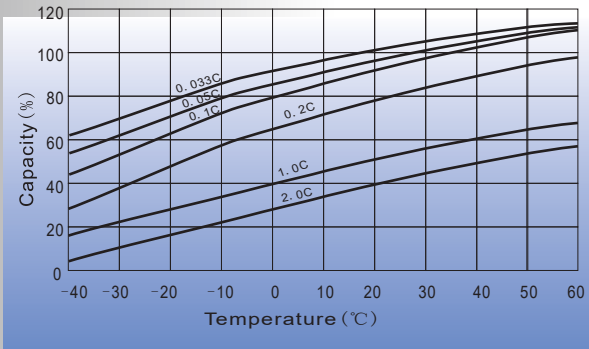
Constant Power Discharge Characteristics Unit:W(25°C,77°F)

F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
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1.65V/cell	901.6	721.3	637.7	387.0	298.3	210.7	104.2	65.0	40.4	20.4
1.70V/cell	842.8	703.7	625.3	379.0	290.3	209.6	103.6	64.4	40.1	20.3
1.75V/cell	784.0	659.7	584.2	358.8	287.7	207.5	103.3	64.2	39.8	20.2
1.80V/cell	705.6	615.8	551.3	354.8	279.6	197.2	95.8	61.1	35.1	19.0

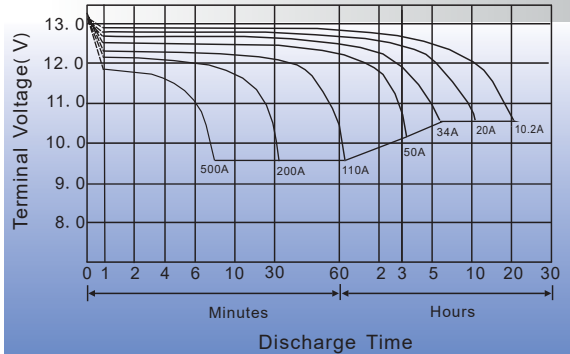
SOLAR DEEP CYCLE GEL BATTERY



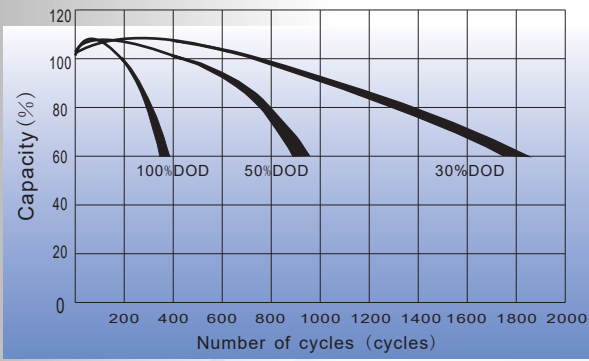
TEMPERATURE EFFECTS CURVE



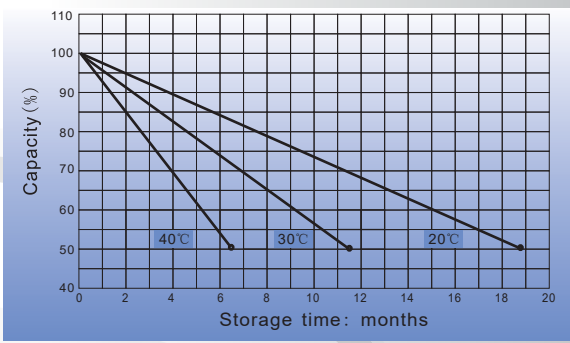
DISCHARGE TIME VS DISCHARGE CURRENT 25 (°C)



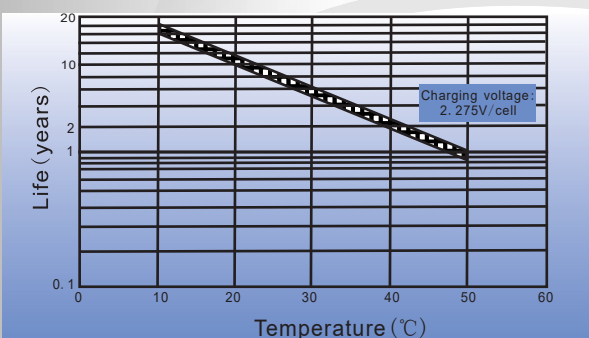
LIFE CHARACTERISTICS OF CYCLIC USE



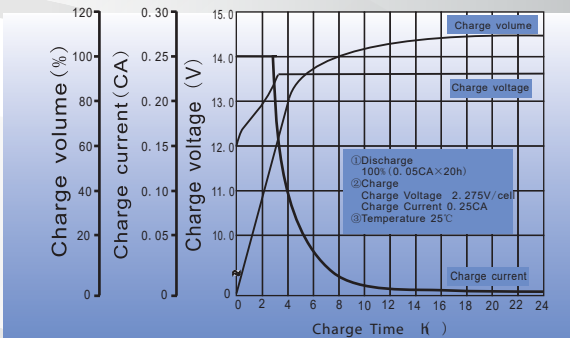
SELF DISCHARGE CHARACTERISTIC



EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



CHARGE CHARACTERISTIC CURVE FOR STANDBY USE



Charging Procedures

Application	Charge Voltage (V/cell)			Max. Charge Current
	Temperature	Set Point	Allow able Range	
Cycle Use	25°C	2.475	2.45~2.50	0.25C
Standby Use	25°C	2.275	2.25~2.30	

Charge the batteries at least once every 6 months , if they are stored at 25 °C.
Charging Method

Constant Voltage	14.7~15.0V, 5~11h, Max. Current 0.25CA
Constant Current	0.1CA×5h
Fast	0.25CA×1.7h

SOLAR DEEP CYCLE GEL BATTERY



Features:

- User Friendly
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- Ultra Long Life Service
- High Recovery Capability
- High Charge Acceptability
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- Non-Spill Sealed Construction
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- Wide Operating Temperature Range



SPECIFICATIONS	EUR25012 12V 250AH
Cells Per Unit	6
Voltage Per Unit	12
Capacity	250Ah@10hr-rateto1.75Vpercell@25 °C
Max. Discharge Current	1200A (5 sec)
Internal Resistance	Approx.2.2 mΩ
Operating Temperature Range	Discharge: -40°C ~50°C Charge: -20°C ~50°C Storage: -20°C ~50°C
Normal Operating Temperature Range	25°C±5°C
Float charging Voltage	13.50 to 13.80V DC/unit Average at 25°C
Max. Charging Current	62.5A
Equalization and Cycle service	14.70 to 15.00V DC/unit Average at 25°C
Self Discharge	The batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For high temperature, the time interval will be shorter.
Terminal	T9/T14
Constainer Material	ABS(UL94-HB) Flammability resistance of UL94-V0 is available on request.
Box Dimension	522 x 268 x 236 mm
Product Weight	N. W - 68 KG / G. W - 68.5 KG

APPLICATION

- Electric tools
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UPS SYSTEM



EMERGENCY LIGHTING



GENERAL PURPOSE



FIRE & SECURITY



MEDICAL



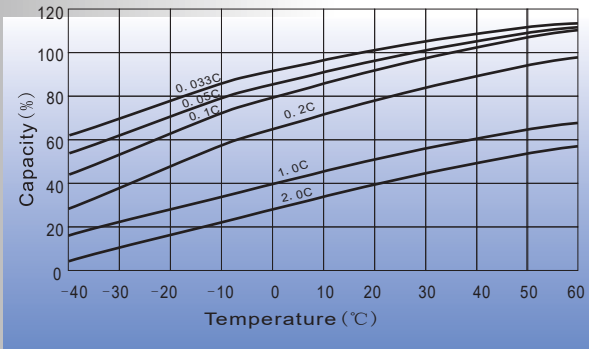
Constant Current Discharge Characteristics Unit:A(25 °C,77°F)										
F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	614.2	474.3	418.3	238.9	174.9	140.6	63.4	43.3	25.8	13.2
1.65V/cell	589.2	429.7	409.3	234.7	172.9	139.4	63.0	43.1	25.6	13.1
1.70V/cell	534.8	414.7	403.4	233.1	170.9	138.1	62.8	42.8	25.3	13.0
1.75V/cell	483.0	381.8	392.0	231.1	165.4	137.5	62.5	42.5	25.0	12.8
1.80V/cell	439.2	354.7	363.7	217.4	163.7	130.6	58.8	40.6	21.9	11.9

Constant Power Discharge Characteristics Unit:W(25 °C,77°F)										
F.V/Time	5min	10min	15min	30min	45min	1h	3h	5h	10h	20h
1.60V/cell	1013.8	836.4	658.9	418.2	315.3	272.5	134.9	83.4	49.6	26.0
1.65V/cell	971.5	831.2	654.7	405.5	312.6	269.9	133.5	83.2	49.0	24.7
1.70V/cell	908.2	811.0	642.0	397.1	304.1	268.5	132.7	82.5	48.5	24.6
1.75V/cell	844.8	760.3	599.8	375.9	301.4	265.8	132.3	82.2	48.2	24.5
1.80V/cell	760.3	709.6	566.0	371.7	292.9	252.7	122.8	78.3	42.5	23.1

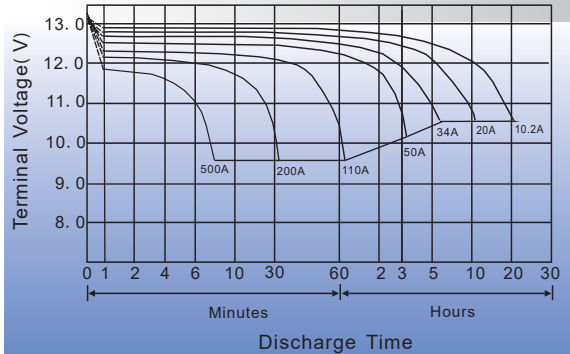
SOLAR DEEP CYCLE GEL BATTERY



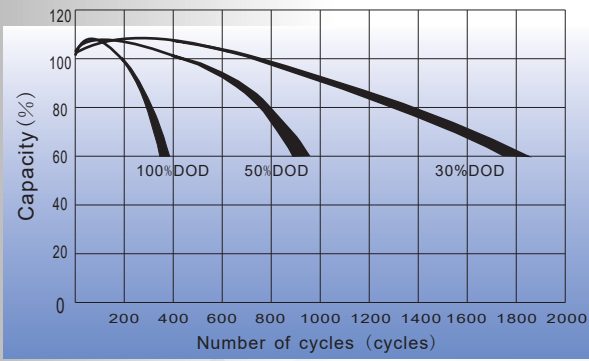
TEMPERATURE EFFECTS CURVE



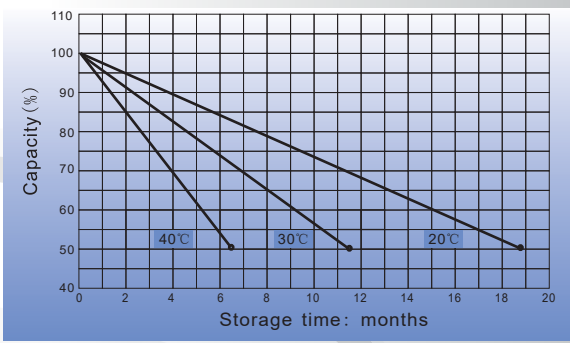
DISCHARGE TIME VS DISCHARGE CURRENT 25 (°C)



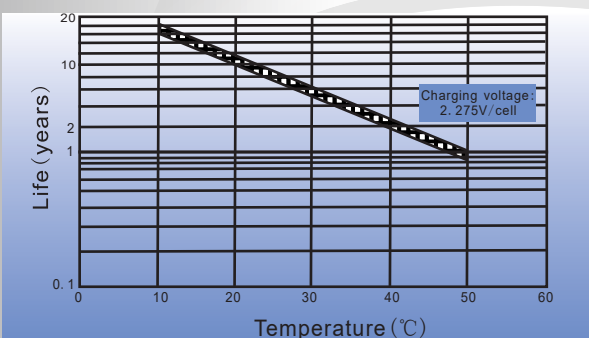
LIFE CHARACTERISTICS OF CYCLIC USE



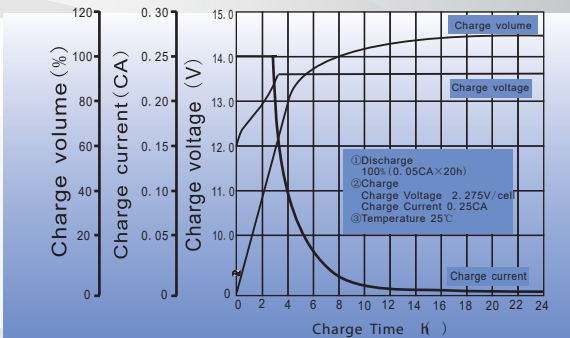
SELF DISCHARGE CHARACTERISTIC



EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



CHARGE CHARACTERISTIC CURVE FOR STANDBY USE



Charging Procedures

Application	Charge Voltage (V/cell)			Max. Charge Current
	Temperature	Set Point	Allow able Range	
Cycle Use	25°C	2.475	2.45~2.50	0.25C
Standby Use	25°C	2.275	2.25~2.30	

Charge the batteries at least once every 6 months , if they are stored at 25 °C.
Charging Method

Constant Voltage	14.7~15.0V, 5~11h, Max. Current 0.25CA
Constant Current	0.1CA×5h
Fast	0.25CA×1.7h