

Model: TTG12V52

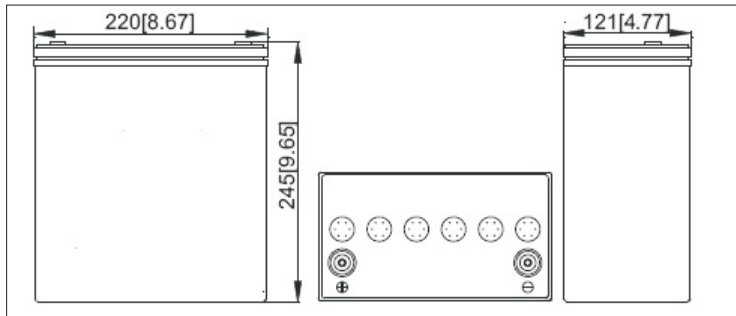
TTG SERIES

General Features

The products are used as standby power for communication, UPS, military and broadcast and television system. They possess precise ABS glue sealing technology between container and lid and patented post seal structure. They possess polymer gel technology. The design float life is 12 years at 20°C(68°F).



Dimension



Parameter

Nominal Voltage	12V
Rated Capacity	52Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Weight	17. 8kg
Internal Resistance	Approx 9. 4mΩ
Operating Temperature Range	Discharge: -40°C~50°C(-40°F~122°F)
	Charge: -20°C~50°C(-4°F~122°F)
	Storage: -20°C~40°C(-4°F~104°F)
Recommended temperature	15°C~25°C(59°F~77°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	13A
Equalize and Cycle Service	2.35V~2.40V@25°C(77°F)
Self Discharge	The residual capacity is above 90% after 90 days storage(25°C/77°F)
Terminal	M6
Container Material	ABS

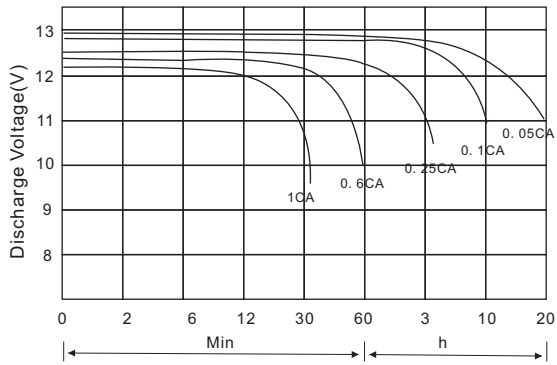
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1. 60V	188. 9	101. 5	61. 5	44. 5	35. 9	20. 7	14. 9	11. 7	9. 9	8. 5	6. 5	5. 4	4. 53	2. 84	2. 36
1. 67V	176. 9	97. 9	60. 4	44. 2	35. 7	20. 5	14. 6	11. 6	9. 9	8. 4	6. 5	5. 3	4. 52	2. 81	2. 34
1. 70V	175. 9	96. 2	59. 6	43. 9	35. 5	20. 4	14. 6	11. 6	9. 7	8. 4	6. 4	5. 3	4. 47	2. 81	2. 34
1. 75V	160. 8	93. 2	59. 0	43. 6	34. 9	19. 9	14. 4	11. 4	9. 6	8. 3	6. 3	5. 3	4. 47	2. 80	2. 34
1. 80V	144. 7	86. 8	56. 5	41. 8	34. 0	19. 7	14. 3	11. 4	9. 4	8. 1	6. 3	5. 2	4. 44	2. 77	2. 33
1. 83V	137. 7	79. 6	55. 5	40. 4	32. 6	19. 5	13. 8	10. 9	9. 1	7. 9	6. 2	5. 0	4. 22	2. 77	2. 30
1. 85V	129. 6	77. 1	51. 6	38. 8	31. 6	18. 7	13. 4	10. 7	8. 9	7. 7	6. 0	5. 0	4. 17	2. 71	2. 28

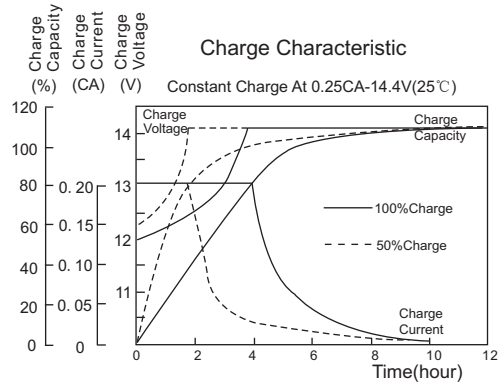
Discharge Data with Constant Power Unit: W (25°C, 77°F)

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1. 60V	315.6	177.9	111.6	83.6	67.6	38.9	28.4	22.6	19.0	16.3	12.6	10.4	8.76	5.61	4.70
1. 67V	303.5	174.9	110.6	83.1	67.2	38.8	28.1	22.5	19.0	16.2	12.5	10.3	8.76	5.59	4.70
1. 70V	302.5	172.9	110.6	83.0	67.0	38.6	28.1	22.4	18.8	16.1	12.4	10.2	8.68	5.58	4.69
1. 75V	285.4	171.9	109.5	82.8	66.0	38.4	27.8	22.4	18.8	16.1	12.2	10.2	8.68	5.56	4.69
1. 80V	262.3	162.8	107.5	80.8	65.9	38.3	27.7	22.3	18.4	15.9	12.2	10.2	8.65	5.56	4.68
1. 83V	254.3	148.7	105.5	78.4	63.2	37.8	27.1	21.5	18.0	15.4	12.2	9.9	8.39	5.55	4.65
1. 85V	240.2	144.7	98.4	75.3	61.2	36.6	26.3	21.2	17.6	15.1	11.8	9.8	8.30	5.45	4.61

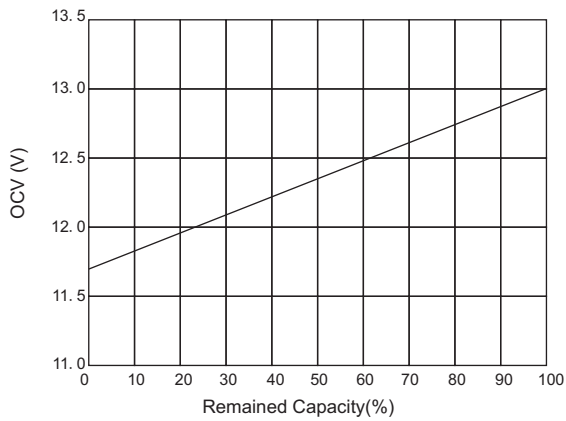
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



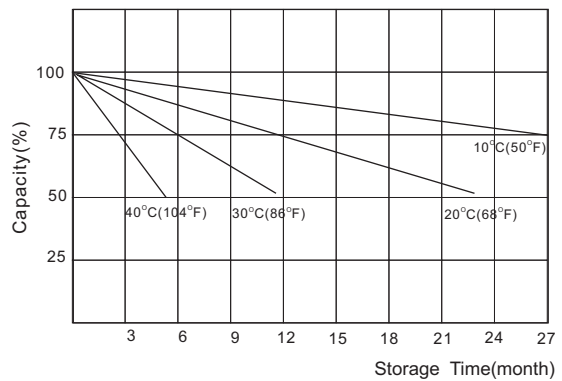
Battery Voltage Vs. Charge Time



Relationship of OCV Vs. State of Charge



Capacity Retention Characteristic



Charging Procedure

Application	Charge Voltage (V/Cell)			Max. Charge Current (A)
	Temperature (°C)	Set Point	Allowable Range	
Cycle	25	2.40	2.35~2.45	0.25C
Standby	25	2.25	2.23~2.27	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage (V/Cell)	1.80	1.70	1.55	1.30
Discharge Current (A)	I<0.2C	0.2C<I<0.5C	0.5C<I<1.0C	I>1.0C

NARADA POWER SOURCE CO.,LTD.
 No.459 Wensan Road, Hangzhou, Zhejiang, P.R.China
 Tel:+86-571-28827013 Fax:+86-571-85126942
 Website:www.naradabattery.com E-mail: intl@narada.biz

NARADA EUROPE LTD.
 PO Box 1137, Hemel Hempstead, HP1 9BQ, UK
 Tel:+44 (0)1442 249791 Fax:+44 (0)1442 229380
 E-mail: Sales@naradaeurope.com

NARADA ASIA PACIFIC PTE. LTD.
 65 Ubi Crescent, Ubi Centre #08-02 Singapore
 Tel:+65-68481191/+65-67421208 Fax:+65-67493498
 E-mail: Sales@narada.com.sg

