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NPP
CLEAN ENERGY, SAFE POWER

Cyclic | AGM Gel | Solar & Wind | EV | Mobility | Railway

NPG12-100Ah

Valve-regulated lead-acid battery



DEEP CYCLE GEL SERIES

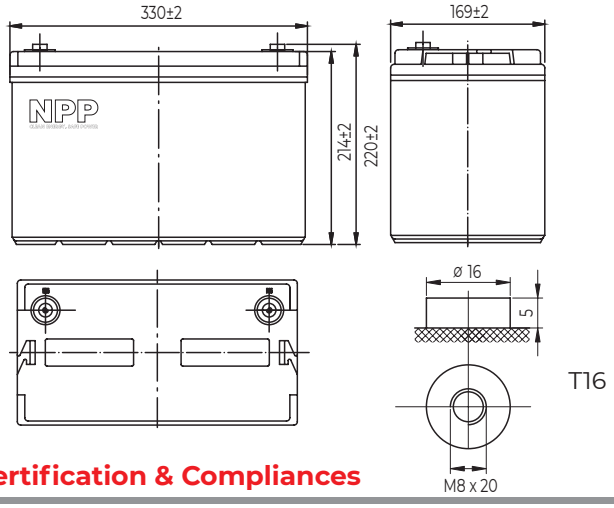
Characteristics

Nominal voltage		12V (6 cells per unit)
Nominal capacity at 10 hours rate/10.8V (25°C)		100Ah
Capacity (25°C)	3 Hours rate/10.8V	75Ah
	1 Hour rate/10.5V	55Ah
Terminal type		T16
Torque		12.3±2.5N.m
Approx. internal resistance (25°C)		5 mΩ
Dimensions	Length	330±2mm (12.99inch)
	Width	171±2mm (6.73inch)
	Height	214±2mm (8.43inch)
	Total height	220±2mm (8.66inch)
Design Life (stand-by)	JIS at 25°C	12 years
	Eurobat at 20°C	10/12 years
Weight		30.50kg (67.20lbs)±3%
Nominal operating temperature		25°C±3 (77±5°F)
Operating temperature range	Discharge	-15°C~50°C (5°F~122°F)
	Charge	-10°C~50°C (14°F~122°F)
	Storage	-20°C~50°C (-4°F~122°F)
Float charging voltage at 25°C		13.5V~13.8V
Cyclic charging voltage at 25°C		14.5V~14.7V
Temperature compensation	Float charge	-18 mV/°C/Block
	Cycle charge	-30 mV/°C/Block
Max. charging current (A)		20A
Max. discharge current for 5 seconds		800A
Self discharge rate (25°C)		≤3%/month
Battery container ABS UL94-HB		V-0 optional

Overview

NPP Power AGM GEL Series are manufactured following the highest demands in the deep cycle and renewable energy applications. The batteries use colloidal or foamed silica gel to immobilize the electrolyte, which further enhances the cycling stability. Available in top and front terminal types.

Dimensions & Terminal Type (mm)



Certification & Compliances

Compliant to: EUROBAT, RoHS, WEEE's and Reach.
Manufactured according to IEC 60896-21 / 22

Construction

Component	Positive Plate	Negative plate	Container	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	AGM	Sulfuric Acid Gel	Rubber	Copper

Constant current discharge characteristics at 25°C

(Ampere/battery)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	195	160	97.0	60.0	36.5	26	20.4	17.3	12.2	10.2	5.40
9.90V	189	156	95.1	59.1	36.3	25.9	20.3	17.2	12.2	10.2	5.38
10.2V	181	150	92.2	57.6	36.0	25.7	20.1	17.1	12.1	10.1	5.37
10.5V	174	145	89.9	55.8	35.5	25.5	20.0	17.0	12.0	10.1	5.34
10.8V	164	138	86.6	54.0	34.6	25.0	19.4	16.5	11.6	10.0	5.30

Constant power discharge characteristics at 25°C

(Watts/battery)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2106	1757	1088	684	423	306	240	205	145	122	64.7
9.90V	2043	1715	1067	674	421	304	238	204	145	121	64.6
10.2V	1959	1651	1034	657	417	302	237	202	144	121	64.4
10.5V	1874	1595	1009	636	411	300	235	201	143	120	64.0
10.8V	1769	1511	972	616	400	294	228	195	138	119	63.6

The above characteristics represent average values and can be obtained within three charge and discharge cycles. The batteries must be fully charged before testing. The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact NPP Power for the latest available version.

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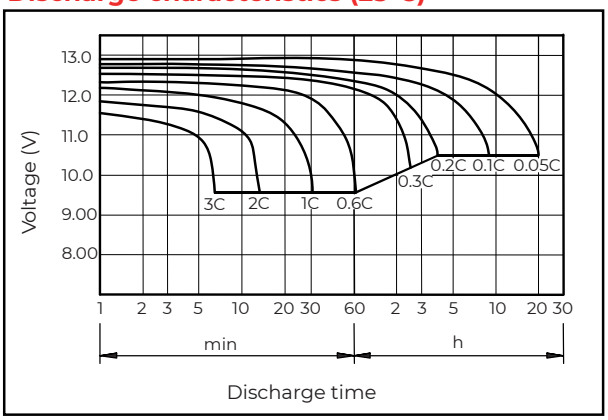
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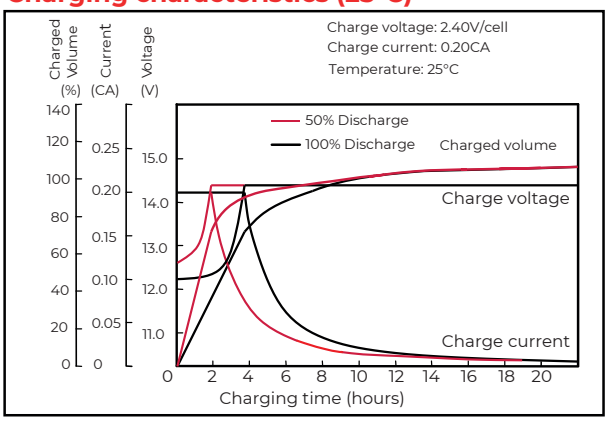
DEEP CYCLE GEL

SERIES

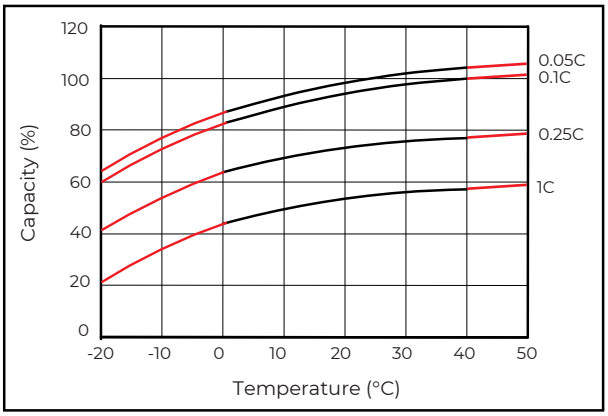
Discharge characteristics (25°C)



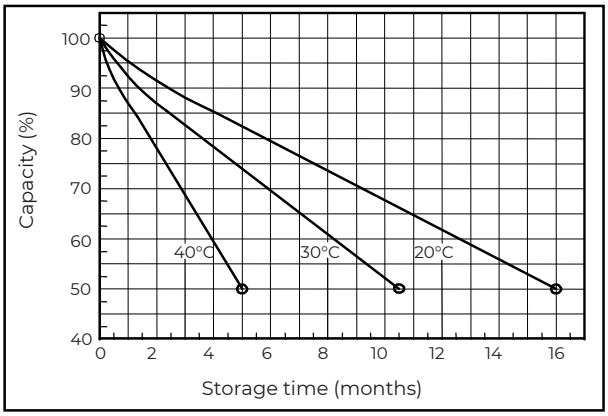
Charging characteristics (25°C)



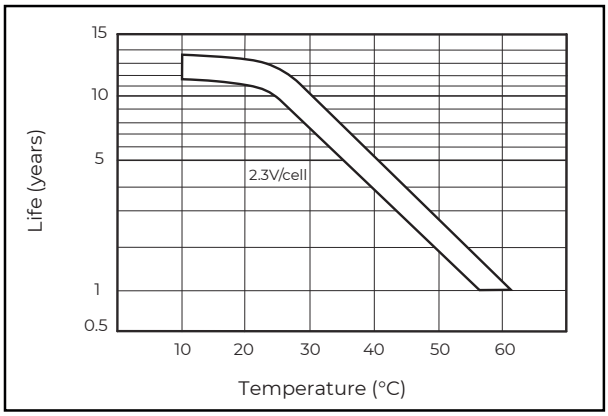
Temperature effects on capacity



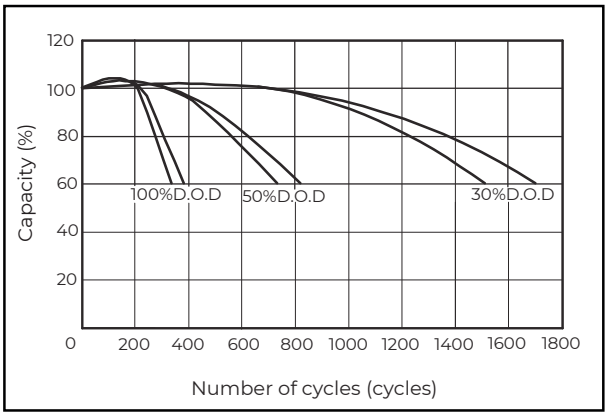
Self-discharge characteristics



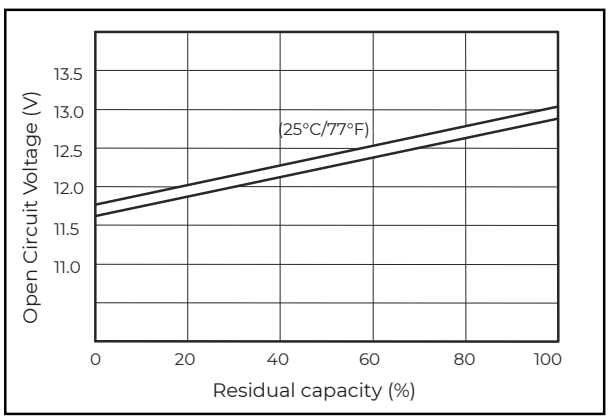
Floating life on temperature



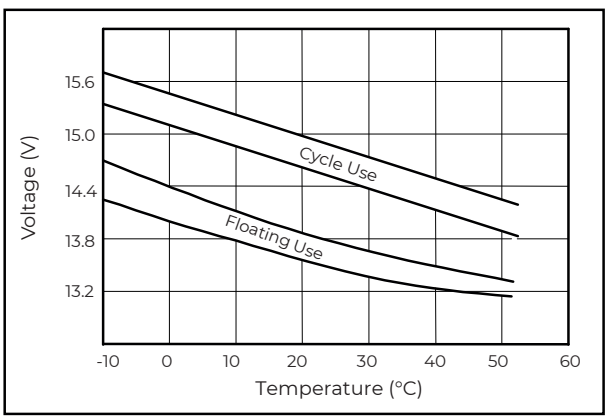
Cycle life on D.O.D (25°C)



Relationship for OCV and capacity (25°C)



Charging voltage VS temperature



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