

# PNB 12420 (12V42AH)

(Power Newmax AGM Battery)



AGM, VRLA for UPS, Telecommunication

### "The Ultra Power of Newmax Lead-Acid Battery"

PNB series is AGM and VRLA type batteries available in various capacities and dimensions which can be installed in any direction. The sealed structure is possible due to technology that prevents over pressuring from excess gassing. This series can be used for UPS, telecommunications, lighting systems and more.



\*\*\* The color and the printed specifications of the products are subject to change without prior notice.

Plate	Paste type
Battery type	Sealed and Maintenance free operation
Structure	Nonspillable construction design
Container/cover	ABS resin (Optional Flame retardant, UL94-V0)
Safety	Safety valve installation for explosion proof.
High quality and high reliability and low self discharge characteristic	
Exceptional deep discharge recovery performance	
Micro-porous Absorptive Glass Mat. Separator (Electro-suspension electrolyte)	

#### 01 Long Life

Advanced technology is used to produce batteries suited for long service life. High density, anti-corrosive lead calcium alloy is used to minimize impurities and resistance.

#### 02 Maintenance Free

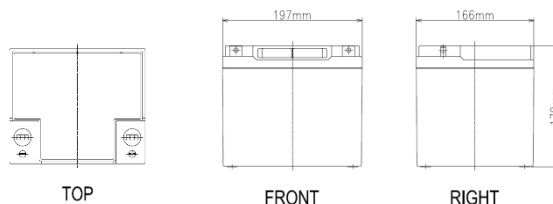
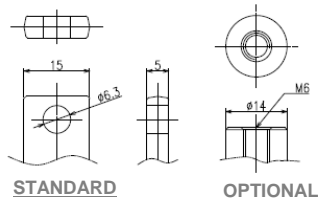
NEWMAX Battery has a gas re-combining design that doesn't need maintenance until the end of its life.

#### 03 Leak Free

Ultra-Porous Absorptive Glass Mat stores the electrolyte between the lead plates. Air-tight sealed container makes it leak free.

#### 04 Safety

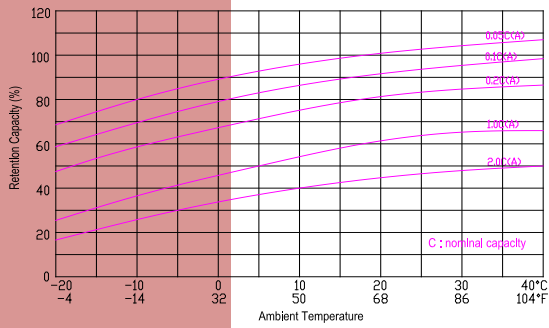
Specially designed anti-explosion filter and safety valves prevent gas leakage when overcharged.



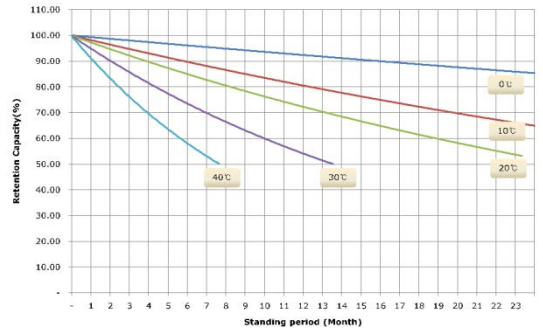
B1-17

Battery model	PNB 12420 (12V42AH / 20 HOUR RATE)			
Rated Capacity (@25°C)	20HR (1.80VPC)	10HR (1.80VPC)	5HR (1.70VPC)	1HR (1.60VPC)
	42.0Ah	40Ah	36Ah	26Ah
Dimension (mm)	Length(L)	width(W)	Height(H)	Total Height(TH)
	197(7.76)	166(6.54)	170(6.69)	170(6.69)
Approx. weight (kg/lbs)	13.1kg ±3% (28.9 lbs)			
Internal resistance (mΩ)	9.60 mΩ ±10% (@25°C, 77°F)			
Max. discharge current (5sec)	320A	Max. discharge current (continuous)		120A
Capacity affected by temperature (%)	@30°C(86°F)	@25°C(77°F)	@10°C(50°F)	@-10°C(14°F)
	105%	103%	95%	78%
Self discharge (@25°C,77F)	After 1 month 3%	After 3 month 8%		After 6 month 15%
Max. short duration discharge current (0.1sec)	680A ±10%			
Recommended charging method (@25°C)	Cycle use		Floating use	
	2.40~2.50V/cell (±5.5mV/°C/Cell) / 13.6A max.		2.21~2.23V/cell (±3.3mV/°C/cell)	

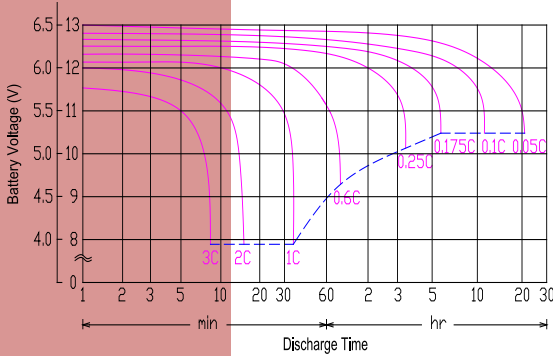
**Effect of temperature on capacity**



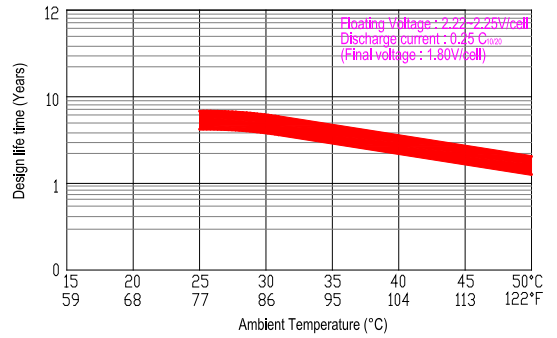
**Self discharge**



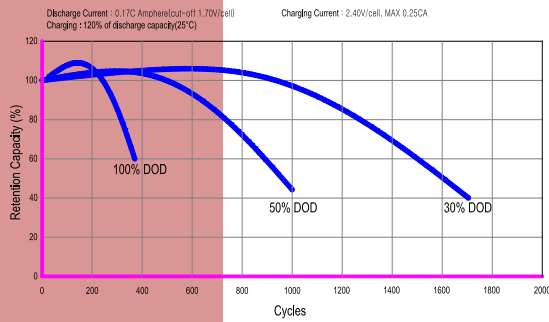
**Discharge time vs current**



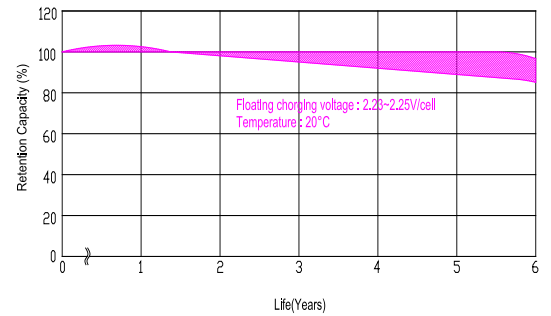
**Floating life characteristics**



**Cycle life vs DOD %**



**Floating life for capacity characteristics**



**Constant current discharge ratings – Amperes per cell @ 25°C**

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	77.2	64.4	60.4	49.2	40.9	34.8	25.0	10.0	6.3	4.4	3.7	1.94
1.85V	92.0	76.0	69.4	56.4	45.5	38.8	25.6	10.4	6.6	4.6	3.9	2.05
1.80V	107	84.8	74.6	59.8	46.7	40.0	25.8	10.8	6.7	4.7	4.0	2.10
1.75V	116	89.6	77.6	64.6	47.7	41.2	26.0	11.2	6.9	4.8	4.1	2.15
1.70V	125	94.0	80.4	62.8	48.3	41.5	26.1	11.4	7.3	5.0	4.2	2.21
1.65V	129	96.0	81.6	63.9	48.8	41.6	26.2	11.8	7.4	5.2	4.4	2.31
1.60V	132	98.0	82.2	64.4	48.9	41.7	26.4	12.0	7.6	5.3	4.5	2.36

**Constant power discharge ratings – Watts per cell @ 25°C**

V/cell	Minutes						Hours					
	5	10	15	20	30	40	1	3	5	8	10	20
1.90V	150	125	117	95	81	69	49	19.7	12.5	8.7	7.4	3.9
1.85V	178	147	135	109	90	76	50	20	12.9	9.1	7.8	4.1
1.80V	208	165	145	116	92	79	51	21	13.2	9.4	8.0	4.2
1.75V	224	174	151	119	94	81	51	22	13.6	9.7	8.2	4.3
1.70V	242	182	156	122	95	82	51	22	14.3	10.0	8.5	4.4
1.65V	235	186	158	124	96	82	52	23	14.6	10.4	8.8	4.6
1.60V	257	190	159	125	96	82	52	24	15.1	10.6	9.0	4.7

