

Koyosonic

Gel Battery

NPG24-12 [12V24AH]

Specification

Nominal Voltage	12V
Nominal Capacity(20HR)	24.0AH
Dimensions	Length 165±2mm (6.50 inches)
	Width 125±2mm (4.92 inches)
	Container Height 175±2mm (6.89 inches)
	Total Height (with Terminal) 175±2mm (6.89 inches)
Approx Weight	Approx 8.2 kg (18.1lbs)
Terminal	T3/L3
Container Material	ABS
Rated Capacity	24.0 AH/1.20A (20hr, 1.80V/cell, 25°C/77°F)
	22.3 AH/2.23A (10hr, 1.80V/cell, 25°C/77°F)
	20.4 AH/4.08A (5hr, 1.75V/cell, 25°C/77°F)
	18.4 AH/6.12A (3hr, 1.75V/cell, 25°C/77°F)
	15.1 AH/15.1A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	360A (5s)
Internal Resistance	Approx 15mΩ
Operating Temp. Range	Discharge : -15~50°C (5 ~ 122°F)
	Charge : 0~40°C (32 ~ 104°F)
	Storage : -15~40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77 ±5°F)
Cycle Use	Initial Charging Current less than 7.2A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	No limit on Initial Charging Current Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C
Standby Use	
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	NP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.



Applications

- ◆ Solar or Wind Power System
- ◆ Stored energy (Photovoltaic)
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Telecommunications
- ◆ DC power supply



ISO9001 ISO14001

Constant Current Discharge (Amperes) at 25 C (77 F) °

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	45.7	35.1	29.1	25.1	19.4	14.32	12.07	7.14	5.58	4.54	3.70	3.21	2.59	2.16	1.19
1.80V/cell	61.3	44.8	35.1	29.7	22.9	16.7	13.52	7.79	6.01	4.85	3.97	3.45	2.75	2.23	1.20
1.75V/cell	69.2	49.3	38.4	32.0	23.8	17.3	14.14	8.08	6.12	4.96	4.08	3.54	2.80	2.29	1.21
1.70V/cell	76.2	53.7	41.0	33.6	24.8	18.0	14.59	8.28	6.29	5.09	4.18	3.61	2.84	2.34	1.23
1.65V/cell	84.0	58.0	43.6	35.7	26.1	18.4	14.93	8.40	6.56	5.26	4.30	3.69	2.88	2.39	1.25
1.60V/cell	92.6	62.9	46.6	38.0	27.6	19.2	15.07	8.76	6.76	5.43	4.44	3.77	2.91	2.41	1.26

Constant Power Discharge (Watts/cell) at 25 C (77 F) °

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	83.6	64.8	54.3	47.4	37.0	27.5	23.3	13.9	10.9	8.88	7.26	6.32	5.12	4.28	2.35
1.80V/cell	111.0	81.9	64.7	55.2	43.0	31.8	25.9	15.0	11.6	9.43	7.76	6.75	5.41	4.41	2.37
1.75V/cell	122.5	88.5	69.8	58.8	44.3	32.6	27.0	15.5	11.8	9.60	7.93	6.91	5.49	4.52	2.39
1.70V/cell	131.1	94.3	73.4	61.3	45.9	33.8	27.8	15.9	12.1	9.84	8.12	7.04	5.56	4.61	2.44
1.65V/cell	142.5	100.8	77.5	64.7	48.0	34.4	28.2	16.0	12.6	10.1	8.32	7.18	5.64	4.70	2.47
1.60V/cell	153.6	107.0	81.5	68.1	50.3	35.6	28.3	16.6	12.9	10.4	8.56	7.31	5.68	4.74	2.48

Specifications subject to change without prior notice.

Koyosonic

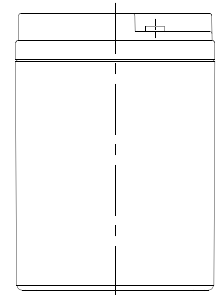
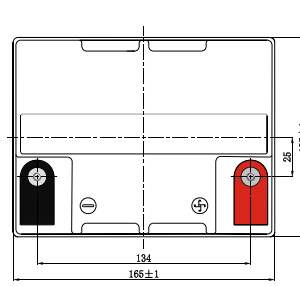
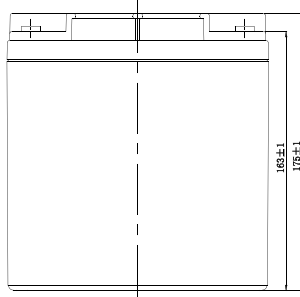
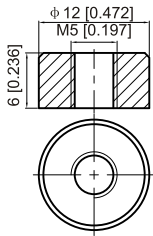
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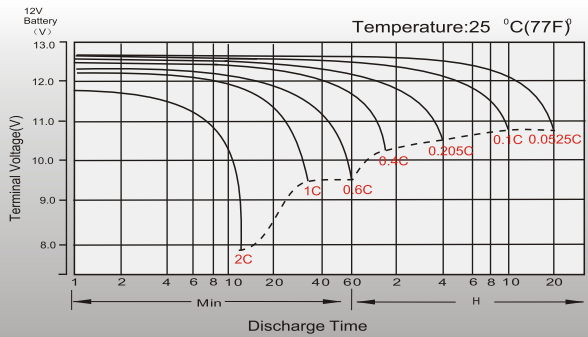
Dimensions

T3 Terminal

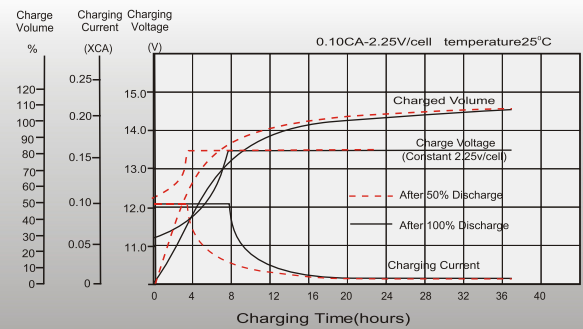
Unit: mm [inches]



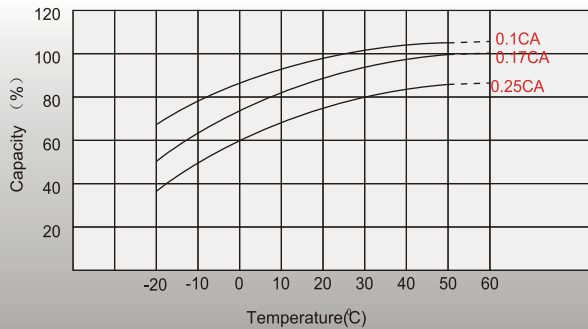
Discharge Characteristics



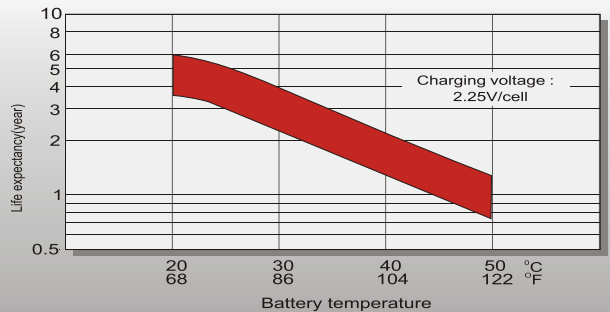
Float Charging Characteristics



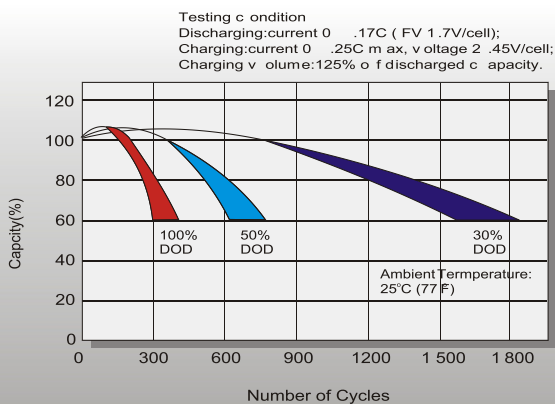
Temperature Effects in Relation to Battery Capacity



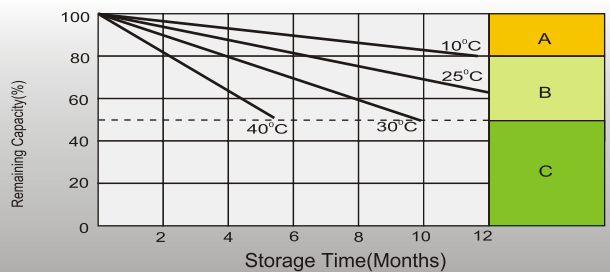
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary charge required.
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplement entary charge required before use. Optional charging way as below:
1. Charg ed for above 3 days at limited current 0.25CA and constant volatge 2.25V/cell.
2. Charg ed for above 20 hours at limited current 0.25CA and constant volatge 2.45V/cell.
3. Charg ed for 8-10 hours at limited current 0.05CA .
- C** Supplement entary charge may often fail to recover the capacity.
The battery sho uld nev er be left standing till this is reached.