

Koyosonic

Gel Deep-cycle Solar Battery

NPS180-12 [12V180AH]

Specification

Nominal Voltage	12V
Nominal Capacity(10HR)	180AH
Dimensions	Length 522±2mm (20.55 inches)
	Width 240±2mm (9.45 inches)
	Container Height 218±2mm (8.58 inches)
	Total Height (with Terminal) 224±2mm (8.81 inches)
Approx Weight	Approx 56.0kg (123.45lbs) ± 2% tolerance
Terminal	T5 (M8X16) / Torque: 9.6 ~ 10.7Nm
Container Material	ABS
Rated Capacity	200.0 AH/10.0A (20hr, 1.80V/cell, 25°C/77°F)
	180.0 AH/18.0A (10hr, 1.80V/cell, 25°C/77°F)
	156.0AH/31.2A (5hr, 1.75V/cell, 25°C/77°F)
	141.0AH/47.0A (3hr, 1.75V/cell, 25°C/77°F)
	112.0 AH/112.0A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	1800A (5s)
Internal Resistance	Approx 2.7mΩ
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 45.0A. 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	The self-discharge rate is about 2% at 25°C (77°F) per month. Refreshing charge is required after stored for 8 months. For higher temperature, shorter interval.



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	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	242.2	206.0	172.3	136.9	103.6	84.9	54.1	42.7	34.9	28.1	24.5	19.9	17.0	10.27
1.80V/cell	309.5	248.9	203.7	161.6	120.5	95.1	59.0	46.0	37.3	30.2	26.3	21.1	18.0	10.0
1.75V/cell	340.1	271.8	219.1	167.7	125.1	99.5	61.2	47.0	38.1	31.2	27.0	21.5	18.2	10.45
1.70V/cell	370.6	290.2	230.2	174.6	130.1	102.6	63.6	48.2	39.1	31.8	27.6	21.8	18.4	10.63
1.65V/cell	400.0	308.6	244.6	184.2	133.3	106.0	65.4	50.2	40.5	32.7	28.2	22.1	18.7	10.76
1.60V/cell	434.3	330.0	260.6	194.4	139.0	112.0	67.6	51.7	41.7	33.8	28.8	22.3	18.9	10.81

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

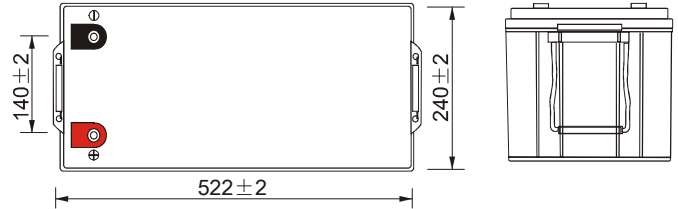
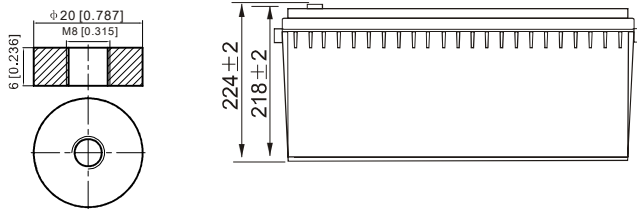
F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	447.4	384.3	324.7	261.0	199.2	163.7	105.0	83.3	68.2	55.2	48.2	39.3	33.6	19.4
1.80V/cell	564.9	458.1	378.2	303.2	229.9	182.4	113.8	89.1	72.5	59.0	51.5	41.5	35.6	19.5
1.75V/cell	610.8	494.3	403.0	312.2	236.3	189.9	117.6	90.4	73.8	60.3	52.7	42.1	35.9	19.7
1.70V/cell	650.7	520.4	420.3	323.2	244.8	195.3	122.0	92.8	75.7	61.7	53.7	42.7	36.2	20.0
1.65V/cell	695.8	549.0	443.2	338.1	248.7	200.4	124.7	96.3	78.0	63.2	54.7	43.3	36.9	20.2
1.60V/cell	738.1	577.5	467.0	354.5	257.8	206.4	128.2	98.8	80.2	65.1	55.8	43.6	37.2	20.3

NPS180-12 [12V180AH]

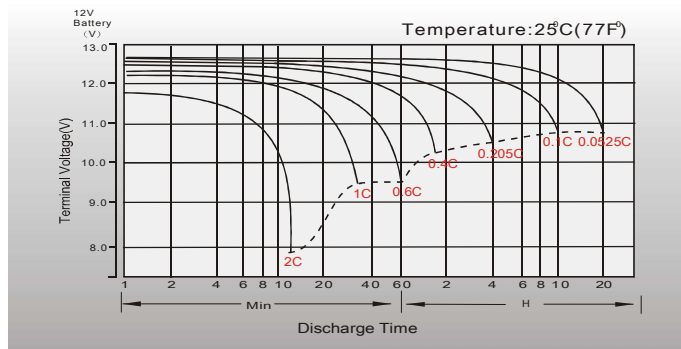
Dimensions

T5 Terminal

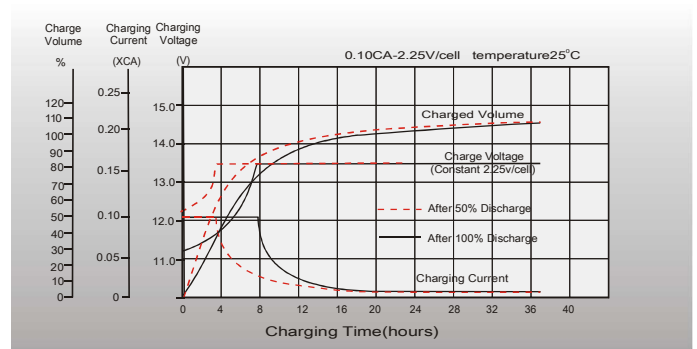
Unit: mm [inches]



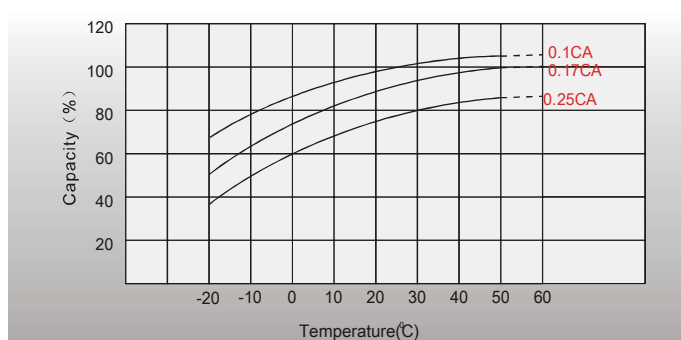
Discharge Characteristics



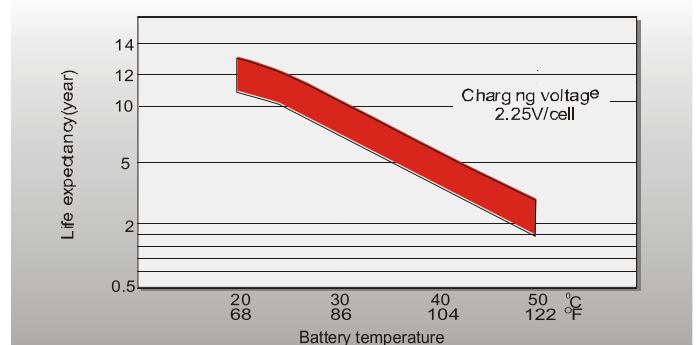
Float Charging Characteristics



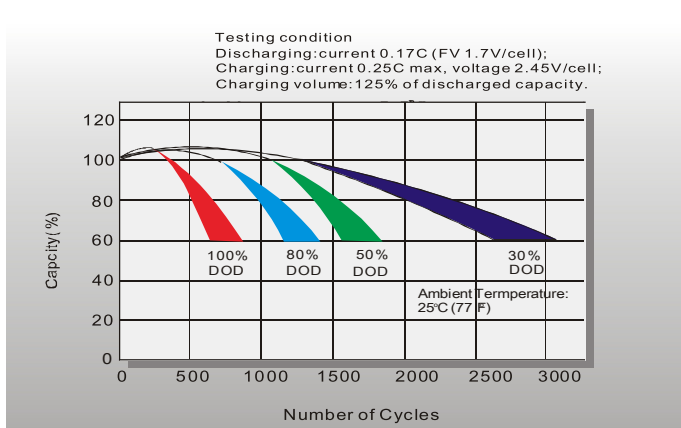
Temperature Effects in Relation to Battery Capacity



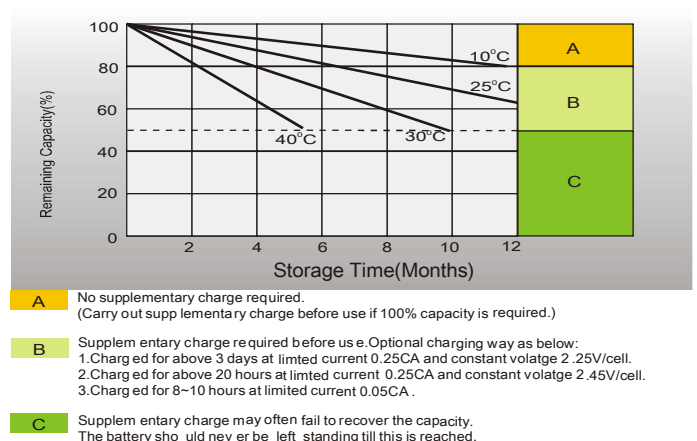
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



Specifications subject to change without prior notice.