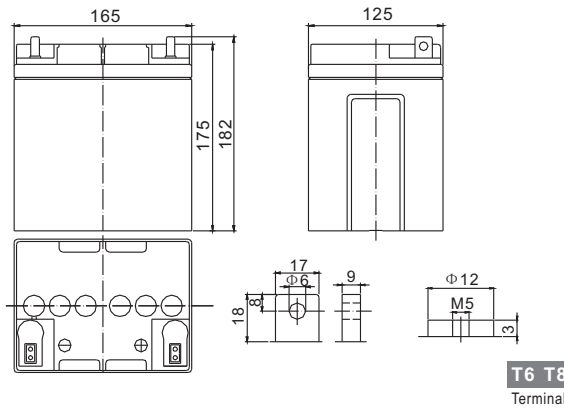


# High Rate Series FP12280HR (12V110Watts/cell@15min.Rate)

**FirstPower®**

## Dimension(mm)



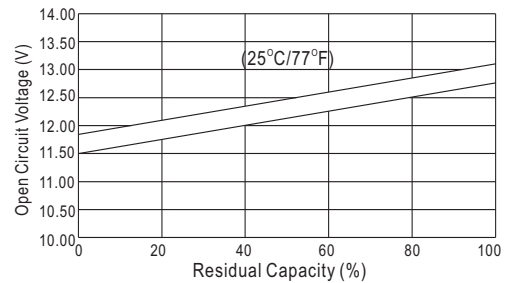
## Specification

Nominal Voltage		12 V
Capacity(20HR, 25°C)		28Ah(110Watts/cell@15min.Rate)
Dimension	Length	165mm (6.5inch)
	Width	125mm (4.9inch)
	Height	175mm (6.9inch)
	Total Height(T6/T8)	182mm (7.2inch)/175mm (6.9inch)
Approx. Weight		9.5kg (20.9lbs)

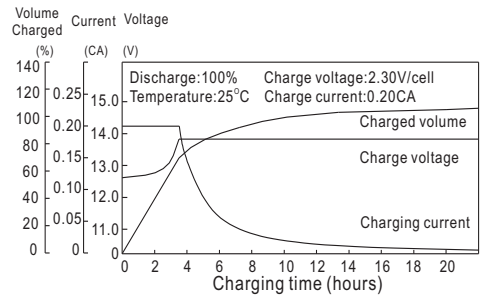
## Characteristics

Capacity 20°C (68°F) To 1.70V/Cell	20 hour rate	28Ah
	10 hour rate	26.5Ah
	5 hour rate	24.5Ah
	1 hour rate	18.3Ah
	15 min rate	14Ah
Internal resistance(Fully charged, 25°C)		Approx. 11m Ω
Capacity affected by temperature (20HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 month	Remaining Capacity: 91%
	6 month	Remaining Capacity: 82%
	12 month	Remaining Capacity: 65%
Nominal operating temperature		25°C ±3°C(77°F ±5°F)
Operating temperature range		-15°C ~50°C (5°F ~122°F)
Float charging voltage(25°C)		13.50 to 13.80V
Cyclic charging voltage(25°C)		14.50 to 14.90V
Maximum charging current		8.4A
Terminal material		Lead
Maximum discharge current		420A(5 sec.)

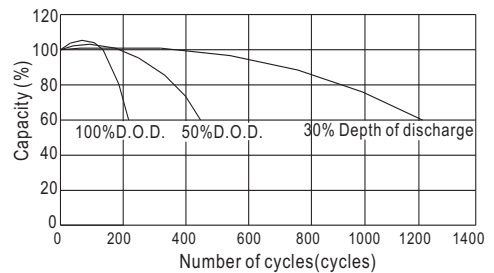
## The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



## Charging Characteristics(25°C)



## Cycle Life(25°C)



## Constant Current Discharge Characteristics (A, 25°C)

F.V/TIME	5min	10min	15min	30min	60min	3h	5h	10h	20h
1.60V/cell	121	77.1	58.4	33.3	19.1	7.25	4.97	2.67	1.42
1.67V/cell	117	74.6	56.9	32.4	18.6	7.18	4.93	2.66	1.41
1.70V/cell	115	73.3	56.0	31.9	18.3	7.14	4.90	2.65	1.41
1.80V/cell	108	68.9	53.2	30.3	17.4	7.00	4.80	2.63	1.40

## Constant Power Discharge Characteristics (Watt/Cell, 25°C)

F.V/TIME	5min	10min	15min	30min	60min	3h	5h	10h	20h
227	147	113	64.9	37.1	14.5	9.95	5.34	2.84	
220	142	110	63.2	36.2	14.4	9.86	5.31	2.83	
216	139	109	62.3	35.7	14.3	9.80	5.30	2.82	
203	131	103	59.2	33.9	14.0	9.60	5.30	2.80	