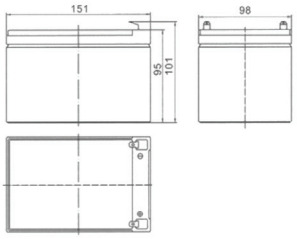
ICAL®

IP12140 - 12V14AH

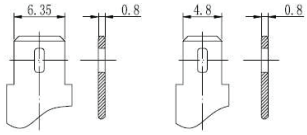
Standard Series



Dimensions



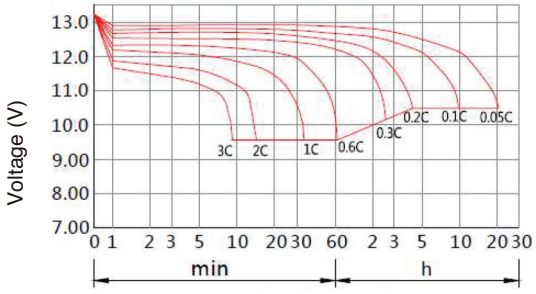
Terminal



■ Specifications

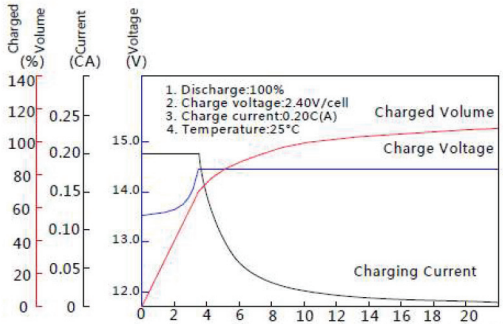
Nominal Voltage		12V
Capacity (25°C)	20HR (10.5V)	14Ah
	10HR (10.5V)	13Ah
	1HR (9.60V)	8.4Ah
Dimensions	Length	151 ± 1.5mm (5.94inch)
	Width	98 ± 1mm (3.86inch)
	Height	95 ± 1mm (3.74inch)
	Total Height	101 ± 1mm (3.98inch)
Approx. Weight		3.70kg (8.16lbs) ± 5%
Terminal type		T2/T1
Internal resistance (Fully charged, 25°C)		Approx. 19mΩ
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	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)
Floating charging voltage (25°C)		13.60 to 13.80V Temperature compensation: -18mV/°C
Cyclic charging voltage		14.50 to 14.90V Temperature compensation: -30mV/°C
Maximum charging current		4.2A
Terminal material		Copper
Maximum discharging current		180A (5sec.)
Design floating life (20°C)		10 years

■ Discharge Characteristics (25°C)



Discharge time

■ Charging Characteristics (25°C)



Charging time (hours)

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

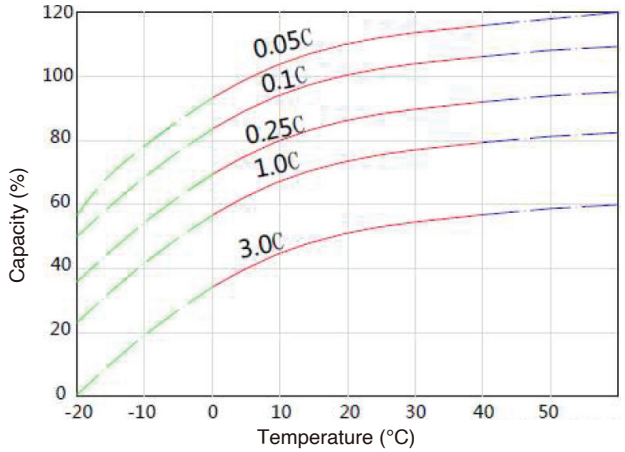
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	28.8	22.8	12.7	7.80	4.26	3.06	2.45	2.08	1.35	1.13	0.61
9.90V	27.9	22.3	12.5	7.68	4.24	3.04	2.43	2.07	1.34	1.13	0.61
10.2V	26.8	21.4	12.1	7.49	4.20	3.02	2.42	2.05	1.33	1.12	0.60
10.5V	25.6	20.7	11.8	7.34	4.14	3.00	2.40	2.04	1.32	1.12	0.60
10.8V	24.2	19.6	11.4	7.11	4.03	2.91	2.33	1.98	1.28	1.09	0.59

■ Constant Power Discharge Characteristics (Watt, 25°C)

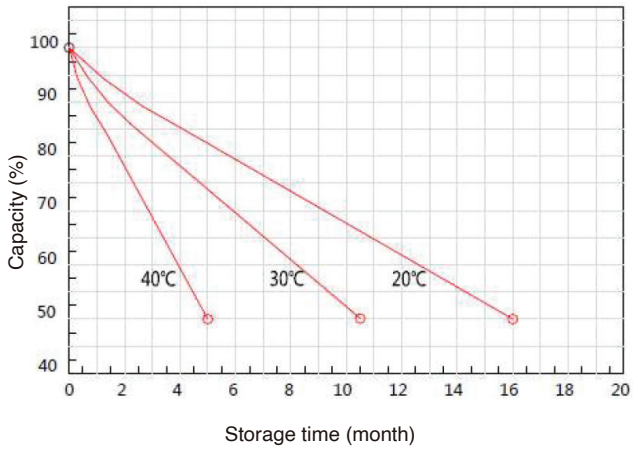
F.V/TIME	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	325	260	146	90.3	49.9	36.4	29.2	24.8	16.2	13.6	7.31
9.90V	315	254	143	89.0	49.6	36.1	29.0	24.7	16.1	13.5	7.28
10.2V	302	244	138	86.7	49.1	35.9	28.8	24.5	16.0	13.5	7.24
10.5V	289	236	135	85.0	48.4	35.6	28.6	24.4	15.8	13.4	7.20
10.8V	273	224	130	82.4	47.2	34.6	27.7	23.6	15.4	13.1	7.06

Note: The above characteristics data can be obtained within three charge/discharge cycles.

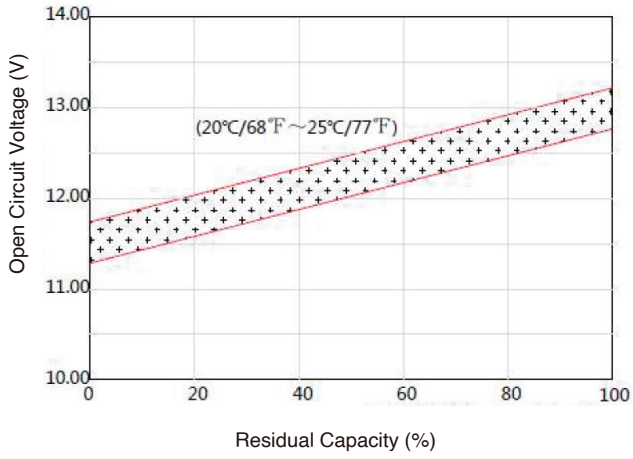
Effect of Temperature on Capacity



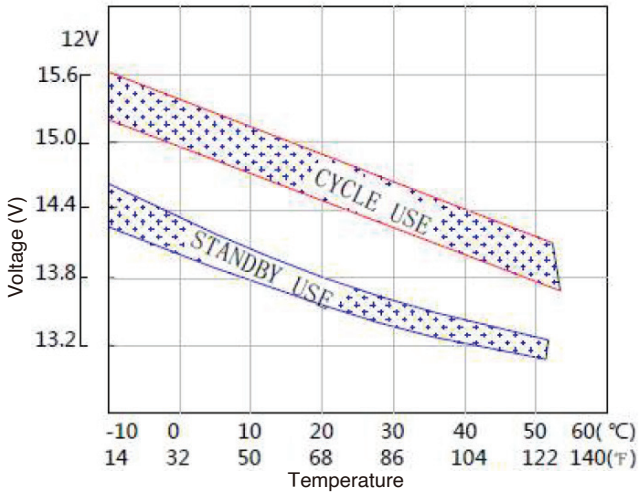
Self-discharge Characteristics



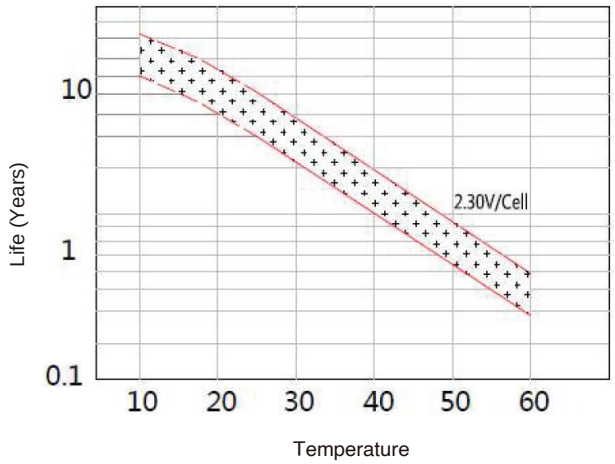
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



The Relationship for Charging Voltage and Temperature



Floating Life on Temperature



Cycle Life on D.O.D (25°C)

