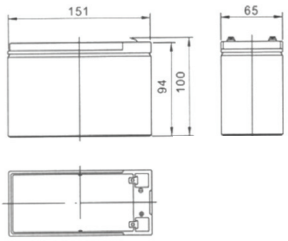
ICAL®

IP1290 - 12V9AH

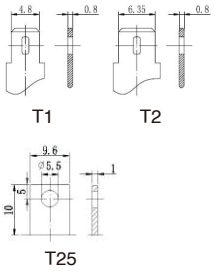
Standard Lead Acid



Dimensions



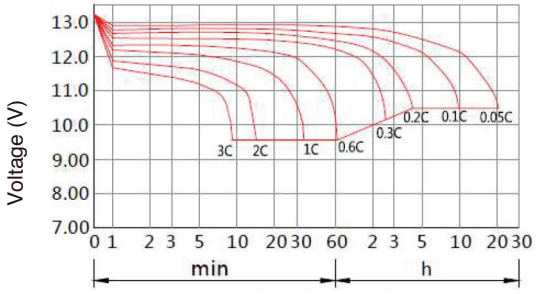
Terminal



■ Specifications

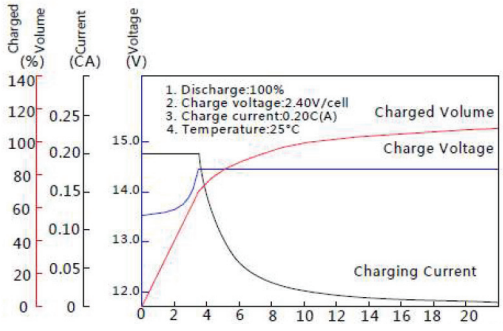
Nominal Voltage		12V
Capacity (25°C)	20HR (10.5V)	9Ah
	10HR (10.5V)	8.4Ah
	1HR (9.60V)	5.8Ah
Dimensions	Length	151 ± 1mm (5.94inch)
	Width	65 ± 1mm (2.56inch)
	Height	94 ± 1mm (3.70inch)
	Total Height	100 ± 1mm (3.90inch)
Approx. Weight		2.60kg (4.40lbs) ± 5%
Terminal type		T1/T2/T25
Internal resistance (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
Cycling charging current		14.50 to 14.90V Temperature compensation: -30mV/°C
Maximum charging current		2.7A
Terminal material		Copper
Maximum discharging current		135A (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)

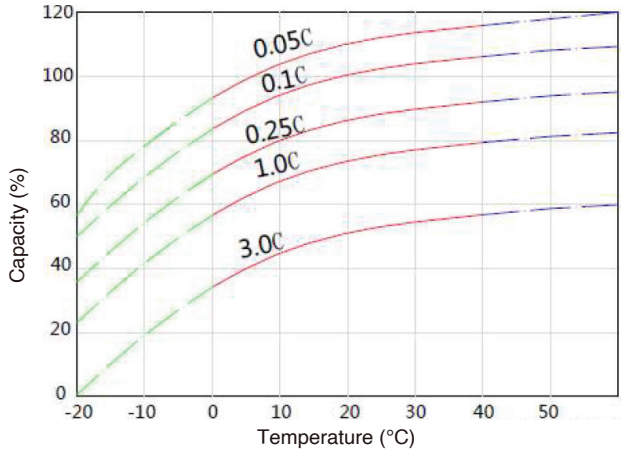
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	34.2	21.6	17.1	9.54	5.85	3.20	2.30	1.84	1.56	0.85	0.46
9.90V	33.2	21.0	16.7	9.35	5.76	3.18	2.28	1.83	1.55	0.85	0.45
10.2V	31.8	20.1	16.1	9.06	5.62	3.15	2.27	1.81	1.54	0.84	0.45
10.5V	30.4	19.2	15.5	8.84	5.50	3.10	2.25	1.80	1.53	0.84	0.45
10.8V	28.7	18.1	14.7	8.52	5.34	3.02	2.18	1.75	1.48	0.82	0.44

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

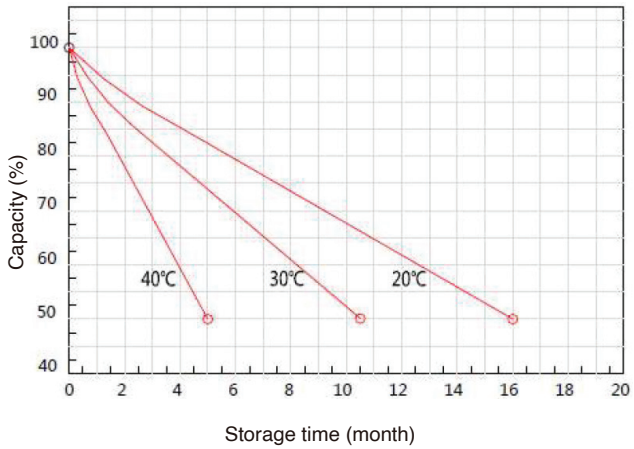
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	382	244	195	109	67.7	37.4	27.3	21.9	18.6	10.2	5.48
9.90V	370	236	190	107	66.7	37.2	27.1	21.7	18.5	10.2	5.46
10.2V	355	227	183	104	65.0	36.9	26.9	21.6	18.4	10.1	5.43
10.5V	340	217	177	101	63.7	36.3	26.7	21.4	18.3	10.0	5.40
10.8V	321	205	168	97.6	61.8	35.4	25.9	20.8	17.7	9.84	5.29

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

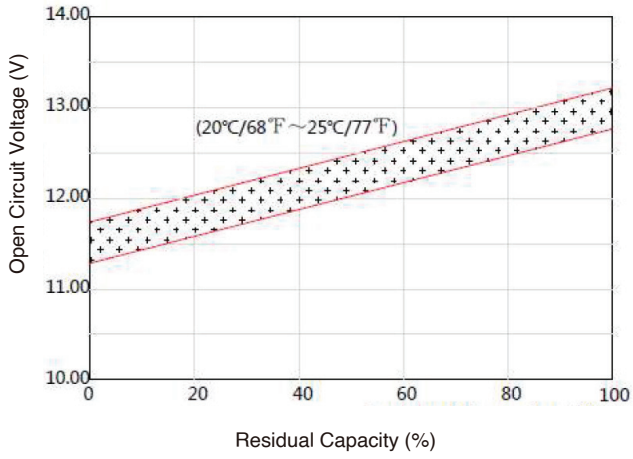
Effect of Temperature on Capacity



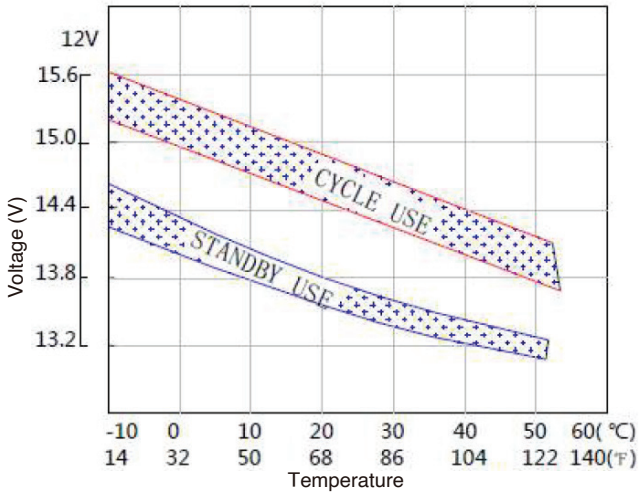
Self-discharge Characteristic



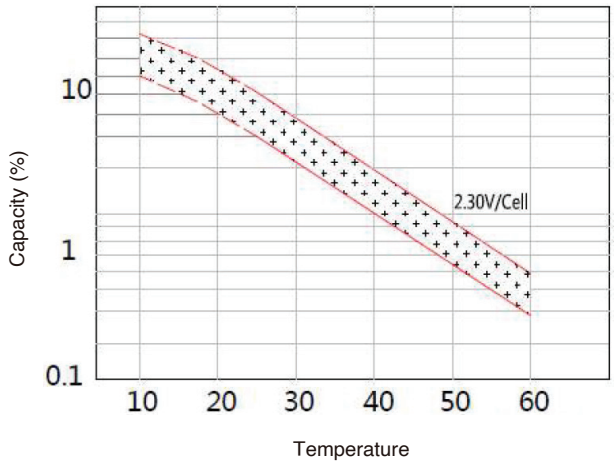
The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



The Relationship for Charging Voltage and Temperature



Floating Life on Temperature



Cycle Life on D.O.D (25°C)

