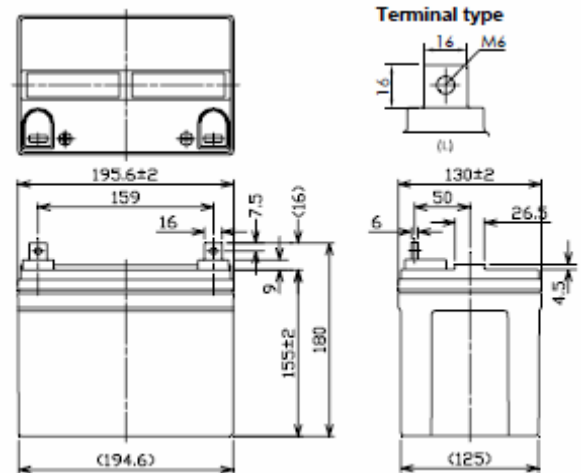


Panasonic LC-R1233P

12V 33Ah Lead Acid Battery

CoolPower
Solutions



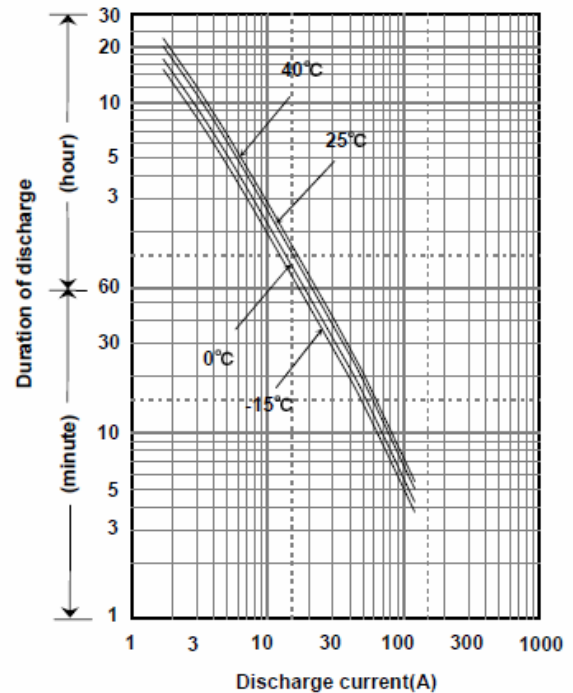
■ Specification

Nominal Voltage		12V
Rated Capacity(20HR)		33Ah
Dimensions	Length	195.6 mm
	Width	130 mm
	Height	155 mm
	Total height	180 mm
Approx. Mass		11.5 kg
Terminal		M6 Bolt and Nut type

■ Characteristics

Capacity (25 °C)	20 hour rate	33Ah
	10 hour rate	30Ah
	5 hour rate	27Ah
	1 hour rate	20Ah
Internal Resistance	Fully charged battery (25 °C)	7 mΩ
Temperature Dependency of Capacity (20 hour rate)	40 °C	102%
	25 °C	100%
	0 °C	85%
	-15 °C	65%
Self Discharge (25 °C)	After 3 months	91%
	After 6 months	82%
	After 12 months	64%

■ Duration of discharge vs. discharge current



■ Watt Table(25°C)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	1546	1254	948	732	635	457	328	268	187	149	107	86.6	69.5	60.5	36.9	19.8	16.5
9.9V	1446	1182	928	721	630	452	322	262	182	148	105	85.4	68.3	60.0	36.9	19.8	16.5
10.2V	1379	1115	899	706	619	443	321	259	170	147	104	84.2	67.7	60.0	36.9	19.8	16.5
10.5V	1323	1051	868	684	603	433	314	256	168	146	104	84.2	67.7	60.0	36.9	19.8	16.5
10.8V	1182	1001	823	663	590	421	281	233	162	137	99.4	82.5	67.1	58.8	36.9	19.8	16.3

■ Ampere Table(25°C)

Cut-off V	3min	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	10h	20h	24h
9.6V	139	113	84.6	63.7	54.8	39.1	27.9	22.8	15.8	12.6	9.00	7.25	5.80	5.10	3.08	1.65	1.38
9.9V	130	106	82.9	62.7	54.4	38.6	27.4	22.2	15.5	12.5	8.85	7.15	5.70	5.00	3.08	1.65	1.38
10.2V	124	100	80.3	61.4	53.4	37.9	27.4	22.0	14.4	12.4	8.75	7.05	5.65	5.00	3.08	1.65	1.38
10.5V	119	94.3	77.5	59.5	52.0	37.0	26.8	21.8	14.3	12.3	8.70	7.05	5.65	5.00	3.08	1.65	1.38
10.8V	106	89.8	73.5	57.7	50.9	36.0	24.0	19.8	13.7	11.6	8.35	6.90	5.60	4.90	3.08	1.65	1.36

Panasonic LC-R1233P

12V 33Ah Lead Acid Battery

CoolPower
Solutions

■ Charging Method

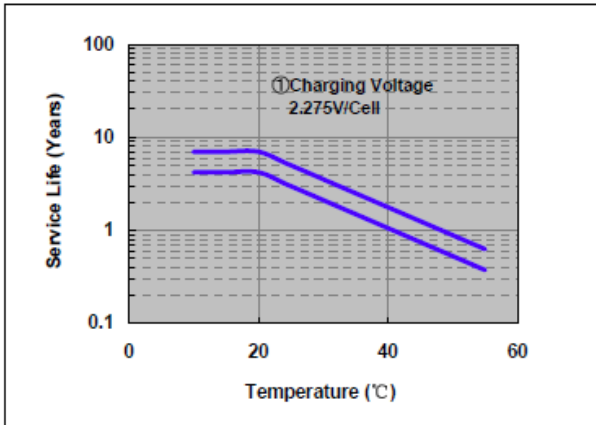
(25°C)

Trickle use	Control voltage 13.6-13.8V; Initial current 4.95A or smaller
-------------	--

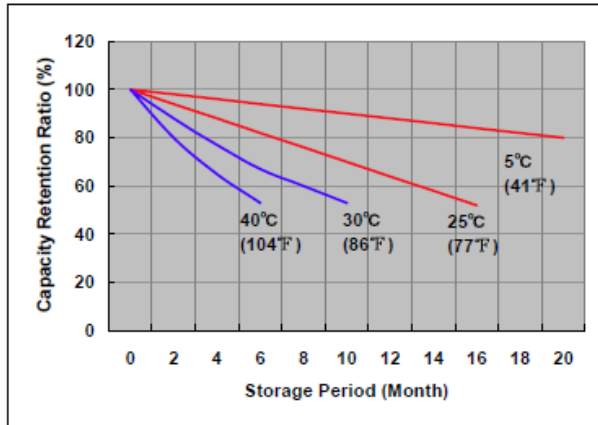
■ Cut off voltage

Discharge current	1.65A-6.6A	6.6A-16.5A	16.5A-33A	33A-66A	66A-99A
Cut off voltage (V)	10.5	10.2	9.9	9.3	8.7

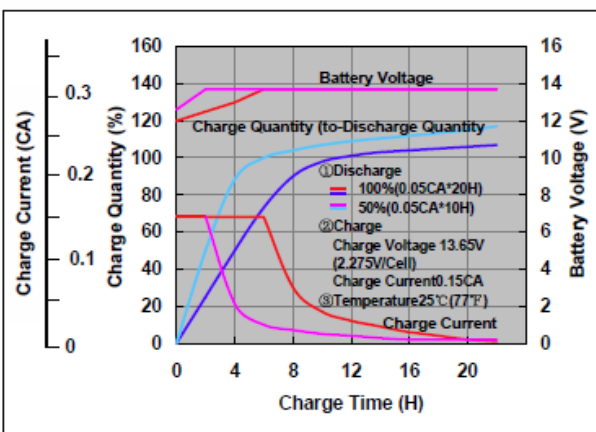
■ Influence of Temperature on Trickle life



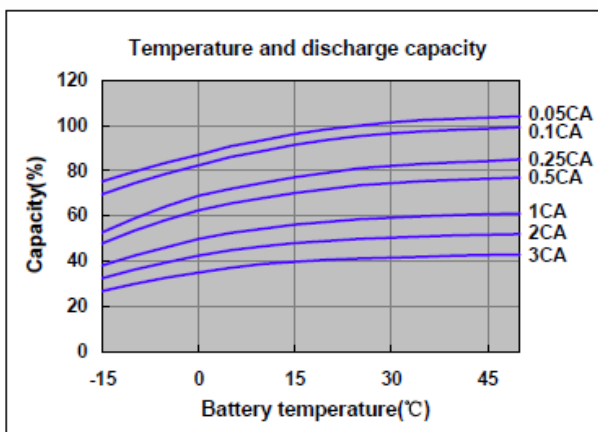
■ Residual capacity test result



■ Constant-voltage and constant-current charge characteristics



■ Discharge capacity by temperature and by discharge current



■ Discharge characteristics (25°C)

