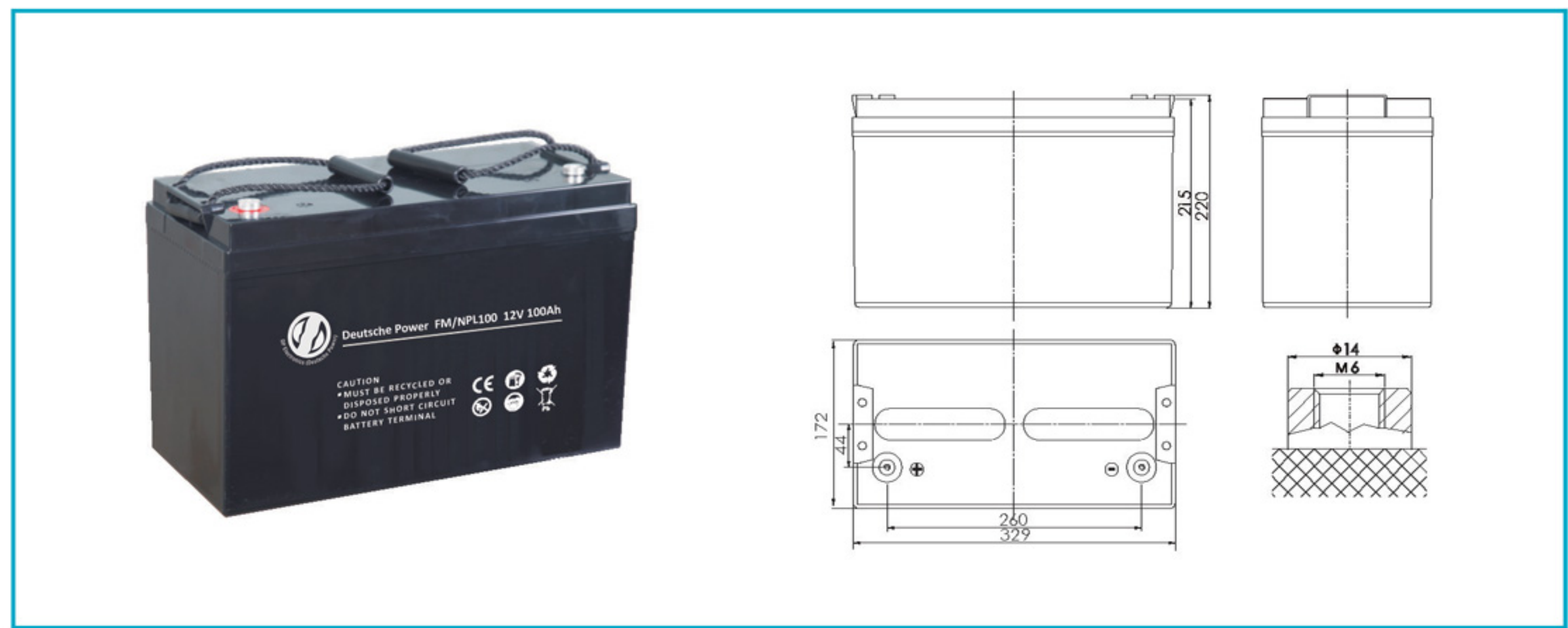


# FM/NPL100

FM/NPL Battery Series  
Solar Energy (Deep Cycle)



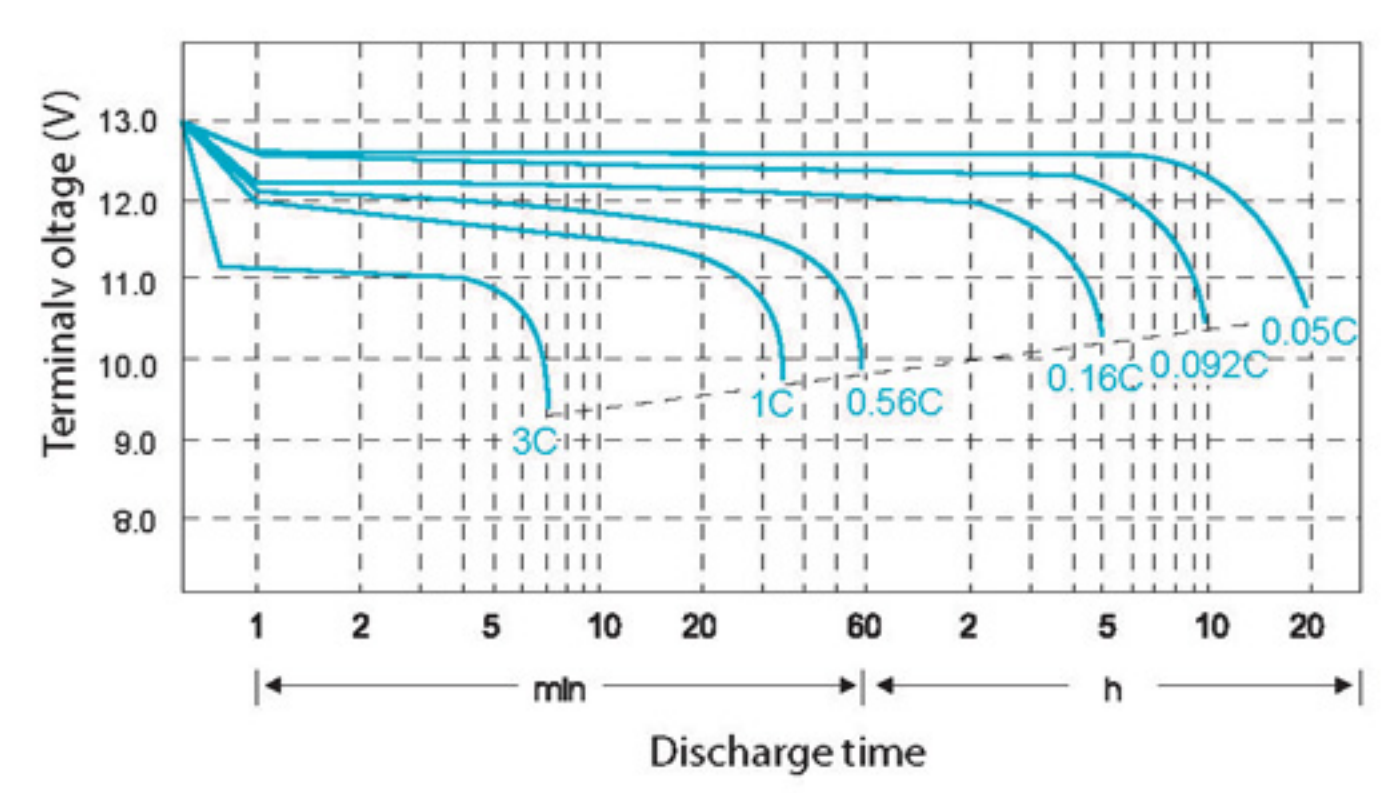
## Specifications

Nominal Voltage	12V	
Rated Capacity (20 hour rate)	100Ah	
Dimensions	Total Height (with terminals)	8.66 inches(220mm)
	Height	8.46 inches(215mm)
	length	12.9 inches(329mm)
	width	6.77 inches(172mm)
Weight	Approx.63.8 Pound(29kg)	

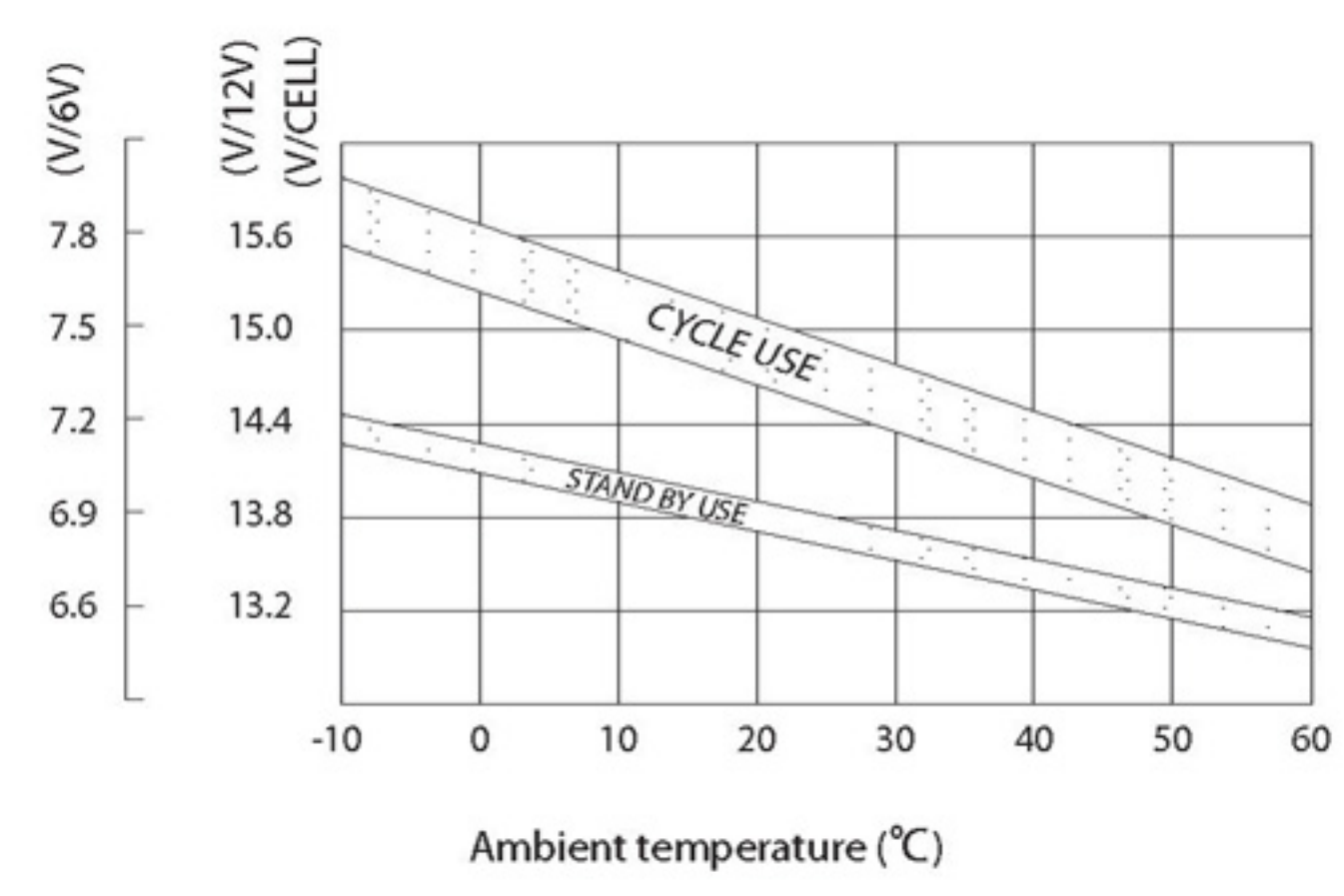
## Characteristics

Capacity 77°F (25°C)	20 hour rate (5.0A)	100 Ah
	10 hour rate (9.20A)	92 Ah
	5 hour rate (16.0A)	80 Ah
	1 hour rate (60.0A)	60 Ah
	15Minute Rate (164A)	41 Ah
Internal Resistance	Full charged Battery 77°F (25°C)	5.0 M
	104°F (40°C)	102%
Capacity affected by Temperature (20hour rate)	77°F (25°C)	100%
	°F (0°C)	85%
	5°F (-15°C)	65%
Self-Discharge 77°F (25°C)	Capacity after 3 month storage	91%
	Capacity after 6 month storage	81%
	Capacity after 12 month storage	60%
Max. Discharge Current 77°F (25°C)	800A(5S)	
Terminal	M5	
Charge (Constant Voltage)	Cycle	Initial Charging Current less than 30A Voltage 14.4~14.7 V / 77°F (25°C)
	Float	Voltage 13.5~13.8V / 77°F (25°C)

## Discharge Curves 77°F (25°C)



## Relationship between charge voltage and temperature



## Constant Current Discharge (AMPERES @25°C)

F.V/Time	5Min	10Min	15Min	30Min	45Min	1Hour	2Hour	3Hour	5Hour	10Hour	24Hour
1.65	311	217	168	102	80.1	54.5	37.8	26.1	17.5	10.6	4.43
1.70	285	205	157	86.8	75.7	51.9	36.9	25.0	16.9	10.4	4.35
1.80	227	173	137	78.4	71.5	49.2	35.3	23.6	16.0	10.0	4.27

## Constant Power Discharge (WATTS PER CELL@25°C)

Cut off voltage V/cell	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	24h
1.60	571	394	307	191	148	119	70.0	49.1	32.4	18.3	8.11
1.65	542	389	304	185	146	115	69.1	49.0	32.2	18.2	8.10
1.67	540	386	302	173	144	114	68.8	48.6	31.9	18.2	8.09
1.70	506	379	291	162	142	111	68.4	47.7	31.6	18.1	8.07
1.75	461	346	274	156	141	108	67.9	46.4	31.0	18.0	8.06
1.80	423	330	264	151	138	107	66.6	46.1	30.5	17.7	8.04
1.85	339	273	231	141	127	104	64.2	45.0	29.5	16.9	7.62

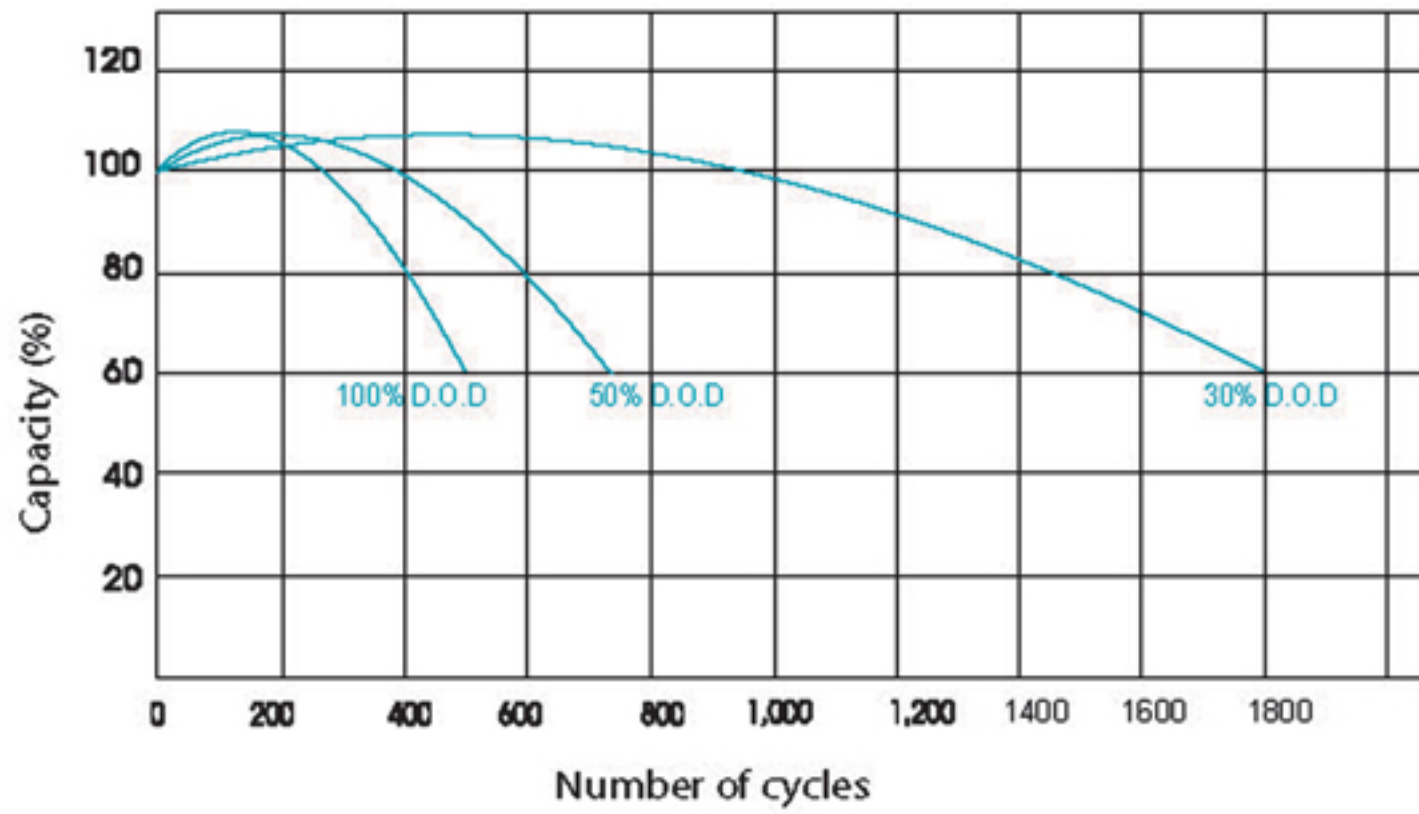


# FM/NPL100

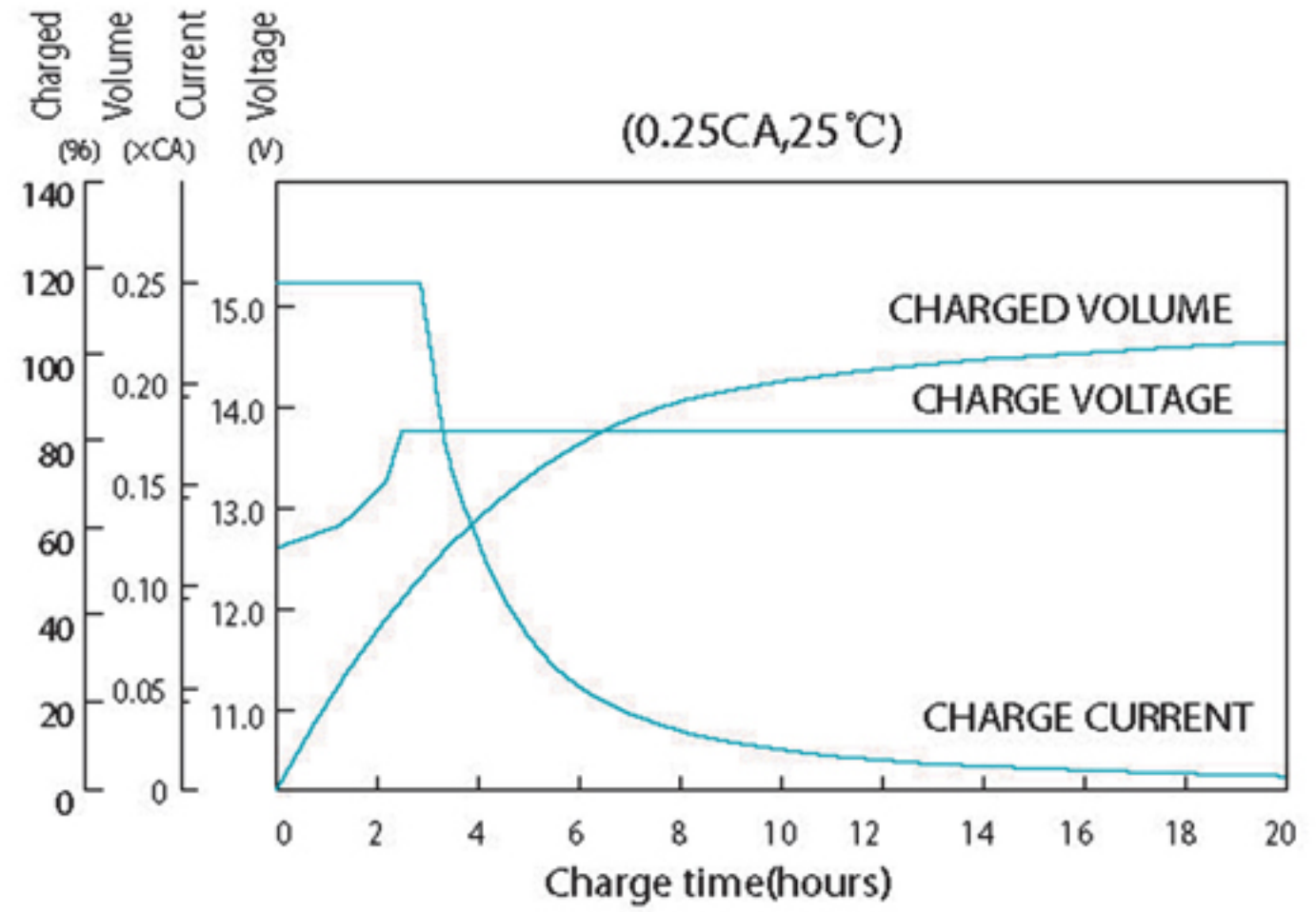
FM/NPL Battery Series  
Solar Energy (Deep Cycle)

The operating environment temperature above 40°C should be avoided. After long term storage, The battery actual capacity would be less than the rated capacity. Full capacity will be obtained through several charge/discharge cycles. To get the longest life, Deutsche Power battery should be fully charged before storage.

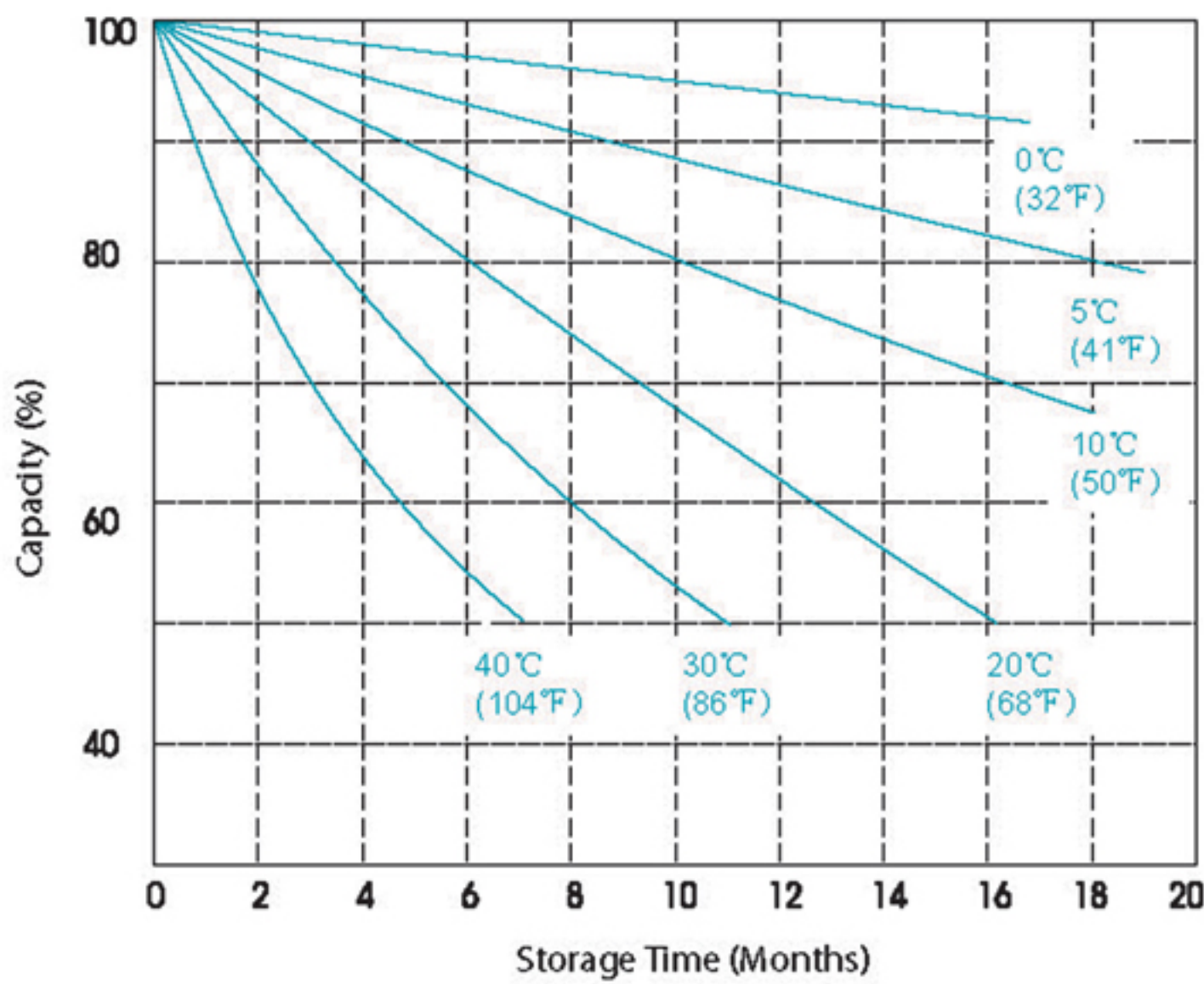
## Cycle service life in relation to depth of discharge



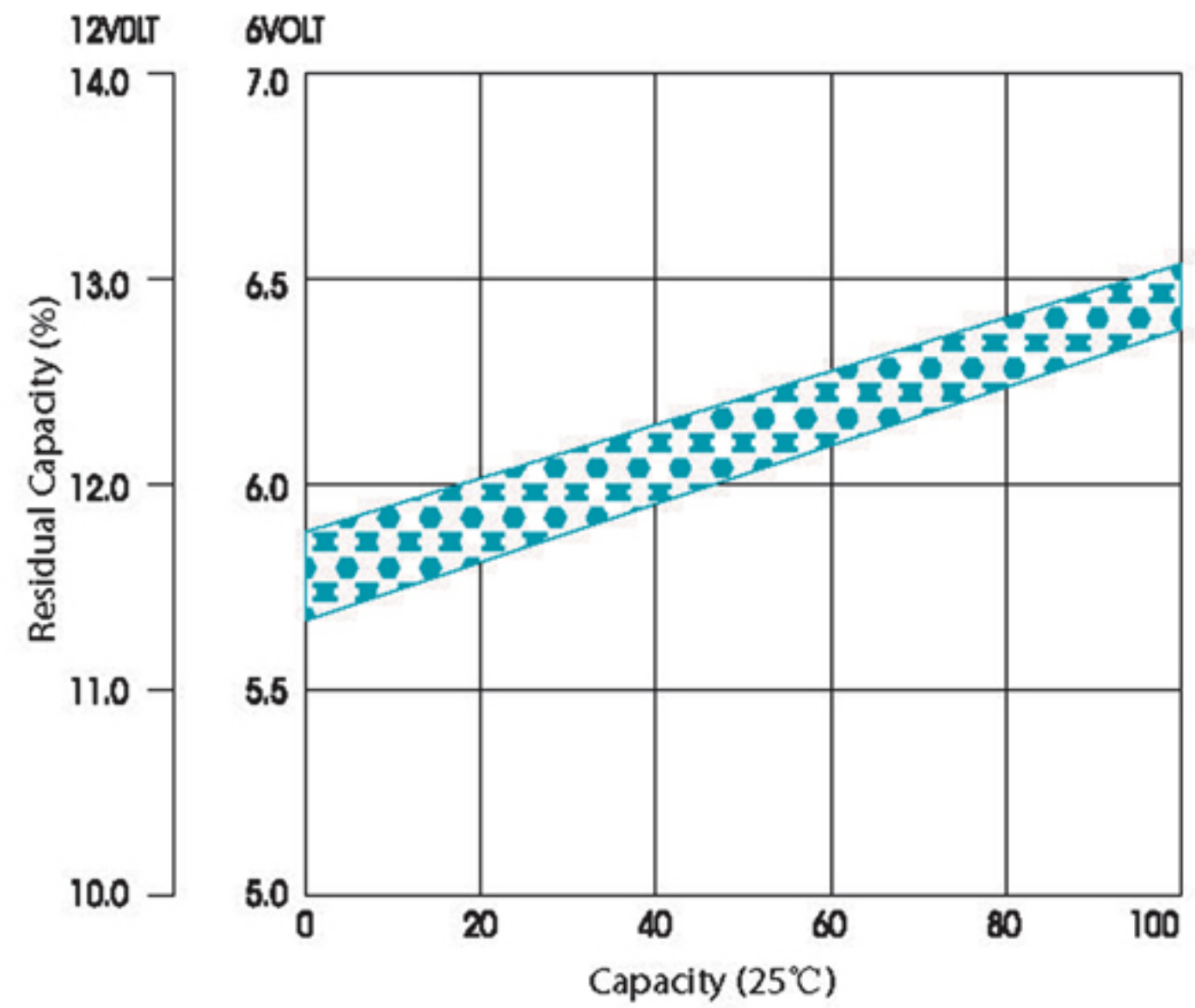
## Constant voltage charge characteristic



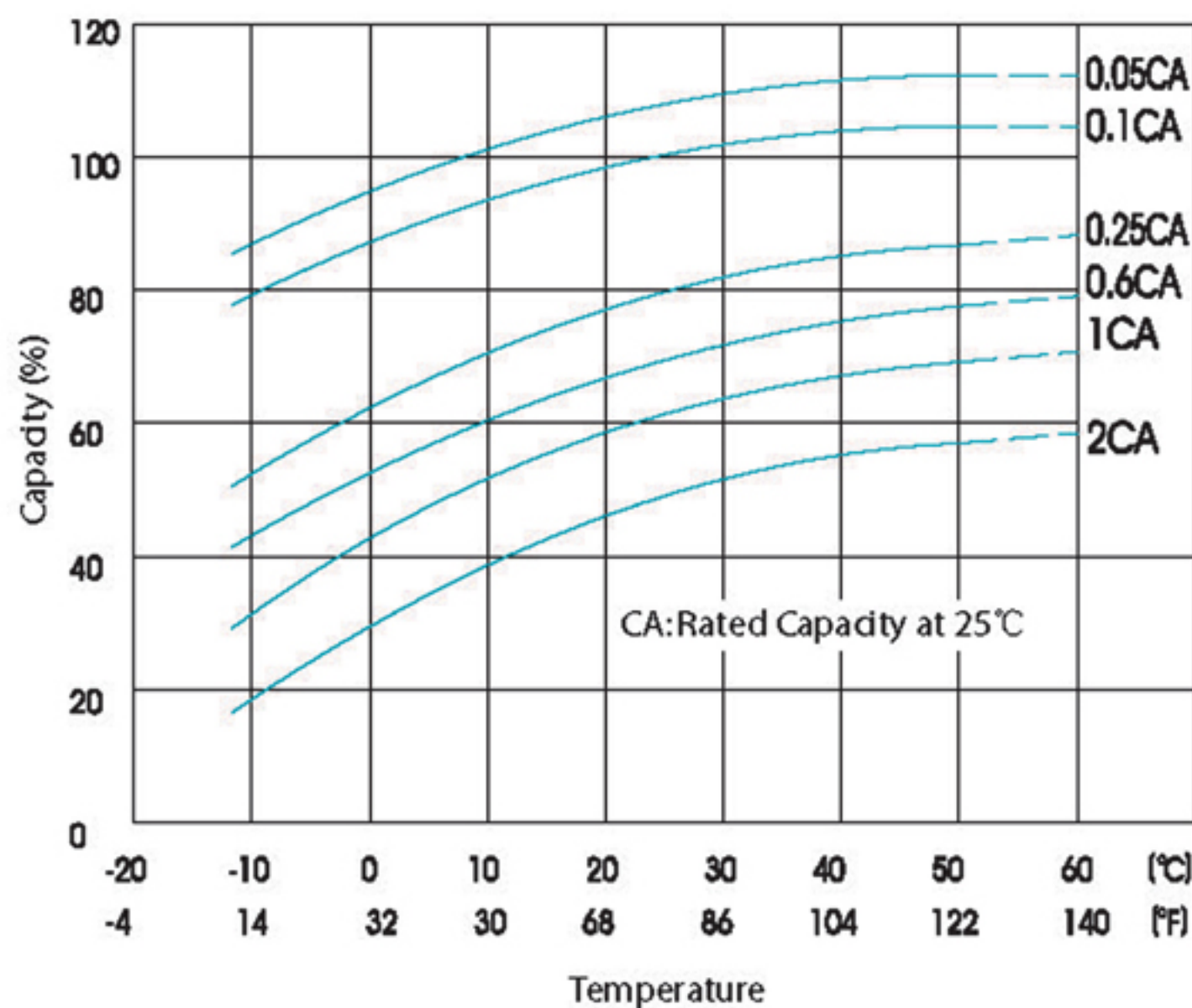
## Self-Discharge Characteristics



## Relationship of OCV and Residual Capacity % (25°C)



## Temperature effects on capacity



## Temperature effects float life

