



# Solar Series-Tubular Gel

## 12V 40PzV150FT(12V180Ah)

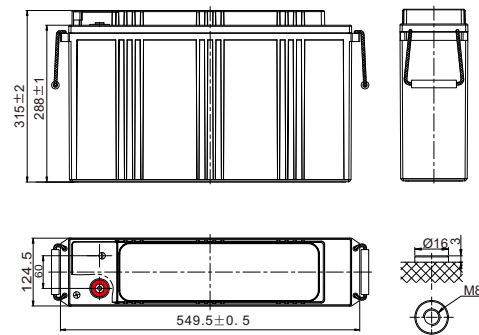


### Specifications

Rated Voltage	12V	
Nominal Capacity	180Ah	(C <sub>100</sub> ,1.80V/cell)
Dimension	Length	549.5mm(21.63 in.)
	Width	124.5mm(4.90 in.)
	Container Height	288mm(11.34 in.)
	Total Height	315mm(12.40 in.)
Approx Weight	51.7Kg (113.98 lbs)	
Terminal	M8	
Container Material	ABS	
Rated Capacity (25°C)	195.6 Ah	(120hr,1.63A,1.80V/cell)
	180.0 Ah	(100hr,1.80A,1.80V/cell)
	174.96 Ah	(72hr,2.43A,1.80V/cell)
	150.0 Ah	(10hr,15.0A,1.80V/cell)
Max. Discharge Current (5s)	1500A	
Internal Resistance(25°C)	Approx.7.5mΩ	
Operating Temp.Range	Discharge	-20°C~55°C (-4°F~131°F)
	Charge	0°C~40°C (32°F~104°F)
	Storage	-20°C~50°C (-4°F~122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max.Charging Current(25°C)	45.0A	
Charge voltage(25°C)	Float	13.5V
	Temp. Coefficient	-3mV/cell/°C
	Cycle(Equalization)	14.1~14.4V
Effect of temp. to Capacity	40°C (104°F)	106%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	≤3% per month at 25°C	



### Layout



### Constant Current Discharge (Amperes) at 25 °C (77° F)

F.V/Time	1h	2h	3h	4h	5h	8h	10h	20h	24h	48h	72h	100h	120h
1.85V/cell	69.7	44.2	33.7	27.9	24.1	16.9	14.4	7.68	6.83	3.50	2.37	1.75	1.60
1.80V/cell	76.5	47.9	36.1	29.6	25.3	17.7	15.0	8.03	6.93	3.55	2.43	1.80	1.63
1.75V/cell	81.5	50.3	37.9	31.0	26.3	18.2	15.3	8.18	7.06	3.62	2.48	1.84	1.67
1.70V/cell	86.1	52.1	39.3	32.0	27.0	18.5	15.5	8.29	7.17	3.69	2.56	1.88	1.71
1.67V/cell	89.0	53.9	40.7	32.8	27.6	18.8	15.7	8.39	7.31	3.80	2.62	1.93	1.75
1.60V/cell	91.7	55.7	41.6	33.6	28.2	19.1	16.0	8.48	7.45	3.85	2.68	1.98	1.79

### Constant Power Discharge (Watts/cell) at 25 °C (77° F)

F.V/Time	1h	2h	3h	4h	5h	8h	10h	20h	24h	48h	72h	100h	120h
1.85V/cell	135.8	86.5	66.1	54.9	47.6	33.6	28.6	15.3	13.6	7.02	4.75	3.53	3.22
1.80V/cell	148.2	93.1	70.5	58.0	49.8	35.2	29.9	16.0	13.8	7.09	4.87	3.61	3.28
1.75V/cell	157.0	97.4	73.7	60.5	51.6	36.0	30.4	16.3	14.1	7.23	4.97	3.70	3.35
1.70V/cell	165.0	100.5	76.2	62.4	52.8	36.6	30.8	16.5	14.3	7.36	5.13	3.77	3.43
1.67V/cell	169.4	103.4	78.6	63.7	53.9	37.1	31.2	16.7	14.5	7.58	5.24	3.86	3.50
1.60V/cell	173.7	106.3	80.0	65.0	54.8	37.6	31.6	16.8	14.8	7.66	5.34	3.96	3.58



# Solar Series-Tubular Gel

## 12V 40PzV150FT(12V180Ah)



### Applications

- Green energy systems (solar, wind, hydro, etc)
- Telecommunications installations
- Solar power stations
- Alarm installations
- Railway crossing
- Street lightening
- Pump systems
- Signal station
- Street signs
- Traffic lights
- Lawn lamp

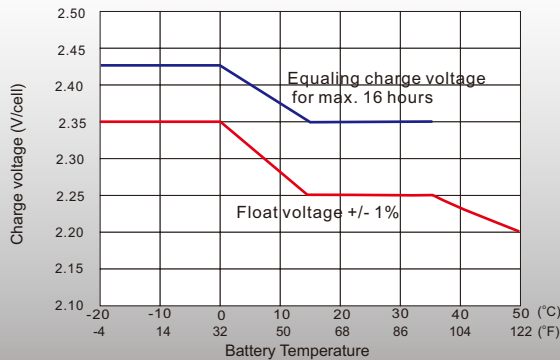
### General Features

- 20 years design life(20°C)
- Better recovery performance
- Wide working temperature range (-20~55)°C
- No electrolyte stratification provides longer service life
- High recombination efficient
- Build in copper core based in lead will carry large current
- Separator imported form AMER-SIL high porosity. PVC-SiO<sub>2</sub> and low resistance
- Pasted negative plate special grid design increase the active material. availability large current discharge and charge ability
- Tubuler type positive plate (polyester tube) prevent the active material from falling. Muti metal alloy pressed positive grid increase the anti corrosion ability and service life

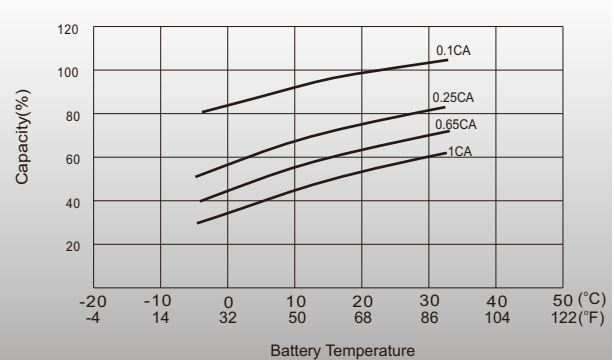
### Standards

- Compliance with IEC 60896, IEC 61427, DIN 40742 standards
- CE, IEC Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

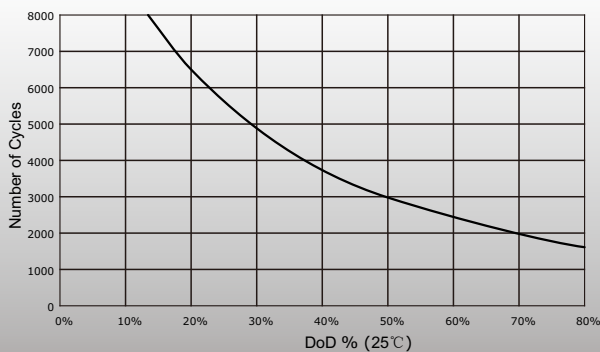
### Charge voltage vs ambient temperature curve



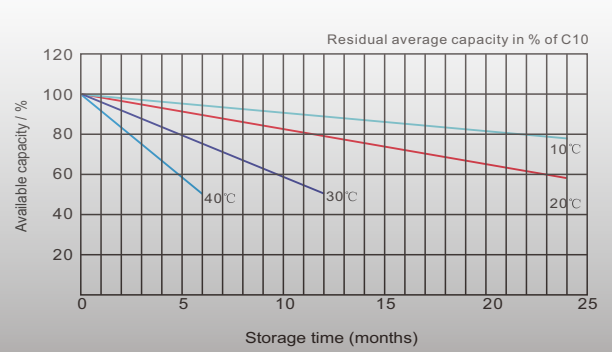
### Temperature effects in relation to battery capacity



### Cycle Life in Relation to DOD



### General Relation of Capacity VS. Storage Time



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