

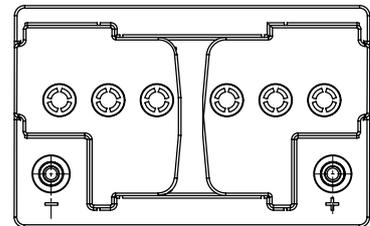
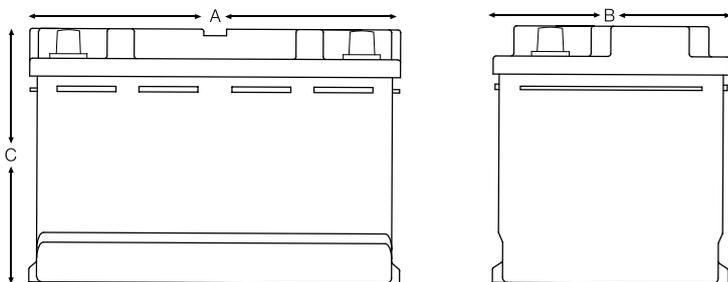
# NORDMAX™

## Light Traction Bloc Batteries

### NM12050T1TG

(12V 51Ah @ 5hr)

Nordmax valve regulated lead-acid batteries for the light traction market. With an innovative Gel-technology and maintenance free design, Nordmax Gel Bloc batteries are compatible with all universal cyclic applications.



Left-Negative

Right-Positive

### Electrical Specifications

<b>Voltage</b>	12V
<b>80% DOD Voltage Cutoff</b>	11.2V
<b>Low Voltage Cutoff</b>	10.8V
<b>Self Discharge</b>	Less than 3% per month (20°C/68°F)
<b>Charge Temperature</b>	Min: -10°C (14°F) / Max: 50°C (122°F)
<b>Discharge Temperature**</b>	Min: -40°C (-40°F) / Max: 50°C (122°F)
<b>Storage</b>	Min: -20°C (-4°F) / Max: 60°C (140°F)

#### Amp Hours (AH)

20 hr	10 hr	5 hr	3 hr	2 hr	1 hr
56	54	51	47	45	40

\*\*CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

### Mechanical Specifications

Industry Reference	L3	
<b>Length (A)</b>	11 in	277 mm
<b>Width (B)</b>	6.9 in	175 mm
<b>Height (C)</b>	7.5 in	190 mm
<b>Weight</b>	46.30 lbs	21 kgs
<b>Terminal (Opt'l)*</b>	A-Pole	
<b>Cell(s)</b>	6	
<b>Electrolyte</b>	GEL	
<b>Terminal Torque Nm</b>	n/a	

NOTE: There is a tolerance of +/-2%.

\* Including A-Terminal

### Features

Maintenance-free bloc batteries in Gel technology (no topping up during lifetime)

Good high current performance for extreme operating conditions

High-class patented safety valve

700 cycles (DIN EN 60254-1) (IEC 254-1)

Capacity: 12V 56Ah - 210 Ah (C20)

Valve-regulated lead-acid battery

Recyclable

Long cycle life

Low self discharge rate allows for up to 2 years shelf life

Classified as a non-spillable battery is not restricted for transportation by:

- Air (IATA/ICAO provision 67)
- Ground (STB, DOT-CFR-HMR49)
- Water (IMDG amendment 27)

### Applications

Electric vehicles

Wheelchairs

Cleaning machines

Electric working platforms

Universal for multiple cyclic applications

#### Compliant with

EN60254-1&2 & IEC254-1/2  
ISO 7176-25 SAE J 1495



## Charging profile

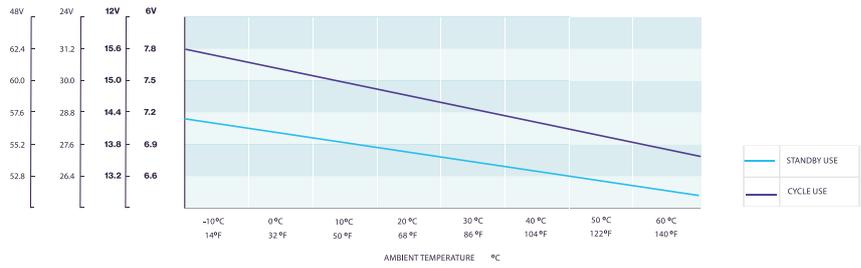
### IU Charging

I = min. 12% C<sub>5</sub> max. 18% C<sub>5</sub>  
 U = 2.4 V per cell

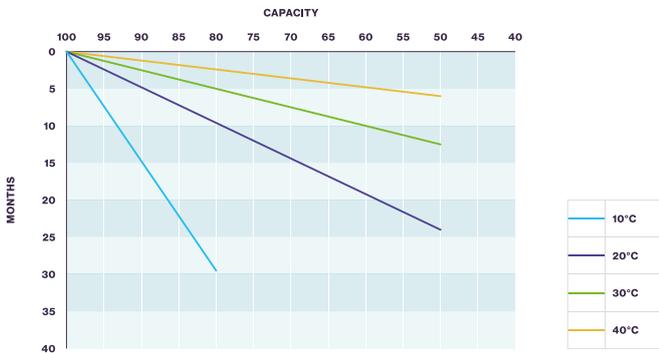
### IUI Charging

I1 = min. 12% C<sub>5</sub> max. 18% C<sub>5</sub>  
 U = 2.35 V per cell  
 I2 = 1.5 % C<sub>5</sub> for max. 4 hours

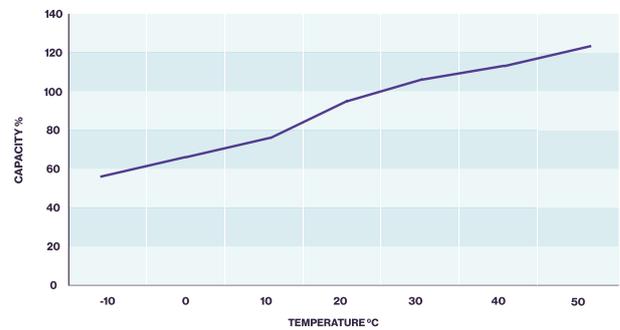
## Relation between charging, voltage and temperature



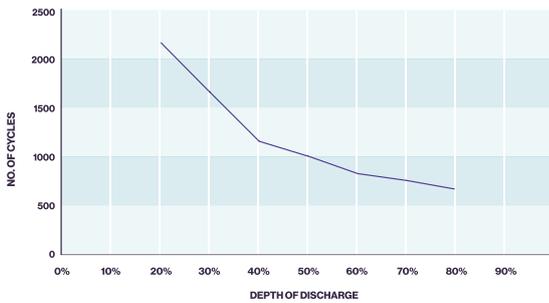
## Self discharge at different temperatures



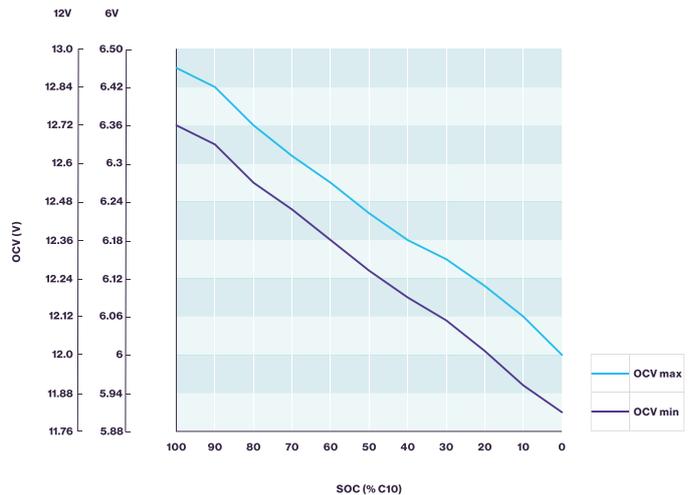
## Capacity vs. temperature



## Cycle life vs. depth of discharge (25 °C)



## Storage: Determine the state of charge



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[www.nordmaxbattery.com](http://www.nordmaxbattery.com)

