



LG Chem Lithium-ion Battery Limited Warranty

[EM048063P3S, EM48126P3S] Battery storage system

This limited warranty (hereinafter "Warranty") specified below applies to LG Chem Lithium-ion batteries and the Accessory Components (hereinafter "Products") supplied by LG Chem, Ltd. (hereinafter "LGC or Seller") to End-user (hereinafter "Buyer") through Authorized Reseller

1. Purpose

The primary purpose of this agreement is to clearly define the matters related to warranty policy of products to be ordered by the Buyer from the Seller.

2. Target of Warranty

This agreement shall be applied to the all Products which were purchased from Seller to Buyer after January, 2017 and after mutually approved, used under matching completion condition for all of such Products which the Seller provided with the order from the Buyer and delivered to the Buyer shall be applicable accordingly.

3. Product Warranty

LGC guarantees that the Products will be free of defects caused by seller and provided in accordance with the mutually agreed specification for warranty period.

After performance warranty period, LGC has no obligation in providing spare part/product.

The Performance Warranty for the Products is valid for 10 years after the date of invoice commencing from 3 month after a product arrives at the delivery point or starting from the day of the successful completion of the commissioning, whichever comes earlier. (the "Term of Performance Warranty").

Products shall be monitored and logged under normal operating conditions in accordance with Section 10. below. In case a warning or fault sign appears in the monitoring system during the operation of the Products, Buyer shall give written notice to LG within a reasonable time period not exceeding seven (7) days following such warning or fault sign, with details of the issue and monitoring data including the information set forth in Section 10.

4. Exclusion of Warranty

Damage resulting from the following activities is NOT covered by this Limited Warranty:

- Improper transportation, storage, installation, wiring, or handling
(However, if LGC performs above things, LGC has responsibility)
- Modification, alteration, disassembly, repair or replace by an uncertified personnel by LG
- Damage or failure caused by non-compliance with national, state or local electric or electric safety code such as National Electric code (NEC), Occupational Safety and Health Administration (OSHA).
- Noncompliance with LGC's installation or maintenance manual
- Incorrect use, or inappropriate operation or environment
- Failure to adhere to safety warning or instruction
- Use of Product more than agreed operation range(State of Charge(SOC), Voltage, Current, Temperature, Number of cycles or Accumulated energy)
- Normal wear and tear, misuse, neglect, accident or abuse
- External influences including unusual physical or electrical stress (power failure surges, inrush current, lightning, flood, fire, accidental breakage, etc. .)

- Use of an incompatible (Not matched) inverter, rectifier or PCS.
- If issue occurred, not provided or insufficient data provided battery event log file and monitoring data (refer to 8. Monitoring Policy) to LGC which is saved on inverter, rectifier or PCS.

5. Limitation of Warranty scope

LGC's liability under this Limited Warranty shall be limited to the above Product warranty and below Performance warranty section. Replaced or repaired Products shall be warranted for the remainder of the original warranty period. In any event, the replacement shall not justify the renewal or new beginning of the warranty period.

UNDER NO CIRCUMSTANCES SHALL LGC BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOST GOODWILL, LOST REVENUES OR PROFITS, WORK STOPPAGE, IMPAIRMENT OF OTHER GOODS, COSTS OF REMOVAL AND REINSTALLATION OF THE PRODUCTS, LOSS OF USE, INJURY TO PERSONS OR PROPERTY ARISING OUT OR RELATED TO THE PRODUCTS. LG'S TOTAL LIABILITY, IF ANY, DAMAGES OR OTHERWISE, SHALL NOT EXCEED THE INVOICE VALUE PAID BY BUYER FOR THE PRODUCTS OR SERVICE(S) FURNISHED, WHICH IS THE SUBJECT OF A CLAIM OR DISPUTE.

EXCEPT AS HEREIN EXPRESSLY STATED, THERE ARE NO WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, FOR ANY SUBJECT OF THE WARRANTY THEREOF FURNISHED HEREUNDER FOR THE PRODUCTS. THE PARTIES AGREE THAT THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES AND/OR GUARANTEES, EXPRESS OR IMPLIED, ARE EXCLUDED FROM THIS TRANSACTION AND SHALL NOT APPLY FOR THE SUBJECT OF THE WARRANTY. IN CASE OF ANY CONFLICT IN THE AGREEMENTS BETWEEN THE PARTIES REGARDING THE PRODUCTS, THIS WARRANTY DOCUMENT ALWAYS WILL PREVAIL UNLESS OTHERWISE AGREED IN WRITING.

6. Force Majeure

LG shall not be responsible or liable to Buyer or any third party for any non-performance or delay in performance of any terms and conditions of sale, including this Limited Warranty, due to natural disasters, war, national strikes, riots, unavailability of suitable and sufficient labor, material, capacity, technical, yield failures or any other unforeseen event beyond LG's control, including, without limitations, any technological, physical event or condition which is not reasonably known or understood at the time of sale of the Products or the claim.

7. Performance Warranty

LGC warrants and represents that the Subject of the Warranty retains at least (60) % of Nominal Energy for (10) years after the date of invoice. LGC guarantees warranty period and energy throughput referred in Table below, whichever comes first when the battery system is operated under normal use followed by specification and manual provided by LGC.

The term "Nominal Energy" herein means the initially rated capacity of the Subject of the Warranty as printed on the label of the Subject of the Warranty. The precondition of the valid Performance Warranty shall be as follows:

- (i) The ambient temperature during the operation of the Subject of the Warranty must not fall below (-10)°C or exceed (45)°C.
- (ii) The energy throughput for 10 years is less than values in table below:

Product Name	Nominal Energy	Energy Throughput
EM048063P3S	(3.3)kWh	(9.6)MWh
EM048126P3S	(6.5)kWh	(19.2)MWh

Capacity measurement condition

- ✓ Ambient temperature: 25~30°C
- ✓ Initial battery temperature from BMS: 25~30°C
- ✓ Charging/discharging method
 - Charge: (0.2)CC/CV (Constant voltage (58.8)V, Cut-off current (0.05)C)
 - Discharge: (0.2)CC (Cut-off voltage (42)V)
 - Current at (0.2)C: (12.6)A (EM048063P3S), (25.2)A (EM048126P3S)

- ✓ Current and voltage measurement at battery DC side

8. Out of Warranty policy /

Products damage which is not caused by seller, LGC shall provide charged service as repair, replace Products.

8-1. Charged service cost

All the expenses of such as material cost, labor cost, warehouse cost, transportation cost, customs duties, analysis cost, management cost, corporate profits, disposal expense(If necessary) and so on.

- ✗ Not only repair, replace parts/products price, but also additional amount of cost and expense shall be charged.

9. About service products/parts

Service products/parts are able to used new or refurbish goods (Performance is equal to or higher than defective goods) which quality is guaranteed by LGC.

In the event, the Subject of the Warranty is not available in the market anymore, LGC, at its option, may replace it with different kind of product with equivalent functions and performances or refund the remaining annually depreciated value of the purchase price over the Term of Performance Warranty beginning from the date of invoice as the Compensation Scheme below. The purchase price mentioned hereinabove means the list price actually paid by the Customer for the purchase.

<Compensation Scheme>

100% of the purchase price according to the document from the date on the purchase invoice up to 24 months (Class I); thereafter:

72% of the purchase price of the Subject of the Warranty according to the document for months 25 through 36 after the date on the purchase invoice (Class II); thereafter:

58% of the purchase price of the Subject of the Warranty according to the document for months 37 through 48 after the date on the purchase invoice (Class III); thereafter:

44% of the purchase price of the Subject of the Warranty according to the document for months 49 through 60 after the date on the purchase invoice (Class IV); thereafter:

30% of the purchase price of the Subject of the Warranty according to the document for months 61 through 72 after the date on the purchase invoice (Class V); thereafter:

16% of the purchase price of the Subject of the Warranty according to the document for months 73 through 84 after the date on the purchase invoice (Class VI); thereafter:

6% of the purchase price of the Subject of the Warranty according to the document for months 85 through 96 after the date on the purchase invoice (Class VII); thereafter:

4% of the purchase price of the Subject of the Warranty according to the document for months 97 through 108 after the date on the purchase invoice (Class VIII); thereafter:

2% of the purchase price of the Subject of the Warranty according to the document for months 109 through 120 after the date on the purchase invoice (Class IX); thereafter:

Accordingly, no warranty of performance will be provided as of the 121th month after the date on the purchase invoice.

10. Monitoring Policy

Buyer shall provide relevant monitoring data of the types listed below as reasonably requested for any warranty claims. Under normal operating conditions, Buyer will record operating data at intervals not exceeding 15 minutes and make such data available to LG within 7 days when requested.

For all cases, buyer shall provide LG with notice whenever material irregular activities of which it is aware occur in the Product, such as an alarm, warning, or fault. Buyer will identify false positive warning messages prior to informing LG.

In cases where the Buyer provides, in Seller's discretion, insufficient data for analysis and results in damage due to a unknown cause, Seller is not obliged to pay incurred cost and expense, such as products cost, incurred in removing, repair, replacing, and/or installing the products (including cost of labor), transport cost at a n amount specified in the Agreement.

Name	Description	Collect Frequency Range	Unit
Time	When the data is recorded	1sec. - 15 min.	yy:mm:dd-hh:mm:ss
Voltage(Pack/Cell)	Voltage value at the moment (BMS upload data)	1sec. - 15min.	V
Voltage Max(Cell)	Maximum voltage value during last 1 minute	Minimum 1 min.	V
Voltage Min(Cell)	Minimum voltage value during last 1 minute	Minimum 1 min.	V
Current	Current at the moment (BMS upload data)	1sec. - 15 min.	A
Current Max	Maximum current value during last 1 minute	Minimum 1 min.	A
Current Min	Minimum current value during last 1 minute	Minimum 1 min.	A
Temperature	Temperature value at the moment (BMS upload data)	1sec. - 15 min.	°C
Temperature Max	Maximum temperature value during last 1 minute	Minimum 1 min.	°C
Temperature Min	Minimum temperature value during last 1 minute	Minimum 1 min.	°C
SOC	SOC value at the moment (BMS upload data)	1sec. - 15 min.	%
SOH	SOH value at the moment (BMS upload data)	1sec. - 15 min.	%
Charge Current Limit	Charge current limit value at the moment (BMS upload data)	1sec. - 15 min.	A
Discharge Current Limit	Discharge current limit value at the moment (BMS upload data)	1sec. - 15 min.	A
Diagnosis	Diagnosis data at the moment (BMS upload data)	1sec. - 15 min.	(Raw data)
Accumulated Discharge Energy	Total accumulated battery discharge energy from initial starting of operation to present (or last operation)	1sec. - 15 min.	Wh

11. Warranty Claim

For warranty claims, Buyer shall provide LG a written notice containing the information listed below. Such notice shall be sent to the two (2) designated personnel identified below:

Name	Telephone No.	E-mail
Ivan Cupic	+61-475-255-783	m_AUservice@lgchem.com
SOONGKYU LEE (Senior manager ESS Korea)	+82 (0) 43 219 2695	soongkyu@lgchem.com

All notices shall be signed by an authorized signatory of the buyer. All notices shall provide the following information:

- (a) Incident date
- (b) Battery installation date (date of the battery serial number scan when leaving warehouse)
- (c) Initial status when defect occurred / current pack status
- (d) Battery switch(ON/OFF) condition
- (e) Installation environment (indoor/outdoor/ambient temperature)
- (f) Installed environment photo shot
- (g) Battery serial number (ID)
- (h) Whether the connectors are connected properly (with photo shot)
- (i) Whether a proper communication cable was used (cable spec, photo shot)
- (j) LED's status when the BMS switch is ON or OFF
- (K) Inverter condition (inverter LCD message / LEDs status when pack is turned on)
- (l) Battery voltage and State of Charge from the inverter display
- (m) Accumulated Battery log data (voltage, current, power, temperature, SOC, SOH etc.)

12. Claim payment policy

During warranty period, all the expense of recovering such as repair/replace is paid by caused company.

In case of unknown cause, Buyer agrees to cover Seller's total expenses to resolve issues.

Buyer shall submit invoice of total amount of expenses monthly to "LGC" at the end of the following month of claim occurred. (It shall be changed under mutual agreement) LGC reserves a right to confirm the accuracy of such invoices and shall confirm the amount.

After the confirmation of the invoice amount by LGC shall pay to Buyer within 30 days.
Detail payment method is to be determined under mutual agreement between Buyer and LGC.

13. Terms of agreement

This Agreement shall be effective [day,month,year] and remain in full force and effect until [day, month, year]
Thereafter, it shall be automatically extended for successive periods of [1] year each unless a notice to refuse extension is given in writing by either of the parties to other party at least [30] days prior to the extension of the initial term of this Agreement or any extension thereof.

14. Dispute Resolution

All disputes arising out of or relating to this contract or individual contract, shall be finally settled in accordance with "Arbitration Agreement" in Korea concluded from The Korean Commercial Arbitration Association.