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# 温室气体核查意见书

授予

## 高德（江苏）电子科技股份有限公司

必维认证（北京）有限公司（以下简称“必维”）受高德（江苏）电子科技股份有限公司的委托，对高德（江苏）电子科技股份有限公司报告的温室气体排放量进行独立的第三方核查，本核查意见适用于下文所述工作范围内的相关信息。

### 核查边界：

- 核查场所名称：高德（江苏）电子科技股份有限公司
- 核查地址：江苏省无锡市锡山区云林街道春晖中路 32 号
- 温室气体报告期限：2024 年 01 月 01 日 - 2024 年 12 月 31 日

**组织边界：**高德（江苏）电子科技股份有限公司实施运营控制权的活动和设施

**报告边界：**高德（江苏）电子科技股份有限公司组织边界内，印刷线路板PCB制造和相关管理活动过程中产生的温室气体排放及其重要的间接温室气体排放和相关管理活动产生的温室气体排放及其重要的间接温室气体排放

### 经核查的排放量：

- 类别1：直接温室气体排放：3,691.02 tCO<sub>2</sub>e
  - 类别2：输入能源的间接温室气体排放（基于市场）：78,230.46 tCO<sub>2</sub>e  
输入能源的间接温室气体排放（基于位置）：82,909.26 tCO<sub>2</sub>e
  - 类别3：运输的间接温室气体排放：3,813.05 tCO<sub>2</sub>e
  - 类别4：组织使用产品的间接温室气体排放：77,024.82 tCO<sub>2</sub>e
  - 类别5：与使用组织产品有关的间接温室气体排放：非重要间接排放，未量化
  - 类别6：其它来源的间接温室气体排放：非重要间接排放，未量化
- 经量化的总排放量（基于市场）：162,759.357 tCO<sub>2</sub>e  
经量化的总排放量（基于位置）：167,438.157 tCO<sub>2</sub>e

**限制性叙述：**排除其他非重要间接温室气体排放

### 温室气体核查依据：

- ISO 14064-1:2018 温室气体 - 第1部分：组织层面温室气体排放和移除的量化和报告的要求及指南
- ISO 14064-3:2019 温室气体 - 第3部分：温室气体声明核查和审定规范及指南
- 温室气体核算体系 - 企业核算与报告标准
- 温室气体核算体系 - 企业价值链（范围三）核算与报告标准

### 保证等级：

- 合理保证

### 核查方法：

- 访谈相关人员；
- 评审提供的文件证据；

认证机构地址：中国北京市东城区东长安街1号东方广场西一办公楼9层902室，邮编：100738  
需进一步澄清本意见书的核查范围，可直接向本意见书持有者查询  
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- 评估用于数据收集、汇总、分析和检查的量化方法和信息系统；
- 核查抽样场所和数据源。

#### 核查结论：

基于核查工作实施过程和核查发现，高德（江苏）电子科技股份有限公司在盘查报告中提供的温室气体排放量数据，与ISO 14064-1:2018 温室气体 - 部分1：组织层面温室气体排放和移除的量化和报告的要求及指南是相符的。

#### 独立、公正和胜任能力声明：

必维集团是一家拥有190多年历史，在质量、环境、职业健康安全和社会责任领域提供独立验证服务的机构。必维核查团队与高德（江苏）电子科技股份有限公司及其管理人员不存在其它的商业关系，核查团队的核查活动是独立的、公正的，不存在任何利益冲突。必维集团在整个业务范围内实施商业道德准则，以确保员工在日常业务活动中保持最高的道德标准。

核查组长：李永健

核查日期：2025年08月15日

编号：EMI27833455

签发日期：2025年08月16日

版本号：No.01

必维认证（北京）有限公司授权代表



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## 温室气体核查意见书附件

高德（江苏）电子科技股份有限公司委托必维认证（北京）有限公司对其的报告边界范围内的温室气体排放进行第三方核查，核查的关键信息如下：

- GWP 版本：IPCC AR6
- 温室气体类型：7 类（CO<sub>2</sub>、CH<sub>4</sub>、N<sub>2</sub>O、HFCs、PFCs、SF<sub>6</sub> 和 NF<sub>3</sub>）
- 数据库：IPCC, GB/T 2589-2020 综合能耗计算通则，中国产品全生命周期温室气体排放系数数据库等；

温室气体排放全量数据表	
范围分类	数值 (tCO <sub>2</sub> e)
温室气体排放总量 <sup>[1]</sup> （基于位置）	167,438.157
温室气体排放总量 <sup>[1]</sup> （基于市场）	162,759.357
范围 1 直接温室气体排放	3,691.02
范围 2 输入能源的间接温室气体（基于市场）	78,230.46
范围 2 输入能源的间接温室气体（基于位置）	82,909.26
范围 3-1 外购商品和服务 <sup>[2]</sup>	74,507.368
范围 3-2 资本商品	
范围 3-3 燃料和能源相关活动	2,488.053
范围 3-4 上游运输与配送 <sup>[3]</sup>	141.829
范围 3-5 运营中产生的废物	29.400
范围 3-6 商务旅行	6.358
范围 3-7 员工通勤	70.869
范围 3-8 上游租赁资产	
范围 3-9 下游运输和配送	3,593.999
范围 3-10 售出产品的加工	
范围 3-11 售出产品的使用	
范围 3-12 处理寿命终止的售出产品	
范围 3-13 下游租赁资产	--
范围 3-14 特许经营权	--
范围 3-15 投资	--

备注：

[1]范围3少量类别使用金额、人数、问卷等数据模型估算

[2] 范围3-1 外购的商品和服务的排放基于财务支出方法计算，商品主要包括原材料、辅料和包材

[3] 范围3-4 上游运输与配送主要基于业务数据计算

认证机构地址：中国北京市东城区东长安街1号东方广场西一办公楼9层902室，邮编：100738

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## Greenhouse Gases Verification Opinion

is awarded to

### **GULTECH (JIANGSU) ELECTRONICS TECHNOLOGIES CO., LTD.**

Bureau Veritas Certification (Beijing) Co., Ltd. was engaged to conduct an independent verification of the greenhouse gases (GHG) emissions reported by GULTECH (JIANGSU) ELECTRONICS TECHNOLOGIES CO., LTD. for the period stated below. This verification opinion applies to the related information included within the scope of work described below.

#### **Boundaries covered by the verification:**

- Verification site name: GULTECH (JIANGSU) ELECTRONICS TECHNOLOGIES CO., LTD.
- Verification site address: No. 32, Middle Chunhui Road, Yunlin Sub-street, Xishan District, Wuxi, Jiangsu Province, PRC.
- Reporting period covered: 01/01/2024 to 31/12/2024

**Organizational boundaries:** Activities and facility operation of Gultech (Jiangsu) Electronic Technology Co., Ltd. under operational control approach.

**Reporting boundaries:** Direct GHG emissions generated in manufacturing of printed circuit board (PCB) manufacturing and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions

#### Emissions data verified under reporting boundaries:

- Category 1: Direct GHG emissions: 3,691.02 tCO<sub>2</sub>e
  - Category 2: Indirect GHG emissions from imported energy (market-based): 78,230.46 tCO<sub>2</sub>e  
Indirect GHG emissions from imported energy (location-based): 82,909.26 tCO<sub>2</sub>e
  - Category 3: Indirect GHG emissions from transportation: 3,813.05 tCO<sub>2</sub>e
  - Category 4: Indirect GHG emissions from products used by organization: 77,024.82 tCO<sub>2</sub>e
  - Category 5: Indirect GHG emissions associated with the use of products from the organization:  
Non-significant indirect emissions and not quantified
  - Category 6: Indirect GHG emissions from other sources:  
Non-significant indirect emissions are not quantified
- Total quantified emissions(market-based): 162,759.3576 tCO<sub>2</sub>e  
Total quantified emissions(location-based): 167,438.157 tCO<sub>2</sub>e

**Limitations and exclusions:** Excluding other non-significant indirect GHG emissions

#### **GHG verification protocol used to conduct the verification:**

- ISO 14064-1:2018 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- ISO 14064-3:2019 Greenhouse gases - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements
- Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard
- Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

Further clarifications regarding the verification scope of this opinion may be obtained by consulting the organization.

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## Level of assurance:

- Reasonable assurance

## GHG verification methodology:

- Interview for relevant personnel;
- Review of the documentary evidence;
- Evaluation of the methodology and information systems for data collection, aggregation, analysis and review;
- Audit of sampled sites and data to verify source.

## Verification conclusion:

Based on the verification process and findings, the GHG emission data in the GHG inventory report from GULTECH (JIANGSU) ELECTRONICS TECHNOLOGIES CO., LTD. is in compliance with ISO 14064-1:2018 Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

## Statement of independence, impartiality and competence:

Bureau Veritas Group is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 190 years' history in providing independent assurance services.

No member of the verification team has a business relationship with GULTECH (JIANGSU) ELECTRONICS TECHNOLOGIES CO., LTD. and its directors or managers beyond that required by this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Bureau Veritas Group has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

**Lead verifier:** Jerry Li

**No.:** EMI27833455

**Version No.:** No.01

**Verification date:** 2025-08-15

**Issue date:** 2025-08-16

Signed on behalf of  
Bureau Veritas Certification (Beijing) Co., Ltd.



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## Appendix for Greenhouse Gases Verification Opinion

GULTECH (JIANGSU) ELECTRONICS TECHNOLOGIES CO., LTD. has commissioned Bureau Veritas Certification (Beijing) Co., Ltd. to conduct a third-party verification on the GHG emissions within its reporting boundary. Key information is listed below:

- GWP source: IPCC AR6
- Types of GHG: 7 types (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub> and NF<sub>3</sub>)
- Database: IPCC, GB/T 2589-2020 General Principles for Comprehensive Energy Consumption Calculation, CPCD, etc

Comprehensive GHG Emissions Data Sheet	
Scope & Category	Quantity (tCO <sub>2</sub> e)
Total quantified emissions <sup>[1]</sup> (location-based)	167,438.157
Total quantified emissions <sup>[1]</sup> (market-based)	162,759.357
Scope 1 Direct GHG emissions	3,691.02
Scope 2 Indirect GHG emissions from imported energy (market-based)	78,230.46
Scope 2 Indirect GHG emissions from imported energy (location-based)	82,909.26
Scope 3-1 Purchased goods and services <sup>[2]</sup>	74,507.368
Scope 3-2 Capital goods	
Scope 3-3 Fuel- and energy-related activities	2,488.053
Scope 3-4 Upstream transportation and distribution <sup>[3]</sup>	141.829
Scope 3-5 Waste generated in operations	29.400
Scope 3-6 Business travel	6.358
Scope 3-7 Employee commuting	70.869
Scope 3-8 Upstream leased assets	
Scope 3-9 Downstream transportation & distribution	3,593.999
Scope 3-10 Processing of sold products	
Scope 3-11 Use of sold products	
Scope 3-12 End of life treatment of sold products	
Scope 3-13 Downstream leased assets	--
Scope 3-14 Franchises	--
Scope 3-15 Investments	--

Notes:

<sup>[1]</sup> Scope Minor categories within Scope 3 are estimated using data models based on expenditure, personnel numbers, and surveys.

<sup>[2]</sup> Emissions from purchased goods and services in Scope 3-1 are calculated based on the financial expenditure method. These goods mainly include raw materials, accessories, and packaging materials.

<sup>[3]</sup> Major part of Scope 3-4 upstream transportation and distribution emissions are calculated using operation data.

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

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