U.R.T.
UNITED RADIANT TECHNOLOGY CORPORATION

光聯科技股份有限公司

GREENHOUSE GAS INVENTORY REPORT

Inventory Year: 2025.

Prepared by: Greenhouse Gas Inventory Committee.

Verification Unit: URT Internal Verification.

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1. Company Profile

1.1 Introduction

1.1.1 Name: UNITED RADIANT TECHNOLOGY CORPORATION.

1.1.2 Number of Employees: About 434 people

1.1.3 Responsible person: Mr. Chen Jiang-Yuan, President and CEO

1.1.4 Address: 42760, NO.2, Fu-Shing Road, Tantzu Technology Industrial Park (T.T.I.P), Taichung city, Taiwan, R.O.C.

1.1.5 History:

R.O.C.: Established in September.

In April, the production line was completed, and all employees worked hard to open up the market with their own brands.

R.O.C. 1982: Operating surplus was generated in January, and the company's excellent image of its products had built up the trust of customers.

In 1983, the Securities and Futures Commission of the Ministry of Finance (MFSC) approved the public offering of shares in the form of a letter (83) TCC No. 31945.

Established LCM plant and obtained ISO 9001 certification for LCD plant.

2006: The Company's shares were listed on the Over-the-Counter (OTC) market. LCM plant obtained ISO 9001 certification.

2002: LCD and LCM plants obtained ISO 9001 (2000 version) and ISO 14001 certificates.

2002: ISO/TS16949-2002 certification; C-STN mass production.

Established Touch Panel factory in 2007.

Passed OHSAS 18001 certification in February.

Received Friendly Workplace Certification from the Ministry of Economic Affairs, Labor Affairs Commission in March.

2012: Awarded the "Excellent Labor Relations Enterprise" by the Ministry of Economic Affairs, Taiwan's Export Processing Zone in April.

In April 2012, we were awarded the "Excellent Enterprise Unit Award for Labor Relations" by the Ministry of Economic Affairs of the People's Republic of China (MOEA).

In April, 2013, we received the "Excellent Enterprise Unit Award for Labor Relations" from the Ministry of Economic Affairs of the People's Republic of China (MOEA).

Received the third place of the 103rd Annual Water Conservation Award from the Administration of the Export Processing Zone of the Ministry of Economic Affairs in November.

September: Acquired buildings No. 12-1 and No. 14-1, Nan Er Road, Tantzu District, for the plant expansion program.

2011: In February, the plant expansion plan acquired the building at No. 15-3, Beihuan Road, Tantzu District.

1.1.6 Corporate goals:

For a long time, the Company has been active in the LCD, LCM, and Touch panel manufacturing industry with its professional panel manufacturing technology, and has been favored by consumers for its excellent product quality and superior production technology. The Company continues to be concerned

about the development of greenhouse gases in the industry and the need for environmental protection while devoting itself to production.

For the source of greenhouse gas emissions, we have replaced the process with non-CFC (Chlorofluorocarbons) process 30 years ago, and the related wet process has been replaced with dry process (Spray) earlier than before. Since the main impact on greenhouse gas is the indirect carbon dioxide emissions from water and electricity, we have been focusing on water and electricity conservation in recent years.

After years of continuous efforts, the results are obvious, the current carbon dioxide emissions per unit of production of finished products, less than half of 2009, whether in terms of cost, or environmental protection and greenhouse gas efforts, the company in the outside world and the customer's concern, more recognized the company, customers and the market to obtain the first opportunity.

1.2 Purpose and related matters:

1.2.1 Purpose of the report: The main purpose of the report is to understand the greenhouse gas emissions of the factory, as a basis for internal greenhouse gas management, and to prepare for the future trend of national greenhouse gas policy.

1.2.2 Intended Users: Stakeholders and senior management of the Company.

1.2.3 Reporting period: 2025/01/01 to 2025/12/31.

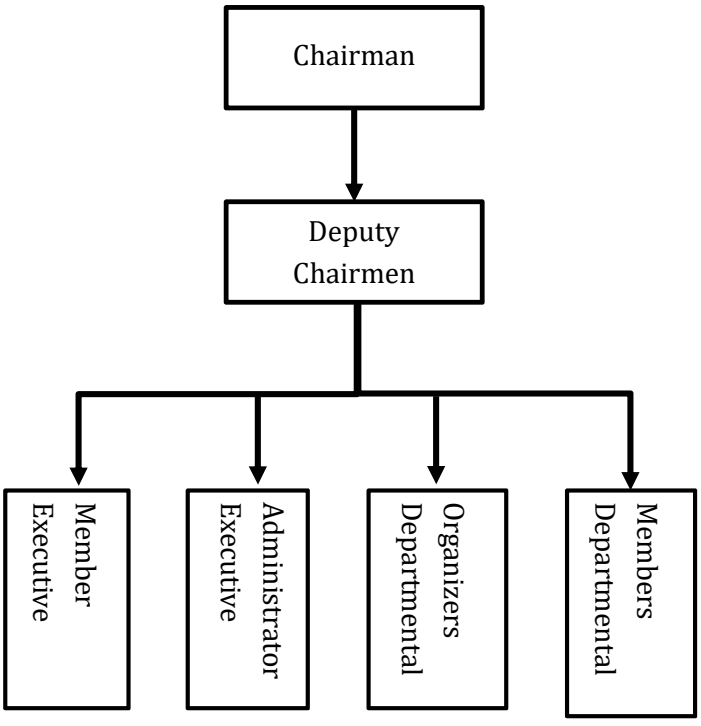
1.3 Policy Statement:

-Improve the efficiency of energy resource utilization and provide low energy consumption and low-carbon products and solutions.

-Promote the supply chain low-carbon green energy industry with corporate strength.

-Continuously reduce greenhouse gas emissions and commit to work toward carbon neutrality.

1.4 Organization Chart of Greenhouse Gas Inventory Committee:



1.5 Organizational and Reporting Boundaries:

1.5.1 Organizational Boundary:

關係 Relationship	名稱 Company name	地址 Address
總公司 Head Office	光聯科技股份有限公司 United Radiant Technology Corporation.	Factory No. 3: No. 2, Fuxing Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan. (Headquarters). Factory No. 1: No. 12, Jianguo Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan. Factory No. 2: No. 12-1 and 14-1, Nan Er Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan and No. 12-3 and 14-3. Factory No. 4: No. 1, East 2nd Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan. Beihuan Factory: No. 15-3, Beihuan Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan.
子公司 associated company	UNITED RADIANT TECHNOLOGY (HK)CO.,LTD	Workshop B 12/F V GA Bldg 532 Castle Peak Rd.
	FIRSTHILL LIMITED	3rd Floor,Omar Hodge Building,Wickhams CayI,P.O.Box 362 Road Town ,Tortola,B.V.I
	BRIGHT YEH LIMITED	P.O. Box 362, PORTCULLIS TRUSTNET CHAMBERS 4TH FLOOR ELLEN SKELTON BUILDING 3076 SIR FRANCIS DRAKE HIGHWAY ROAD TOWN, TORTOLABRITISH VIRGIN ISLANDS VG1110
	光曄光電公司	No. 695, Boluo Avenue East, Boluo County, Huizhou City, Guangdong Province, China

1.5.2 Product Process .

(1). Liquid Crystal Display ,LCD

Conductive glass discharge → Cleaning → Photoresist coating → Exposure → Developing → Etching→ Directional film coating → Directional grinding→Resin printing→Sealing→Printing of conduction points

→ Cutting → Liquid crystal filling → Sealing → Cleaning → Visual inspection → Cutting→ Cleaning → Electrical Test → Polarizing Attachment → Final Inspection → Packing and storage→ Shipments

(2). Liquid Crystal Display Module ,LCM

Circuit boards and other components → solder paste printing → parts placement → soldering → hot press conductive film→ Assembly → Inspection → Final Inspection → Packing and storage →Shipment

(3). Touch Panel

ITO Glass Strengthening → Ink Printing → ITO Coating → Etching → Glass Sensor Cutting → External Edge Grinding → Flexible Circuit Boards→External edge grinding → Flexible circuit board hot pressing → Function test → Final inspection → Packing and storage → Shipment

1.5.3 Report boundary and headquarters location map :

關係 Relationship	名稱 Company name	地址 Address
總公司 Head Office	光聯科技股份有限公司 United Radiant Technology Corporation.	Factory No. 3: No. 2, Fuxing Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan. (Headquarters). Factory No. 1: No. 12, Jianguo Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan. Factory No. 2: No. 12-1 and 14-1, Nan Er Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan and No. 12-3 and 14-3. Factory No. 4: No. 1, East 2nd Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan. Beihuan Factory: No. 15-3, Beihuan Road, Tantzu Science and Technology Industrial Park, Tantzu District, Taichung City, Taiwan.
子公司 associated company	UNITED RADIANT TECHNOLOGY (HK)CO.,LTD	Workshop B 12/F V GA Bldg 532 Castle Peak Rd.
	FIRSTHILL LIMITED	3rd Floor,Omar Hodge Building,Wickhams Cayl,P.O.Box 362 Road Town ,Tortola,B.V.I
	BRIGHT YEH LIMITED	P.O. Box 362, PORTCULLIS TRUSTNET CHAMBERS 4TH FLOOR ELLEN SKELTON BUILDING 3076 SIR FRANCIS DRAKE HIGHWAY ROAD TOWN, TORTOLABRITISH VIRGIN ISLANDS VG1110
	光曄光電公司	No. 695, Boluo Avenue East, Boluo County, Huizhou City, Guangdong Province, China

1.5.4 Inventory of seven types of greenhouse gases: CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3.

1.5.5 Inventory methodology: The OCC method is used, and the scope is the greenhouse gases generated within the reporting boundary.

1.6 Report Coverage Period and Frequency:

1.6.1 Coverage period: January 1, 2025 to December 31, 2025

1.6.2 Production frequency: once a year.

1.6.3 Responsible unit: The Greenhouse Gas Inventory Committee is responsible for the inventory and report.

1.6.4 Others: The contents shall be formulated and revised according to the regulations; any subsequent changes in the scope of the inventory shall be carried out together with the report.

If there is any change in the scope of the inventory, the report will be revised

2. Base Year and Significant Emission Sources

2.1 Base year:

According to ISO14064-1:2018 and with reference to the requirements of the EPA program, this is the five year of the inventory.

The base year is set as 2021 . The base year verification guarantee period is from 2021/01/01 to 2021/12/31.

2.2 Base year recalculation mechanism:

(1) Required by government decree or directed by company policy.
(2) The base year shall be reset to re-investigate emissions when there is a transfer of ownership/control of the source.
(3) When there is a change in the calculation methodology that results in a significant change in the calculation of GHG emissions data, the base year emissions should be adjusted accordingly.
(4) The base year emissions shall be recalculated if the threshold of significance is higher than 3% due to a change in the reporting boundary.

2.3 Greenhouse gas emission sources:

Category	Source	Equipment
Category 1 Direct GHG Emissions	Stationary combustion sources: Refers to stationary equipment fuel combustion, such as: diesel generators.	Diesel emergency generator (CO_2, CH_4, $N_{(2)O}$)
	Mobile combustion sources: Refers to the transportation of fuel combustion, such as: buses, diesel forklifts.	Gasoline bus (CO_2, CH_4, $N_{(2)O}$) Diesel forklift (CO_2, CH_4, $N_{(2)O}$)
	Process Emission Sources: Emissions from physical or chemical processes, such as process cracking emissions of CO_2.	Fluxes, TOP solutions (CO_2, CH_4)
	Fugitive Emission Sources: Refers to both intentional and unintentional emissions, such as: fugitive emissions from equipment opening and closing; fugitive carbon dioxide and HFCs from fire protection equipment; fugitive HFCs from air conditioning, refrigeration, and refrigeration equipment; fugitive $CH_4$from septic tanks.	Fire extinguishers (CO_2, HFCs) Air conditioners, water coolers, water dispensers and refrigerators (HFCs) Septic tanks (CH_4)
	Land Use Emission Sources: Emissions from land use change and forestry	None

Category	Emission Sources	Equipment
Category 2 Input Energy	Purchased Electricity	Electricity ($CO_{(2)e}$)
Category 3 Transportation	Emissions from transportation	Staff commuting ($CO_{(2)e}$) Downstream transportation - products
Category 4 Organizational use of products	Emissions from organizational use of products Greenhouse gas emissions from general business waste. Indirect emissions from purchased goods and services - water	Waste treatment + transportation ($CO_{(2)e}$) Tap water/industrial water
Category 5 Use of organization's products	Indirect GHG emissions associated with the use of the organization's products	No significant indirect GHG emissions
Category 6 Other	Indirect GHG Emissions from Other Sources	No Significant Indirect GHG Emissions

2.4 Evaluation of Significant Emission Sources:

(1) Category 1~2 direct/input energy emissions, all 5 items are included in the inventory.

(2) According to the "GHG Inventory Procedures" identification criteria for significant indirect emissions, select the following criteria

≧(2) According to the "Greenhouse Gas Inventory Procedures", select the criteria for identifying significant indirect emissions from the criteria.

(3) For indirect emissions in categories 3 to 6, three items were included in the inventory as "significant" after the significance assessment, and the rest were excluded.

(4) Biomass emissions: The Company has no biomass emission sources.

Table 2.4 Evaluation results of significant emission sources:

No.	Significant Emission Sources	Description of emission sources	Category
1	Downstream Transportation - Domestic Land Transportation of Products To domestic ports or airports for export	Downstream transportation of products by road, GHG emissions are calculated on the basis of the extended tonne-kilometer from the point of origin to the point of destination.	3
2	Indirect Emissions from Transportation	Emissions from employee commuting	3
3	Emissions from the disposal of solid and liquid wastes	Emissions from transportation and disposal of industrial and domestic waste.	4

3. Selection of greenhouse gas emissions or removal data:

3.1 Calculation of greenhouse gas emissions:

The calculation of greenhouse gas emissions is mainly based on the

"Emission Factor Method", and the calculation method is as follows:

(1) Activity data × emission factor × global warming potential (GWP) = CO_2equivalent.

(2) Using the mass balance method, which refers to the consumption of direct substances, GHG emissions are calculated by mass balance.

After selecting the emission factor according to "EPA GHG Emission Factor Management Table", the calculated values are then converted to $CO_{(2)e}$(carbon dioxide equivalent) in metric tons/year according to the Global Warming Potential (GWP) of various greenhouse gases announced by the IPCC.

3.2 Principles of Emission Factor Selection:

(1). Internal measurement data

(2). Coefficients from mass balance calculations

(3). Coefficient of experience with the same process/equipment

(4). Coefficient provided by the manufacturer

(5). Regional emission factor

(6). National Emission Factor

(7). If there is no applicable emission coefficient, the applicable coefficients announced by international organizations will be used.

The greenhouse gas emission coefficients are based on the latest emission coefficients published by IPCC, Environmental Protection Administration of the Executive Yuan, or relevant authorities.

3.3 Description of each emission factor:

The management of greenhouse gas types and emission coefficients is shown in Table 3.3.1, and the use of GWP values released by IPCC reports is shown in 3.3.2.

Table 3.3.1 Management of GHG Types and Emission Coefficients

Facility/Activity	Emission Sources	Greenhouse Gas Type	Emission Factor		Source
			Values	Unit	
Emergency generator	Diesel	CO_2	0.0026100000	Metric tons CO2/liter	EPD GHG Emission Factor Management Table
		CH_4	0.0000001060	Metric tons of CH4/liter	
		N_2O	0.0000000211	metric tons N2O/liter	
Public Transportation	Gasoline	CO_2	0.0022600000	Metric tons CO2/liter	EPD GHG Emission Factor Management Table
		CH_4	0.0000000980	Metric tons CH4/liter	
		N_2O	0.0000000196	metric tons N2O/liter	
Forklift	Diesel fuel	CO_2	0.0026100000	Metric tons CO2/liter	EPD GHG Emission Factor Management Table
		CH_4	0.0000001060	Metric tons of CH4/liter	
		N_2O	0.0000000211	metric tons N2O/liter	
Process (Module)	Flux	CO_2	0.0022000000	Metric tons CO2/kg	Quality Conservation
Process (LCD)	TOP Liquid	CO_2	2.0246649675	Metric tons of CO2/ton	Conservation of quality
Household, refrigeration equipment	Refrigerant	HFC_S	0.0030000000	Metric tons HFC_S/ metric tons	EPD GHG Emission Factor Management Table
Mobile Air Cleaner	Refrigerant	HFC_S	0.1500000000	Metric tons of HFCs/ton	EPD GHG Emission Factor Management Table
Residential and Commercial Air-conditioners	Refrigerant	HFC_S	0.0550000000	Metric tons of HFCs/ton	EPD GHG Emission Factor Management Table
Chiller	Refrigerant	HFC_S	0.0850000000	Metric tons of HFCs/ton	EPD GHG Emission Factor Management Table
Fire Extinguisher	Carbon Dioxide	CO_2	1.0000000000	Metric tons of CO_2e/MT	EPD GHG Emission Factor Management Table
Septic Tank	Water Fertilizer	CH_4	0.0000015938	Metric tons of CH_4/person-hour	EPD GHG Emission Factor Management Table
Purchased Electricity	Purchased Electricity	CO_2	0.0004740000	Metric tons of CO_2/kWh	Electricity Emission Factors Announced by the Bureau of Energy, Ministry of Economic Affairs, 2024

Table 3.3.1 Greenhouse Gas Types and Emission Coefficients Management Table

Facility/Activity	Emission Source	Type of Greenhouse Gases	Emission Coefficient		Source
			Values	Unit	
High Speed Rail	Per person per kilometer	CO_2	0.0000290000	Metric tons of CO_2/Extender Kilometer	Product Carbon Footprint Information Network
Taiwan Railroad (Train)	Per person per kilometer	CO_2	0.0000550000	Metric tons of CO_2/Extended person-km	Product Carbon Footprint Information Network
Rapid Transit	Per person per kilometer	CO_2	0.0000750000	Metric tons of CO_2/Extended person-kilometer	Taipei City Government "Carbon Footprint of MRT Transportation Services"
Bus	Per person per kilometer	CO_2	0.0000767000	Metric tons of CO_2/extended person-kilometer	Product Carbon Footprint Information Network
Vehicle (Gasoline)	Per Kilometer per Trip	CO_2	0.0001150000	Metric tons of CO_2per kilometer of travel time.	Product Carbon Footprint Information Network
Car (Tram)	Kilometer per trip	CO_2	0.0000752000	Metric tons of CO_2/km	Vehicle energy consumption research website
Automobile (Hydro-electric Vehicle)	per trip per kilometer	CO_2	0.0001010000	Metric tons of CO_2/km	Energy Bureau, Ministry of Economic Affairs, Vehicle Fuel Consumption Guidelines
Motorcycle (Gasoline)	Kilometer per Trip	CO_2	0.0000951000	Metric tons of CO_2/Extended Human Kilometers	Product Carbon Footprint Information Website
Motorcycle (Tram)	per trip per kilometer	CO_2	0.0000204000	Metric tons of CO_2/km	Energy Bureau, Ministry of Economic Affairs, Vehicle Fuel Consumption Guidelines

Table 3.3.1 Greenhouse Gas Types and Emission Coefficients Management Table

Facility/Activity	Emission Source	Greenhouse Gas Type	Emission Coefficient		Source
			Values	Unit	
Trucks (Diesel)	Transportation Carbon Footprint	CO_2	0.0001310000	Metric Tons CO_2e/Extended Ton-km	EPD Product Carbon Footprint Calculation Platform - Commercial Vehicle (Diesel) (2022)
Waste Treatment (Incineration)	Domestic + Utility Waste	CO_2	0.3600000000	Metric tons of CO_2e per metric ton	Product Carbon Footprint Information Network
Waste Treatment (Recycling)	Glass recycling	CO_2	0.0001200000	Metric tons of CO_2e/tonne	Product Carbon Footprint Information Network
Waste Treatment (Recycling)	Waste Plastic Recycling	CO_2	0.0006600000	Metric tons of CO_2e/tonne	Product Carbon Footprint Information Network
Waste treatment (physical)	Printed Circuit Board (PCB) Waste and Powder Containing Metals Waste printed circuit boards with attached components	CO_2	0.1230000000	Metric tons of CO_2e/tonne	Product Carbon Footprint Information Network
Waste treatment (physical)	waste mercury lamps	CO_2	0.3000000000	Metric tons of CO_2e/tonne	Product Carbon Footprint Information Network
Diesel-powered garbage trucks are used to remove and transport general waste.	Transportation	CO2	0.0013100000	Metric tons of CO_2e/tonne	Product Carbon Footprint Information Network
Purchased Water	Tap water	CO_2	0.0002330000	Metric tons CO_2e/kilowatt-hour	Product Carbon Footprint Information Network
Purchased Water	Industrial Water	CO_2	0.0001020000	Metric tons CO_2e/kilowatt-hour	Product Carbon Footprint Information Network

Table 3.3.2 GWP Values of IPCC Notified Substances

Substance Name	GWP value
	IPCC Assessment Report
CO_2	1
CH_4	27.9
N_2O	273
HFC-134a/R-134a	1530
R-410A	2256
R-507A	3985
R-404A	3922
R-23	14600
R-502	4657
R-508A	11,607
R-600A	3
R-12	10,200
R-22	1,760
R-123	90.4

備註：
Remarks
The refrigerant GWP value can be found by referring to the IPCC database.
If no GWP value was found in the sixth assessment report, the value from the fifth assessment report will be used for calculation, and so on.

3.4 The calculation methods for various types of emissions are summarized below:

Category	Emission source	Emission equipment	Description and Calculation Method
Category I	Stationary Combustion	Emergency Generator Diesel Usage	(1). The amount of diesel fuel used is based on the difference in fuel consumption before and after the use of diesel fuel. (2) CO2, CH4, N2O emissions = fuel use × emission factor × GWP.
	Mobile Combustion	Gasoline Usage in Public Vehicles	(1). Fuel consumption is calculated based on the amount of gasoline purchased with gasoline invoices. (2). CO2, CH4, N2O emissions = fuel usage × emission factor × GWP.
	Mobile Combustion	Diesel fuel usage of forklift trucks	(1). Calculate the amount of diesel fuel used based on the information on the gasoline invoice. (2).CO2, CH4, N2O emissions = fuel usage × emission factor × GWP.
	Fugitive Emissions	Fire extinguishers (CO2, HFCs)	(1). CO2 = (Purchased volume/fill volume/use volume) × GWP. (2). Activity data is purchased/filled/used; based on purchase records.
	Fugitive Emissions	Air Conditioning System / Drinking Water Dispenser / Chilled Water Dispenser / Refrigerator etc. Refrigerant for refrigerators, etc.	(1). Refrigerant activity data is the amount of refrigerant used as indicated on the nameplate of the equipment, the amount used in the technical manual, or the amount of refrigerant filled according to the information provided by the service provider. (2).HFCS emission = Filling quantity × Fugitive coefficient × GWP.
	Fugitive emissions	Septic Tank Fertilizer Treatment	(1). Total retention hours include the following items in total: Employees (day, night & regular day shifts) Number of employees: Number of employees insured by labor insurance per month Monthly working days：The number of working days announced by the Executive Yuan Daily work: 8 working hours + 1 rest hour (2).CH4 emission = total residence hours × emission factor × GWP.
Category 2	Input Electricity	Purchased Electricity	(1) Annual total electricity consumption activity statistics are based on the number of kilowatt hours used in each billing period provided by the Taiwan Power Company and are calculated on a year-over-year basis. (2) Total annual electricity consumption × the latest coefficient announced by TEPCO for the year.
Category 3	Transportation	Employee commuting	(1). The distance from residential location to the company is estimated by Google map, and the commuting mode is calculated to calculate the greenhouse gas emissions generated by transportation. (2) CO2 emissions = total distance traveled × transportation vehicle emission factor.
	Downstream Transportation (Domestic Land Transportation of Foreign Products)	URT products are transported to domestic ports or airports for export.	(1). The distance from the location of the park to the domestic port or airport is estimated by google map, and the weight of the containers is counted by the diesel method in order to calculate the greenhouse gas emissions generated by transportation. (2).CO2 emission = weight × transportation distance × emission coefficient of the transportation vehicle.

Category 4	Usage Indirect Emission	Waste Transportation	(1). The transportation routes of domestic garbage and waste plastics of the employees of the Company are based on the routes suggested by Google Map in order to calculate the greenhouse gas emissions generated from the transportation. (2). The rest of the transportation routes are based on the GPS tracks of the waste reporting and management information system of the company. (3) CO2 emissions = weight × transportation distance × emission factor of transportation vehicle.
		Waste Disposal	(1). Based on the items and their weights in the EPA Waste Reporting System, the greenhouse gas emissions from waste disposal are calculated. (2) CO2 emission = weight × emission factor of waste treatment.
		Purchased Water	(1) The annual total water consumption activity statistics are based on the number of uses on the water bill provided by the water utility company, and the calculation is based on the proportion across years. (2) Annual total water consumption × the latest coefficient or CO2 consumption value on the bill provided by the water utility company.

3.5 Uncertainty Analysis

3.5.1 Qualitative and quantitative rating assessment:

Level	Uncertainty of activity data	Uncertainty of CO_2emission coefficients.	Qualitative/Quantitative
A	Yes	Yes	Quantitative
B	No	Yes	Qualitative
	Yes	No	
C	No	No	Qualitative

Table 3.5.1 Qualitative and Quantitative Assessment Grading Scale

Emission source		Grade	Activity Data Uncertainty	Emission coefficient of CO_2 Uncertainty	Qualitative/Quantitative
Category 1: Direct Greenhouse Gas Emissions and Removals					
Direct emissions from stationary combustion sources	Generator	B	No	Yes	Qualitative
Direct Emissions from Mobile Combustion Sources	Public Vehicle (Gasoline)	A	Yes	Yes	Quantitative
	Forklift (Diesel)	A	Yes	Yes	Quantitative
Direct process emissions and removals from industrial processes	Flux	C	No	None	Qualitative
	TOP Liquid	C	No	No	Qualitative

Direct Temporary Emissions from Greenhouse Gases Released by Man-Made Systems	Air conditioners, chilled water dispensers, refrigerated chilled water equipment	B	No	Yes	Qualitative
	Fire extinguishers	C	No	No	Qualitative
	Septic tank	C	No	No	Qualitative
Category 2: Indirect GHG emissions from energy inputs					
Indirect Emissions from Electricity Inputs	Purchased Electricity	A	Yes	Yes	Quantitative
Category 3: Indirect GHG emissions from transportation					
Downstream off-shore transportation	Product transportation to port	B	Yes	No	Qualitative
Emissions from Employee Commuting	Staff Travel	C	None	None	Qualitative
Category 4: Indirect GHG emissions from products used by the organization					
Purchased goods and services - water indirect emissions	Water utility equipment-Taiwan	A	Yes	Yes	Quantitative
Discharge from solid and liquid waste disposal.	General Utility Waste Disposal	B	Yes	No	Qualitative
	General Utility Waste Transportation	C	No	None	Qualitative
Category 5: Indirect GHG emissions associated with the use of the organization's products.					
Category 6: Indirect GHG emissions from other sources.					

3.5.2 Quantitative Uncertainty

Calculation formula:

$$\text{Uncertainty of a single emission source} = \pm\sqrt{(\text{uncertainty of emission source A})^2 + (\text{uncertainty of emission source B})^2}$$

$$\text{Total uncertainty} = \frac{\sqrt{(\text{source A emission} \times \text{A uncertainty})^2 + (\text{source B emission} \times \text{BA uncertainty})^2}}{\text{source A emission} + \text{source B emission}}$$

Degree of data quality	Percentage range of the mean value
High	High ± 5%
Good	± 15%
General Purpose	± 30%
Poor	More than 30 %

(1). Source of data uncertainty assessment:

Input oil quantity is based on the technical specification 3.12 of the Standard Bureau of Standards, Inspection and Quarantine (CNMV117, 3rd edition).

(CNMV117, 3rd edition), the calibration tolerance of oil quantity meter is ±0.5% of the calibration oil quantity, according to the statistical concept of 2 standard deviations, the calibration tolerance is 1 %.

According to the statistical concept of 2 standard deviations, the calibration tolerance is 1% as the uncertainty of this data.

(2). Input power is based on the technical specification for calibration and inspection of meters from the Bureau of Standards, Inspection and Quarantine (CNMV46).

(CNMV46, 6th edition) 8.1.4 specification, from the mechanical and electronic meter (watt-hour meter) appearance labeled as "0.5", the amount of its calibration tolerance of ± 0.5% of the amount of detection, according to the statistical concept of two standard deviations, the calibration tolerance of 1% as the uncertainty of this data.

Table 3.5.2 Uncertainty quantitative assessment table [direct greenhouse gas emissions].

Emission source	Qualitative and quantitative assessment level	CO_2emission equivalent	Percentage (%)	Uncertainty of Activity Data		Uncertainty of CO_2Emission Coefficient		Uncertainty of single source	Data Quality
				Upper and lower limits of the 95% confidence interval	Source	Lower and upper 95% confidence interval	Source	Lower limit above 95% confidence interval	
Public Vehicle (Gasoline)	A	7.1072	0.12%	+1.00% ~ -1.00%	Fuel Meter Calibration Check Technical Specification	+5.30% ~ -2.60%	Greenhouse gas emission coefficient management table	+5.39% ~ -2.79%	High
Forklift (Diesel)	A	6.5939	0.11%	+1.00% ~ -1.00%	Fuel Meter Calibration Check Technical Specification	+0.90% ~ 2.00%	Greenhouse Gas Emission Coefficient Management Table	+1.35% ~ -2.24%	
Total Emissions		6,009.9591	0.23%	Total Uncertainty for Type I of this inventory		Lower limit of the 95% confidence interval		Upper limit of 95% confidence interval	
						-1.80%		+2.87%	

Table 3.5.2 Quantitative Uncertainty Assessment Table [Energy Indirect GHG Emission

Emission source	Qualitative and Quantitative Assessment Level	CO_2Emission Equivalent	Percentage (%)	Uncertainty of Activity Data		Uncertainty of CO_2emission factor		Uncertainty of single source	Data Quality
				Upper and lower limits of the 95% confidence interval	Source	Lower and upper 95% confidence limits	Source	95%confidence interval above and below	
Outsourcing Electricity	A	5,658.2707	94.15%	+1.00% ~ -1.00%	Technical specification for meter calibration and inspection	+7.00% ~ -7.00% -	Greenhouse gas emission coefficient management table	+7.07% ~ -7.07%	Good
Total Emissions		6,009.9591	94.15%	Total Uncertainty for Type II of this inventory		Lower limit of the 95% confidence interval -7.07% -		Upper limit of 95%confidence interval +7.07%	

Table 3.5.2 Uncertainty Quantitative Assessment Table [Indirect GHG Emissions from Purchased Water

Emission source	Qualitative and Quantitative Assessment Levels	CO_2Emission Equivalent	Percentage (%)	Uncertainty of Activity Data		Uncertainty of CO_2Emission Coefficient		Uncertainty of single source	Data Quality
				Upper and lower limits of the 95% confidence interval	Source	Lower and upper 95% confidence limits	Source	95% confidence interval above and below	
Tap Water	A	0.0030	0.000050%	+1.00% ~ -1.00%	Technical specification for water meter calibration and inspection	+7.00% ~ -7.00%	Greenhouse gas emission coefficient management table	+7.07% ~ -7.07%	Good.
Industrial Water	A	0.0114	0.000190%	+1.00% ~ -1.00% -	Technical specification for water meter calibration and inspection	+7.00% ~ -7.00% -	Greenhouse gas emission coefficient management table	+7.07% ~ -7.07%	
Total Emissions		6,009.9591	0.000240%	Total Uncertainty for Type II of this inventory		Lower limit of the 95% confidence interval -7.07		Upper limit of 95% confidence interval +7.07	

3.5.3. Qualitative Assessment of Uncertainty for GHG Inventories

Calculation formula: Uncertainty level of emissions (U) = Uncertainty level of activity data (A1) × Uncertainty level of emission factors (A2)

Activity Data and Emission Factor Uncertainty Levels

	Level 1	Level 2	Level 3	Class 4		
Activity Data (A1)	Automatic Continuous Measurement	Periodic Measurement (Meter Reading)	Financial Accounting Data	Estimates		
	Level 1	Level 2	Level 3	Level 4	Grade 5	Class 6
Emission factor (A2)	Measurement/Energy Balance Obtained Coefficient	Same process/equipment Experience Coefficient	Manufacturing Plant Coefficient of supply	Area Emission Coefficient	Country/Province Emission factor	International Emission factor

Uncertainty Level Value Quality Determination

Uncertainty Level	Data quality judgment
U 5≦	High
5 < U≦ 10	Good
10 <U≦ 15	General
16 <U	Poor

Table 3.5.3 Qualitative Assessment of Uncertainty

Type of greenhouse gas inventory	Item	Activity Data (A1)	Emission Coefficient (A2)	Emission Factor (A2) Total Uncertainty Level (U)	Data quality judgment
Category 1: Direct GHG Emissions and Removals					
Stationary Combustion	Emergency generators	4	5	20	Poor
Direct process emissions and removals from industrial processes	Flux	3	1	3	High
	TOP Flux	3	1	3	High
Direct Temporary Emissions from Greenhouse Gases Released by Man-Made Systems	Air conditioners, chilled water dispensers, refrigerated chilled water equipment	4	5	20	Poor
	Fire extinguishers	3	1	3	High
	Septic tank water fertilizer	4	5	20	Poor

Table 3.5.3 Qualitative Assessment of Uncertainty

Category 3: Indirect GHG Emissions from Transportation					
Downstream transportation	Product transportation to port (Taiwan)	3	1	3	High
Emissions from Employee Commuting	Staff commuting	4	5	20	Poor
Category 4: Indirect GHG Emissions from Products Used by the Organization					
Emissions from disposal of solid and liquid wastes	General business waste disposal	2	5	10	Good
	Transportation of general utility waste	4	5	20	Poor

3.6 Total Greenhouse Gas Emissions

Emission source categories I to VI		Emission Equivalent (metric tons of CO_2et/year)	Total	Activity Data Type	Factor Type
Category 1: Direct GHG Emissions and Removals					
Direct emissions from stationary combustion sources	Emergency generators	0.1302	207.6689	Measured and Estimated Data	National Coefficients
Direct Emissions from Mobile Combustion Sources	Forklift (diesel)	6.5939		Financial Information	National Coefficient
	Buses (gasoline)	7.1072		Financial Information	National Coefficient
Direct Process Emissions and Removals from Industrial Processes	Fluxes	0.0033		Financial Information	Quality Conservation Calculations
	TOP Liquid	0.0405		Financial Information	Mass Conservation Calculations
Direct Temporary Emissions from Greenhouse Gases Released by Anthropogenic Systems	Refrigerant	149.2428		Equipment specifications	Country Coefficient
	Fire extinguisher (CO2)	0.0180		Financial Information	Country Coefficient
	Septic tanks	44.5330		Financial Information	National Coefficient
Category 2: Indirect GHG emissions from energy inputs					
Indirect Emissions from Electricity Inputs	Purchased electricity	5,658.2707	5,658.2707	Financial Information	National Coefficients
Category 3: Indirect GHG Emissions from Transportation					
Downstream Offshore Transportation Products	Product transportation to port (Taiwan)	4.6362	113.9727	Financial Information, Estimated Distance	Country Coefficient
Emissions from Employee Commuting Emissions from Employee Commuting	Employee commuting	109.3365		Estimated Distance	Country Coefficient

3.6 Total GHG Emissions

Category 4: Indirect GHG Emissions from Products Used by Organizations					
Purchased goods and services - water Indirect emissions	Tap water/industrial water	0.0144	30.0467	Financial information	National Coefficients
Emissions from disposal of solid and liquid wastes	Transportation of general utility wastes	7.3442		Financial data, estimated distance	National Coefficient
	Disposal of general business waste	22.6882		Financial information	National Coefficient
Category 5: Indirect Greenhouse Gas Emission Associated with the Organization's Use of Products			Indirect Greenhouse Gas Emissions without Significant Significance		
Category 6: Indirect GHG Emissions from Other Sources			Indirect GHG Emissions from Unsignificant Sources		
Total Emissions					
			6,009.9591		Metric tons of CO_2e/t/year

Table 3.6.1 Statistics of direct seven greenhouse gas emissions

Item	CO_2	CH_4	N_2O	HFCs	SF6	PFCs	NF3	Total
Emission Equivalent (metric tons CO_2e/year)	5,816.1355	44.5492	0.0316	149.2428	0	0	0	6,009.9591
Gases (%)	96.7750%	0.7413%	0.0005%	2.4833%	0%	0%	0%	100.00%

4. Description of Activity Data

The total emissions in 2025 were 6,009.9591 metric tons of CO_2e, representing a reduction of 2,035.7089 metric tons of CO_2e compared to the 2022 baseline year. Among all greenhouse gases, carbon dioxide (CO_2) remains the primary emission source, accounting for 96.7750% of total emissions.

Category 2 (purchased electricity) decreased by 2,084.55 metric tons CO_2e, mainly due to effective energy-saving measures and reduced electricity consumption, resulting in lower greenhouse gas emissions compared to 2022.

Compared to 2024, total emissions in 2025 decreased by 709.04 metric tons CO_2e, primarily due to reduced emissions from Category 2 purchased electricity. However, Category 4 emissions increased by 21.04 metric tons CO_2e due to business activities (waste treatment).

For Category 5 (indirect emissions from product use) and Category 6 (other indirect emissions), committee investigations indicate that carbon emissions from displays mainly originate from electricity consumption. Since small- and medium-sized displays have relatively low power consumption, no significant items were identified for inventory

5. Greenhouse Gas Reduction Strategies:

1. Conduct regular company-wide inventories to identify equipment and processes with the greatest potential for energy and water savings, and implement dedicated projects with assigned personnel.
2. Phase out outdated, energy-intensive equipment and replace it with more energy-efficient alternatives (such as air conditioning systems, compressed air systems, cooling towers, etc.).
   Examples:
   - Retrofit of FFU (Fan Filter Unit) power systems
   - Cleaning of chiller condensers
   - Replacement of heatless desiccant dryers with heated desiccant dryers
   - Upgrading regional pumps (ZP1) to IE3 efficiency level with variable frequency drives
3. Improve equipment performance and production efficiency through automation (or semi-automation), reduce the use of high energy-consuming equipment, strengthen operational cost management, and optimize the use of energy, water, and electricity to achieve optimal production efficiency.

6. Greenhouse gas inventory standard:

Operate in accordance with ISO 14064-1 2018 and the "Greenhouse Gas Inventory Procedures".

7. Quantification method and change of emission coefficients:

(1). Changes in quantitative methods : FY2021 is the base year, and there are no changes in quantitative methods during the inventory period.

(2). Changes in emission factors: FY2021 is the base year, and the latest emission factor information announced by IPCC, Environmental Protection Administration, Executive Yuan, or relevant authorities will be used as the main data during the inventory period.

8. Greenhouse gas inventory record keeping:

2025/01/01~2025/12/31 The operation of the inventory data is based on the principles of relevance, completeness, consistency, accuracy, and transparency in accordance with the "Greenhouse Gas Inventory Protocol - Corporate Accounting and Reporting Standard" and "ISO 14064-1:2018". In order to ensure the accuracy of the data quality during the entire inventory process, the data source of each responsible unit is clearly stated, such as: relevant requisition documents, records, etc., and all data that can be proved and corroborated to be credible should be investigated, and the data will be retained in the responsible unit for subsequent checking and tracking confirmation.

9. Internal verification of greenhouse gas:

Internal verification unit name: Greenhouse Gas Inventory Committee departmental officers as internal verifiers

Date of on-site verification: 2026/03/18~2026/03/20

After the implementation of the internal verification of greenhouse gas, confirmed that the relevant greenhouse gas inventory data in accordance with ISO 14064-1:2018 standards and norms, and verification of the assurance level, the level of reasonable assurance, the materiality of the threshold is 5%.

10. External greenhouse gas verification:

In accordance with the FSC's "Roadmap for the Sustainable Development of Listed Companies", we have deferred commissioning a third party to conduct the greenhouse gas verification for the current year, and will do so at an appropriate time.

11. Reporting responsibilities, purpose and format:

(1). Responsibility of the report.

This report is prepared in accordance with "ISO 14064-1:2018"; it was verified internally and externally upon completion, corrected for deficiencies, and issued after approval by the General Manager.

(2). Purpose of the report.

To understand the greenhouse gas emissions of the factory, as a basis for internal greenhouse gas management, and to prepare for the future trend of national greenhouse gas policy.

(3). Format of the report:

The format presented in this report is in accordance with ISO 14064-1:2018.

The format of this report is based on the requirements of ISO 14064-1:2018 Greenhouse Gas Report.

(4). Disclosure of the report:

The report can be downloaded from the Company's website.

References

1. ISO 14064-1:2018 Greenhouse gases - Part 1: Specification for the Quantification and Reporting of Greenhouse Gas Emissions and Removals at the Organizational Level with Guidelines
2. The Greenhouse Gas Protocol-ACorporate Accountingand Reporting Standard, Revised Edition 2005, WBCSD; "Greenhouse Gas Inventory Protocol-ACorporate Accountingand Reporting Standard" Second Edition (2005)
3. Energy Bureau, Ministry of Economic Affairs - 113 Electricity Carbon Emission Coefficient
4. Technical Specification for Calibration and Inspection of Electricity Meters (CNMV46, 6th Edition)
5. Technical specification for calibration and inspection of oil meter (CNMV117, 3rd edition)
6. IPCC Good Practice Guidance and Uncertainty Management for National Greenhouse Gas Inventories, 2021 IPCC Guidelines for National Greenhouse Gas Inventories Inventories
7. Guidelines for Greenhouse Gas Inventories
8. Announcement of GHG Emission Factor Management Table Version February 5, 113
9. Carbon Footprint Information Website: https：//cfp.moenv.gov.tw/webpage/index.aspx
10. Google Map