# VERIFICATION STATEMENT OF GREENHOUSE GAS ASSERTIONS

Statement No.: 10000444730-MSC-DNV GL-TWN

Issued date: 19 May, 2021

This is to verify initiate reporting of Greenhouse Gas Inventory Management Report (2020) of

## **AU Optronics Corporation**

#### Scope of Verification

DNV Business Assurance (DNV) has been commissioned by AU Optronics Corporation to perform a verification of the greenhouse gas assertion of Greenhouse Gas Inventory Management Report (2020) (hereafter the "Inventory Report") with respect to the sites listed in Appendix.

The scope of indirect emissions, other than Imported Energy with specified/limited list of sources, was defined by AUO's own pre-determined criteria for significance of indirect emissions, considering

the intended use of the GHG inventory:

Category	Subcategory	Boundary		
Indirect GHG	Upstream transportation and distribution	Transportation of selected purchased goods, such as		
emissions from		glass substrate · PI spacer · target · gaseous		
transportation		chemicaletc.		
	Business travel	Transportation of employees for business-related		
		activities		
	Employee commuting	Transportation of employees travelling between		
		company and residence place, factory shuttle bus		
		included		
		(employees located at Mainland and overseas plants were not included)		
	Downstream transportation and distribution	Transportation of products sold by the Company		
Indirect GHG	Purchased goods and services	Upstream (cradle-to-gate) emissions of selected		
emissions from		purchased goods, such as glass substrate, liquid		
products used		crystals, photoresist, developer, etchant, stripper and		
by organization		thinneretc		
	Fuel-and-energy-related activities (not	Upstream emissions of purchased fuels (Diesel Oil,		
	included in Scope 1 or 2)	Liquefied Petroleum Gases, Motor Gasoline and Natural Gas) and electricity		
	Waste generated in operations	Transportation and disposal or treatment of waste		
		(waste generated in Mainland and overseas plants were not included)		
Indirect GHG	Investments	Emissions of subsidiary, AUO Crystal Corp., from		
emissions	- Invocation to	energy use (Diesel Oil and electricity)		
associated with		crising, and (blood on and discontinuty)		
the use of				
products from				
the organization				

### **DNV·GL**

#### **Verification Criteria and GHG Programme**

The verification was performed on the basis of ISO 14064-1:2018, as well as IPCC 2006 Tier 2b methodology for fluorinated GHG emissions inventory, given to provide for consistent GHG emission identification, calculation, monitoring and reporting. The verification was conducted in accordance with ISO 14066:2011, ISO 14065:2013 and ISO 14064-3:2006.

#### **Verification Statement**

It is DNV's opinion that the Inventory Report (2020), which was published on April 30, 2021, is free from material discrepancies in accordance with ISO 14064-1:2018. The reliability of the information within the Inventory Report (2020) for direct GHG emissions and indirect GHG emissions from imported energy were verified with a reasonable assurance.

Sophia Kim

GHG Verifier

Place and date:

Taipei, April 07 ~ May 04, 2021

For the issuing office:

DNV Business Assurance Co., Ltd. 29Fl., No. 293, Sec. 2, Wenhua Rd., Banqiao District, New Taipei City 220,

Management Representative

**DNV-GL** 

#### Supplement to Statement

#### **Process and Methodology**

The reviews of the Inventory Report and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria. The Inventory Report correctly complies with the requirement of ISO 14064-1:2018.

#### **Quantification of Greenhouse Gas Emission**

The Inventory Report covering the period 1<sup>st</sup> January, 2020 to 31<sup>st</sup> December, 2020, it is DNV's opinion that the Inventory Report results in quantification of GHG emissions that are real, transparent and measurable.

Organizational E	Boundary of	Verification
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Financial Management Control Operational Management Control Equity Share

#### **GHGs Verified**

Direct Emissions: 102,217.50 tonnes CO2e

Imported Energy Indirect Emissions: 2,909,307.96 tonnes CO2e

#### Quantification of other indirect emissions:

Category	Tonnes CO <sub>2</sub> e
Indirect GHG emissions from transportation	119,284.87
Indirect GHG emissions from products used by organization	1,313,888.66
Indirect GHG emissions associated with the use of products from the organization	38,578.99

The Indirect Emissions was calculated based on 2019 electricity emission factor of 0.509 kg CO2-e/kwh, which was announced by Bureau of Energy, Ministry of Economic Affairs. The Global Warming Potential (GWP) defined in IPCC AR4 (2007) has been chosen and correctly referred by the Organization.

The fluorinated greenhouse gases ("FCs" defined by 2006 IPCC Guidelines) emissions in year 2020 with implementing abatement equipment was calculated as 27,057.16 Tonnes CO2-e, and self-declared 1,909,928.32 Tonnes CO2-e emission reduction with represented 98.60% reduced, according to the Tier 2b method referred to 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 3 Industrial Processes and Product Use, Chapter 6 Electronics Industry Emissions.

#### **Verification Opinion**

$\boxtimes$	Verified	without	Qualification
	Unable	to Verify	

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### **Appendix**

The greenhouse gas assertion of AU Optronics Corporation Greenhouse Gas Inventory Management Report (2020) with respect to the following sites:

		(2020) with respect to the following	Total	Total Direct	Total Energy
Site	Fab	Address	Emissions (Tonnes CO2-e)	Emissions (Tonnes CO2-e)	Indirect Emissions (Tonnes CO2-e)
AUHC	Headquarters/ L3B	No. 1, Li-Hsin Rd. 2, Hsinchu Science Park, Hsinchu, Taiwan, R.O.C.	22,113.62	1,990.82	20,122.81
	Global Research Center	No. 1, Gongye E. 3rd Rd., Hsinchu City, Taiwan (R.O.C.)	1,295.38	34.69	1,260.69
	L3C	No. 23, Li-Hsin Rd., Hsinchu Science Park, Hsinchu, Taiwan, R.O.C.	42,768.79	946.29	41,822.49
	Dormitory	Mabuville at Beipu Township, Hsinchu County, Taiwan, R.O.C	894.77	2.14	892.62
AULT	L4A/L5A/L5B	No. I, Xinhe Rd., Aspire Park, Lungtan, Taoyuan, Taiwan, R.O.C.	231,357.78	8,402.97	222,954.80
AULK	L6B	No. 228, Lungke St., Lungtan, Taoyuan, Taiwan, R.O.C. / No. 288, No. 338, No. 338-1, Lungyuan Rd. I, Lungtan, Taoyuan, Taiwan, R.O.C.	317,103.61	10,114.81	306,988.80
AUHY	L3D/L5D	No. 189, Hwaya Rd. 2, Kueishan, Taoyuan, Taiwan, R.O.C.	282,199.32	7,117.79	275,081.54
AUTC	L5C/L6A/L7A/ L7B/L8A	No. 1, JhongKe Rd., Central Taiwan Science Park, Taichung, Taiwan, R.O.C. / No. 2, No. 3, Keya Rd., Central Taiwan Science Park, Taichung, Taiwan, R.O.C.	1,046,406.11	21,457.19	1,024,948.92
AUHL	L8B	No. I, Machang Rd., Houli Dist., Taichung City, Taiwan, R.O.C.	357,367.19	7,318.78	350,048.41
AUTN	C4A/C5D/C6C	No.36, Keji 1st Rd., Annan Dist., Tainan City, Taiwan, R.O.C.	63,980.90	410.46	63,570.44
AUKH	C5E	No.9, Luke 3rd Rd., Luzhu Dist., Kaohsiung City, Taiwan, R.O.C.	28,847.12	171.56	28,675.55
AUSZ	S01/S02/S06	No. 398, Suhong Zhong Road, Suzhou Industrial Park, 215021, China	117,281.60	2,344.84	114,936.76
AUXM	\$11/\$13/\$17	No. 1689, Xiang An North Road, Xiang An Branch, Torch Hi-tech Industrial Development Zone, Xiamen, 361102, China	85,063.38	1,921.20	83,142.18
AUKS	L6K	No. 6, Longteng Rd., Kunshan Economic-Technological Development Area, China	319,524.03	28,558.08	290,965.96
AUST	L4B	No. 10, Tampines Industrial Avenue 3, Singapore 528798	95,096.35	11,386.82	83,709.53
AUSK	E11/E12	Bratislavska 517, 911 05 Trencin , Slovak Republic	225.51	39.05	186.45
Total 3,011,525.46 102,217.50 2,909,307.5					