QB RESEARCH

Quarterly Medium & Large OLED Display Market Track Sample

4Q, 2022

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1. Reference Guide

Application Covered

- Automotive
- Notebook
- Monitor
- Tablet PC
- TV
- Etc.

Substrate Covered

- Flexible OLED
- Rigid OLED

Nation Covered

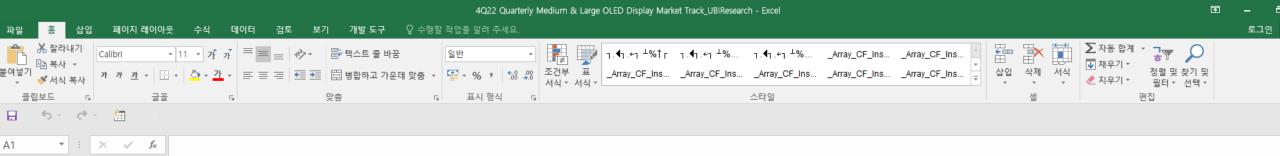
- Korea
- China
- Taiwan
- Japan

Actual and Forecast

- Quarterly update
- History : 3-year, Forecast : 5-year

Unit

- Shipments : M pcs
- Revenue : US\$ millions
- Average Selling Price : US\$
- Display Area : (million m²)



A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI 2 2

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Medium & Large OLED Display Quarterly Market Track

- 4Q22 Data Tables

Quarterly Capacity

Quarterly Capacity Glass Area Quarterly Capacity Glass Area Chart PIVOT Quarterly Performance PIVOT Quarterly ASP Trend

PIVOT Forecast

Supply & Demand for TV

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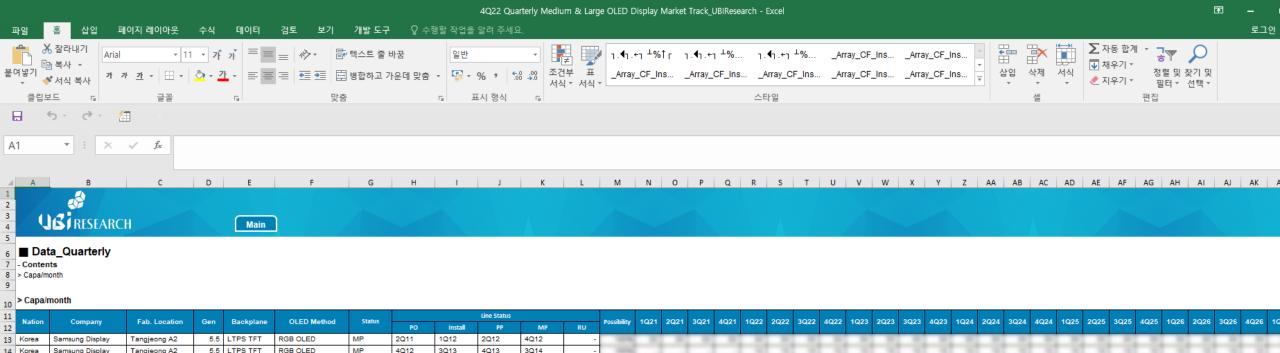
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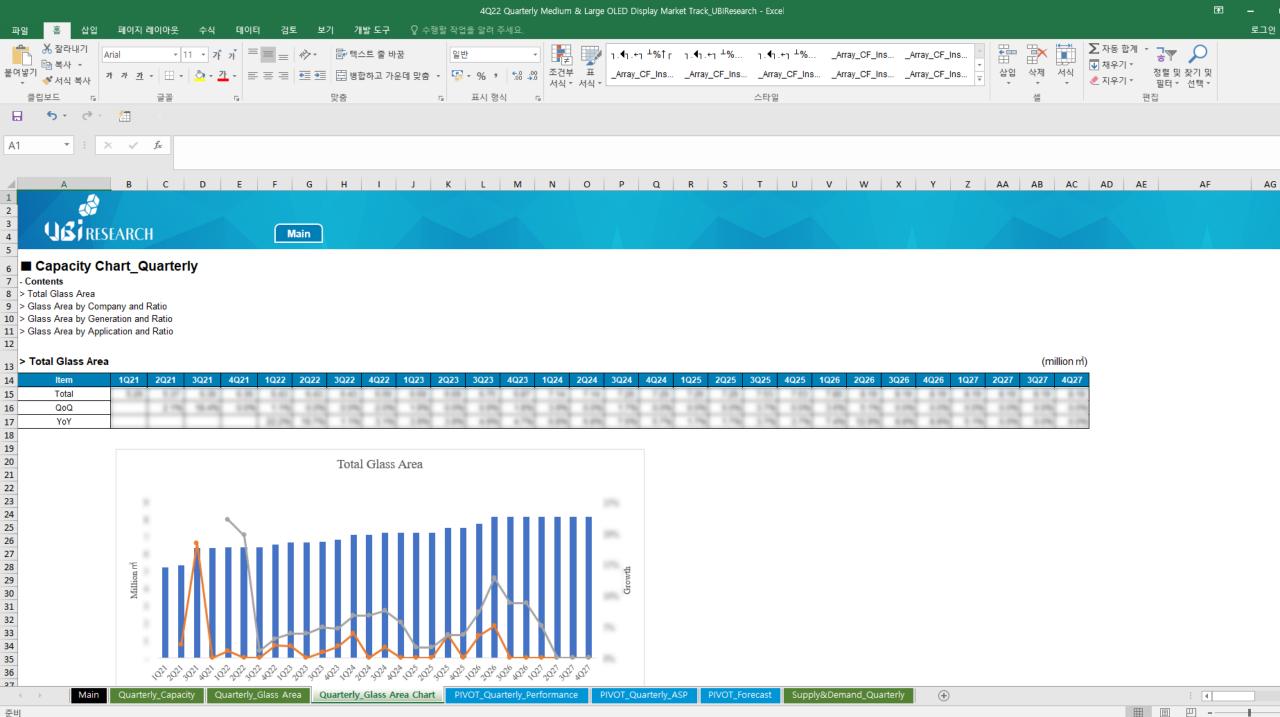
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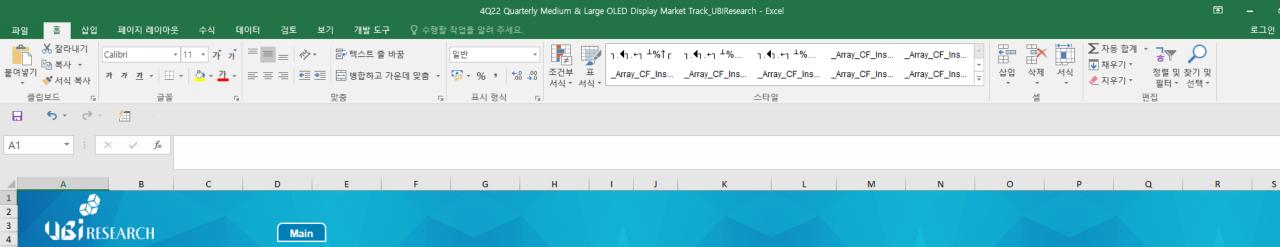
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3 K	orea	Samsung Display	Tangjeong A2	5.5	LTPS TFT	RGB OLED	MP	2Q11	1Q12	2Q12	4Q12	
4 K	orea	Samsung Display	Tangjeong A2	5.5	LTPS TFT	RGB OLED	MP	4Q12	3Q13	4Q13	3Q14	-
.5 K	orea	Samsung Display	Tangjeong A3	6	LTPO TFT	RGB OLED	Expect	1Q23	1Q24	2Q24	3Q24	-
16 Ka	orea	Samsung Display	Tangjeong A3	6	LTPO TFT	RGB OLED	MP	-	-	-	-	4Q23
17 K	orea	Samsung Display	Tangjeong IT	8.6	Oxide TFT	QD OLED	Expect	1Q23	3Q23	1Q24	2Q24	-
18 Ka	orea	Samsung Display	Tangjeong Q1	8.5	Oxide TFT	QD OLED	MP	1Q20	3Q20	4Q20	4Q21	-
19 Ka	orea	LG Display	Paju E3	8.5	Oxide TFT	WRGB OLED	MP	4Q10	3Q11	1Q12	1Q13	1Q18
20 K	orea	LG Display	Paju E4	8.5	Oxide TFT	WRGB OLED	MP	2Q13	1Q14	2Q14	3Q14	3Q20
21 K	orea	LG Display	Paju E4	8.5	Oxide TFT	WRGB OLED	MP	4Q15	3Q16	4Q16	1Q17	3Q20
22 K	orea	LG Display	Gumi E5	6	LTPS TFT	RGB OLED	MP	1Q16	4Q16	1Q17	3Q17	-
23 Ka	orea	LG Display	Paju E6	6	LTPO TFT	RGB tandem OLED	PO	4Q21	3Q22	1Q23	4Q23	-
24 Ka	orea	LG Display	Paju E6	8.7	Oxide TFT	RGB tandem OLED	Expect	2024	2Q25	3Q25	4Q25	-
25 Ka	orea	LG Display	Paju P7	7.5	Oxide TFT	WRGB OLED	Expect	1Q25	4Q25	1Q26	2Q26	-
26 Ka	orea	LG Display	Gangzhou 1	8.5	Oxide TFT	WRGB OLED	MP	1Q18	4Q18	1Q19	3Q20	3Q21
27 K	orea	LG Display	Gangzhou 2	8.5	Oxide TFT	WRGB OLED	MP	3Q18	2Q19	3Q19	3Q20	3Q21
28 CI	hina	BOE	Hefei		Oxide TFT	WRGB OLED	PP	4Q12	4Q13	2Q14	-	-
29 CI			Chongqing B12		LTPS TFT	RGB tandem OLED	Install	3Q21	2Q22	4Q22	1Q25	-
_		BOE	Chengdu B16		Oxide TFT			4024	4Q25	1Q26	2Q26	-
31 C	hina	Visionox	Hefei V3		LTPS TFT	RGB tandem OLED	PO	3Q22	2Q23	3Q23	4Q23	-
32 Ja		JOLED	Ishikawa		LTPS TFT	Sol OLED	stopped	1Q16	4Q16	1Q17	1Q18	-
3 Ja	apan	JOLED	Ishikawa	5.5	LTPS TFT	Sol OLED	MP	2Q19	1Q20	2Q20	2Q21	-



	4Q22 Quarterly Medium & Large OLED Display Market Track_UBIResearch - Excel													-															
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14 4	oplication [Size	1Q18	2Q18	3Q18 4	IQ18 1(Q19 2	2 Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20	1Q21 2	2Q21 ä	3Q21	4Q21 1(Q22 2	2Q22 3	3Q22								
14 4	oplication [Automotive	▼ Size ▼	r 1Q18	2Q18	3Q18 4	Q18 10	Q19 2	2Q19 :	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20 :	1Q21 2	2Q21 ÷	3Q21 -	4Q21 1(Q22 :	2Q22 3	-								
14 4	oplication Automotive	▼ Size ▼	r 1Q18	2Q18	3Q18 4	Q18 10	Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20 :	1Q21 2	2Q21 ŝ	3Q21	4Q21 10	Q22 :	2Q22 3	-								
14 4	oplication Automotive Automotive etc Monitor	▼ Size ▼	r 1Q18	2Q18	3Q18 44		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20 :	1Q21 2	2Q21 :	3Q21	4Q21 10	Q22 :	2Q22 3	-								
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14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor	▼ Size ▼	r 1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	<u>3Q20</u> 4	4Q20 :	1Q21 2	2Q21	3Q21	4Q21 1	1111	2Q22 3	10.211								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor	v Size v	r 1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20	2Q20	3Q20 4	4Q20 :	1Q21 2	2Q21	3Q21	4Q21 1	212.212	10. 2 1 B B	288888.8888								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor	Size	r 1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20 :	1Q21 2	2Q21 3	3Q21	4Q21 1	212.212	10. 2 1 B B	8888.8888								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor		1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20 :	1021 2	2Q21 :	3021			ECCERCE. 2128	81588888 . 8288								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor	v Size	1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20	2Q20	3Q20 4	4Q20 :	1Q21 2	2021	3Q21	1111 F 111 F 11			EUSEES. 2188								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor		1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	łQ20 :	1Q21	2Q21 3	3Q21	1111 F 111 F 11		ECCERCE. 2128	EUSEES. 2188								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor		1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	4Q20 :	1Q21 2	2021	3Q21	1111 F 111 F 11			EUSEES. 2188								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor		1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20	2Q20	<u>3Q20 4</u>	4Q20 :	1021 2	2021	3021	1111 F 111 F 11			EUSEES. 2188								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor		1Q18	2Q18	3Q18 4		Q19 2	2Q19	3Q19 4	Q19 1	1Q20 2	2Q20	3Q20 4	łQ20 :	1Q21	2Q21	3Q21	1111 F 111 F 11			EUSEES. 2188								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor		1Q18	2Q18	3Q18 4		84 352 853 855 855	80 100 80 100 100 100	81 151 81 181 181 181	80 100 80 100 100 100 100 100 100 100 10				4Q20	1Q21 2	2021	3Q21	1111 F 111 F 11			EUSEES. 2188								
14 A 15 = 16 = 17 = 18 = 19 = 20 =	Automotive etc Monitor NB Tablet TV		1Q18	#1 152 152 152 152 152	3Q18 4	30.0 10.0 10.0 10.0 10.0 10.0	84 353 853 855 855	80 100 80 100 100 100	3Q19 4	80 100 80 100 100 100 100 100 100 100 10	1Q20 2				1Q21 2	38.3 15.3 15.3 15.3 15.3 15.3 15.3 15.3 15	3Q21	38.3 35.5 40.5 8.2 40.5 8.2 36.5 36.5 36.5 36.5 36.5 36.5 36.5 36.5	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			•						:	



6 Vearly Forecast Shipment

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8 > Pivot of forecast shipment (Mpcs)

9			
10	Nation	(All)	Ŧ
11	Substrate	(All)	Ŧ

13		M pcs	1					
14	Company 🗸	Application 🕂 2022	2023	2024	2025	2026	2027	
15	■ JOLED	Monitor	0.00	0.000	0.00	0.00	0.00	0.00
16	LG Display	Automotive		1.4		8.7		1.4
17		Tablet			2.0	1.0		1.1
18		TV	18	8.2			10.2	10.4
19	Samsung Display	Automotive					1.4	1.0
20		etc	1.0	14		1.0		1.1
21		Monitor	1.0		1.4	1.8	2.2	1.4
22		Notebook	18	2.6	100.0	36.7	17.2	10.7
23		Tablet	2.0	2.0	1.2	10.0	100.0	100.0
24		TV	3.8	3.8	1.0			
25	Total		M .1		-	10.7	10.0	-

Yearly Forecast Revenue

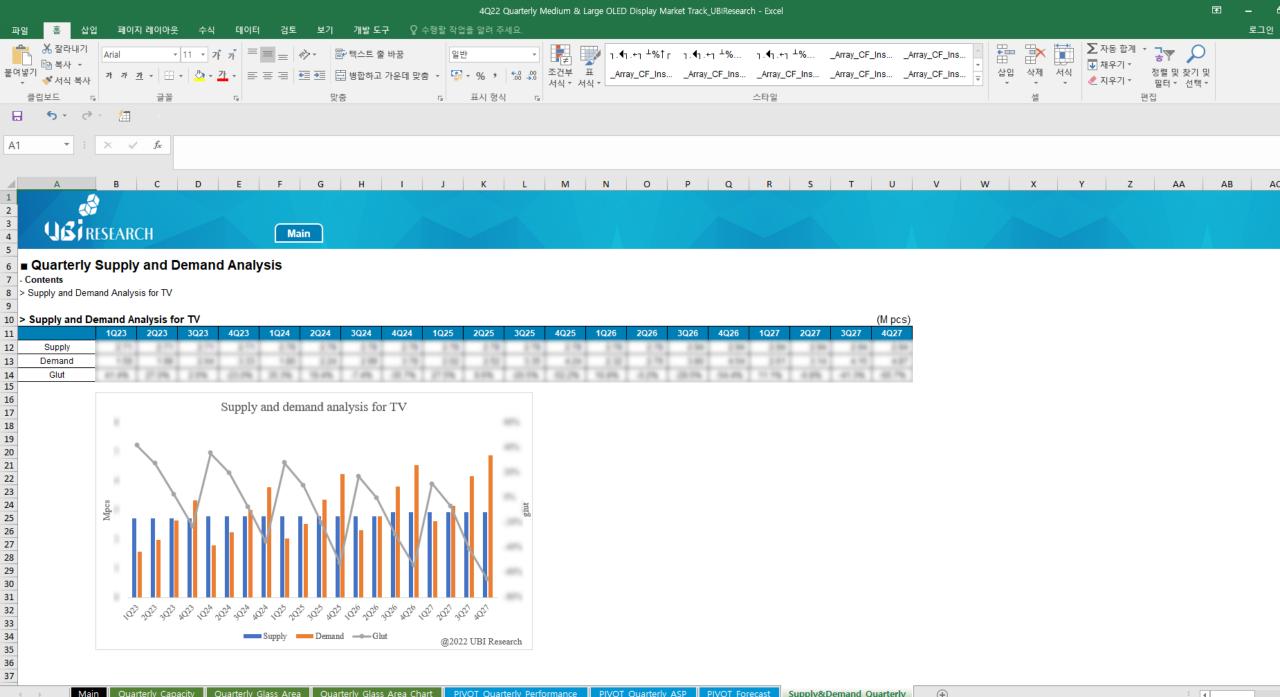
- Contents

> Pivot of forecast revenue (US\$ million)

▼▼ Nation (All) (All) Substrate

	US\$ m	illion					
Company .	Application 🕂 2022	2023	2024	2025	2026	202	7
■ JOLED	Monitor	10					
LG Display	Automotive		100		-		
	Tablet			100	100	100	475
	TV	1,000	1,000	1,000	0.040	1,000	1.460
Samsung Display	Automotive	-		175	100	1004	-
	etc	1004	100	100	100		
	Monitor		-	102	100	100	144
	Notebook	776	1,004	1,000	1.455	1,000	1,175
	Tablet	1000	100		780	1,000	1,007
	TV	1007	1,000	1,000	1,000	1,000	1,000
Total		4.05	1.00	10.000	11.00	11.00	14.00

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Chief Analyst Dr. Choong Hoon YI

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