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4Q21_Quarterly AMOLED Manufacturing Equipment Market tracker

4Q, 2021

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Reference Guide

Generation Covered

- Gen 5.5
- Gen 6
- Gen 8

Substrate type Covered

- Rigid
- Flexible

OLED Method Covered

- RGB OLED
- OLED
- QD-OLED
- Solution Process OLED

Layer Covered

- Substrate
- TFT
- OLED
- Encapsulation
- Cell
- Module

Unit

- Revenue : US\$millions

Equipment Covered

- Manufacturing
- Inspection

Actual and Forecast

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

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6	Avera	age Sales Price	e of Equ	lipments																	
7 -	Contents																				
8 >	ASP of Eq	uipments for Substrate	e																		
9 >	ASP of Eq	uipments for TFT																			
10 >	ASP of Eq	uipments for OLED																			
11 >	ASP of Eq	uipments for Encapsul	ation																		
12 >	ASP of Eq	uipments for Cell																			
13 >	ASP of Eq	uipments for Module																			
14 *	Touch scree	en equipment was exclu	uded.																		

15 *The equipment market is assumed to occur at the time of evaporation equipment's order issuance.

16 *Based on Gen8 15K and Gen8.5 30K

17	Dased	on Geno Tok	and Gen	5.5 30K															
18	> ASP	of Equipme	nts for s	Substrate														(US	\$ million)
19		Layer		Equipment	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21
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46																									
47																									

> ASP of Equipments for TFT

48	> ASP of Equipme	nts for TFT														(U	S\$ million)
49	Layer	Equipment	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21
50		AOI							1	1							1
51		Array tester	_														1
52		a-step															1
52 53		CD															1
54		Chromaticity measurement															1
55		Cleaner															1
56		Coater															1
57		CVD Repair]
58		DC tester]
59		Developer]
60		Dry etcher]
61		E-BEAM review]
62		ELA]
63		ELA inspection]
64		Ellipsometer]
65 66	TFT	Furnace]
		Grinding Repair															
67		Ion implanter															
68		Laser CVD and cut repair															
69		LOS															
70		Oven															
71		Particle counter															
72		PECVD															_
73		Review Repair															_
74		Scanner															_
75		sheet resistance measurement	:														_
76		Slit Mura															_
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78		Stripper															
79		TP															
80		Wet etcher															
81		probe													-		
82																	
83	35				ASP of	Equipment	s for TFT										
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104 > ASP of Equipments for OLED

(US\$ million)

4 > ASP of Equip	nents for OLED														(C
5 Layer	Equipment	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21
5 7	AOI														
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9	Cooling chamber														
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1	Ellipsometer	T													
2	Evaporator	T													
3	ICE	T													
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7	Mask AOI	+													
3	Mask tension	+													
9	Particle counter	+													
D	PT chamber	—													
1	Halfcut	T													
2	IR Oven	T													
3	Mask repair	T													
8 9 1 2 3 4 5 5 0LED 7 8 9 9 1 1 2 3 4 5	Mask cleaner	T													
5	Mask inspection	Ŧ													
5	4														
7	ASP	of Equipme	nte for Ol	ED											
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217

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218 > ASP of Equipments for Module (US\$ million) 219 3Q18 2Q19 3Q19 4Q19 3Q20 2Q21 Layer Equipment 2Q18 4Q18 1Q19 2Q20 4Q20 1Q21 220 Aging 221 AOI 222 Autoclave 223 Bezel printer 224 Cleaner 225 226 227 Cover window bonder Module Inspection & Silicon Dispenser PCB bonder 228 Polarizer attacher 229 TAB bonder 230 Touch film attacher 231 visual inspection 232 233 ASP of Equipments for Module 📥 Aging 234 235 236 237 - Autoclave 238 239 240 241 242 ---- Cover window bonder Silicon Dispenser 243 ٠ ---- PCB bonder 244 ----- Polarizer attacher 245 246 247 Ж ---- Touch film 248 attacher 249 250 1Q18 2Q18 3Q18 4Q18 1Q19 2Q19 3Q19 4Q19 1Q20 2Q20 3Q20 4Q20 1Q21 2Q21 251 © 2021 UBI Research 252 253

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12 Gen.	(All)	v										
13 Substrat	e type (All)	¥										
14 TFT	(All)	T										
15 OLED M	ethod (All)	T										
16 Encapsu	lation (All)	V										
17 Layer	(All)	T										
18 Equipme	ent type (All)	v										
19 Equipme	ent (All)	-										

Main	Remarks	Capacity_Q	ASP_Q	PIVOT Purchase Expense	PIVOT Forecast	(+)
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Sum of Sales_2021 Sum of Sales_2022 Sum of Sales_2023

(US\$ million)

19 Equipment

22 Company 23 BOE 24 CSOT 25 Everdisplay 26 Japan Display 27 JOLED 28 LG Display 29 Royole 30 Samsung Display 31 Tianma 32 Truly 33 Visionox 34 Grand Total

20 21

35 36 37

(All)

US\$ million



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