

OLED Display Cost Model

Jimmy Kim, PhD., Principal Analyst

ACTUALS AND FORECAST

Frequency, Time Period

- Quarterly
- One-year historical
- Five-years forecast

Measures

- Typical costs for first-tier panel makers (USD)

PRODUCTS COVERED

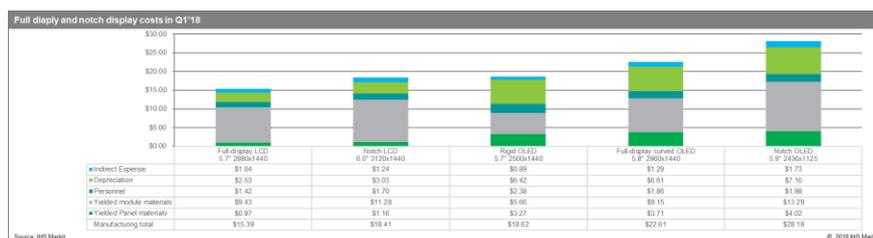
- Smart watch OLED modules
- Smartphone OLED modules
- Tablet OLED modules
- OLED TV modules

COST DATA COVERED

- Glass, target, other array materials
- RGB OLED, WOLED OLED
- Color filter materials (COA)
- Common material (HTL/ETL/HIL/EIL)
- Electrode material
- Glass, frit
- Panel thinning
- Driver IC
- Retardation film
- PCB, etc.
- Material & component total
- Yielded material & component total
- Indirect expense
- Labor cost
- Equipment depreciation by process (array, OLED and module)
- Facility depreciation
- Manufacturing total cost
- Cash cost
- SG & A
- Sales total cost
- Fab operation
- Yield by process

The OLED Display Cost Model covers all OLED panels, including smart watch, smartphone, tablet, and TV applications. Subscribers will be able to better understand the panel cost structure and profitability of mainstream panel sizes using the model's Excel data tables.

Users can generate forecasts based on various data and assumptions. Standard selections are also prepared in the model, showing many typical panel sizes. These typical selections are easy to work with, allowing users to change starting conditions that affect panel costs like equipment depreciation year. Parameters like component costs, panel prices, panel yield, and fab utilization can also be changed to reflect the user's real panel conditions.



Key Issues Addressed

- Know which applications and panel sizes are most profitable
- Understand which fab generation is better for lowering panel costs
- Know the estimated panel cost forecasts for buyers
- Find typical first-tier panel costs and component breakdowns
- Latest OLED panel costs and profit margin trends

Applicable To

- Brand manufacturers/OEMs/ODMs
- FPD and materials/components procurement division
- FPD Panel suppliers
- Materials/components Procurement division
- Panel development division
- Investment Community
- Fund managers / investors / analysts with interest in display companies

LEAD ANALYST

Jimmy Kim, PhD., Principal Analyst

Dr. Jimmy Kim joined IHS in November 2014, when IHS acquired DisplaySearch, a leader in primary research and forecasting on the global display market. At DisplaySearch, he served as a senior analyst in charge of display materials and LED analysis.

Before DisplaySearch, he spent three years on the marketing team at Samsung LED (currently Samsung Electronics), leading the display-related LED market team and creating marketing strategies for the company. Prior to Samsung LED, Dr. Kim spent five years at Samsung Electronics working on the R&D team for the LCD business. There, he led several R&D projects on new light sources for LCD backlights and new BLU structures.

He earned his Doctor of Philosophy from the School of Materials Science and Engineering at Seoul National University, Korea.

CONTRIBUTING ANALYSTS

Tadashi Uno, Senior Analyst

Irene Heo, Principal Analyst

TECHNOLOGY SOLUTIONS FROM IHS MARKIT

The Technology Group at IHS Markit is the leading source of information, insight and analytics in critical areas that shape today's technology ecosystem—from materials and components, to devices and equipment, to end markets and consumers. Businesses and governments in more than 150 countries around the globe rely on the deep market insight and expert independent analysis of our 300+ industry analysts in technology sectors spanning IT, telecom, media, industrial, automotive, electronics, solar and more.

Table of Contents

(panel sizes change in response to market trends)

Smart watch OLED panels

- 1.3" _340x272 flexible
- 1.5" _390x312 flexible
- 1.67" _320x320
- 1.8" _432x128 flexible

Smartphone OLED Panels

- 4.0" _800x480
- 4.3" _800x480
- 4.5" _800x480
- 4.8" _1280x720
- 5.0" _1920x1080
- 5.1" _1920x1080
- 5.1" _2560x1440 rigid/flexible
- 5.3" _1280x800
- 5.5" _1280x720
- 5.5" _1920x1080
- 5.5" _2560x1440 flexible
- 5.6" _2560x1600
- 5.7" _1920x1080
- 5.7" _2560x1440
- 5.8" _2960x1440 flexible
- 5.9" _1920x1080
- 5.9" _2436x1125 flexible
- 6.0" _1280x720
- 6.0" _2560x1440
- 6.2" _2960x1440 flexible
- 6.3" _2960x1440 flexible

OLED TV panels

- 32" _1920x1080
- 40" _1920x1080
- 42" _1920x1080
- 46" _1920x1080
- 47" _1920x1080
- 55" _1920x1080
- 55" _3840x2160
- 56" _3840x2160
- 65" _3840x2160
- 77" _3840x2160

Tablet OLED panels

- 7.0" _1280x800
- 7.7" _1280x800
- 8.0" _2048x1536
- 8.4" _2560x1600
- 9.7" _2048x1536
- 10.1" _1280x800
- 10.5" _2560x1600

For more information [ihsmarkit.com/technology](https://www.ihsmarkit.com/technology)

About IHS Markit

IHS Markit (Nasdaq: INFO) is a world leader in critical information, analytics and solutions for the major industries and markets that drive economies worldwide. The company delivers next-generation information, analytics and solutions to customers in business, finance and government, improving their operational efficiency and providing deep insights that lead to well-informed, confident decisions. IHS Markit has more than 50,000 key business and government customers, including 85 percent of the Fortune Global 500 and the world's leading financial institutions. Headquartered in London, IHS Markit is committed to sustainable, profitable growth.