

OLED Display Cost Model

Part of the Display Manufacturing, Technology & Components Service Area Coverage

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.

“ Manufacturing yield and depreciation play key roles in the cost structure of OLED display. ”

Jimmy Kim

Ph.D., Principal Analyst

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HOW OMDIA HELPS YOU

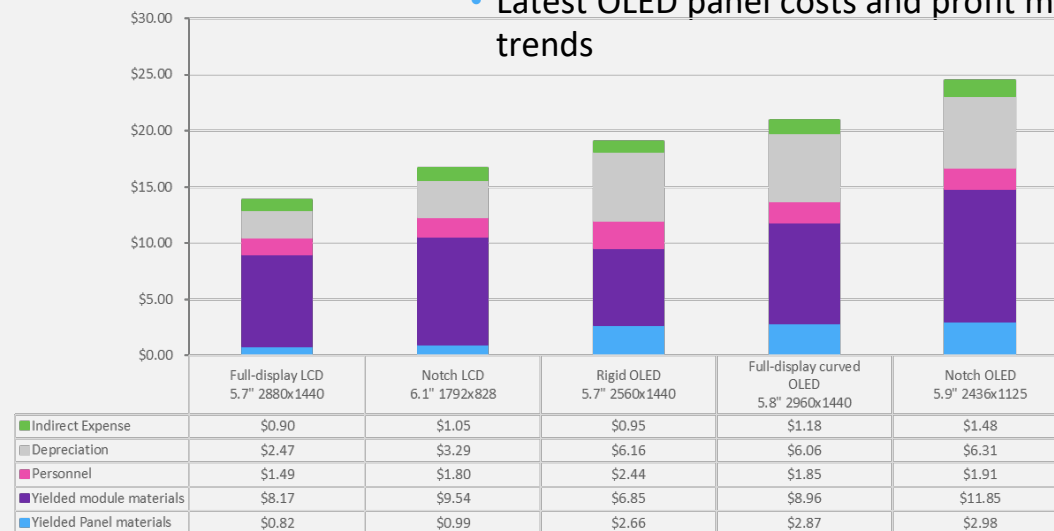
- Know which applications and panel sizes are most profitable
- Understand which fab generation is better for lowering panel costs
- Know the estimated panel cost forecasts for buyers
- Find typical first-tier panel costs and component breakdowns
- Latest OLED panel costs and profit margin trends

KEY QUESTIONS ADDRESSED

- How can the manufacturing of WOLED be profitable?
- How much will the cost increase for the manufacturing of foldable display?
- What will become of the cost competitiveness of QD OLED?

Full display and notch display costs in Q4'19

Full display and notch display costs



Source: Omdia

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Display Optical Film: Our Expert Analysts



Jimmy Kim
Principal Analyst
OLED Material Cost/ Backlight



Irene Heo
Principal Analyst
Display Optical Film



Tadashi Uno
Senior Analyst
Display Components & Cost

Cost Model

OLED Display Cost Model

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.

DETAILS

Frequency

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

Measurements

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

Region

- Typical costs from Korea/Japan/China/Taiwan

COVERAGE

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.
- Touch sensor
- Touch IC
- Touch cover
- 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

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

Table of Contents

(Panel sizes change in response to market trends)

Smart watch OLED panels

- 1.3" _340x272 flexible
- 1.5" _390x312 flexible

Smartphone OLED Panels

- 5.0" _1920x1080
- 5.1" _1920x1080
- 5.1" _2560x1440 rigid/flexible
- 5.5" _1280x720
- 5.5" _1920x1080
- 5.5" _2560x1440 flexible
- 5.7" _1920x1080
- 5.7" _2560x1440
- 5.8" _2960x1440 flexible
- 5.9" _2340x1080
- 5.9" _2436x1125 flexible
- 6.1" _2340x1080
- 6.1" _3040x1440 flexible
- 6.2" _2960x1440 flexible
- 6.2" _3200x1440 flexible
- 6.3" _2960x1440 flexible
- 6.4" _2340x1080
- 6.4" _3040x1440 flexible

- 6.5" _2340x1080
- 6.5" _2688x1242 flexible
- 6.7" _3040x1440 flexible
- 6.7" _3200x1440 flexible
- 6.8" _3040x1440 flexible
- 6.9" _3200x1440 flexible

OLED TV panels

- 55" _1920x1080
- 55" _3840x2160
- 65" _3840x2160
- 77" _3840x2160

QD OLED panels

- 65.0" _3840x2160

Tablet OLED panels

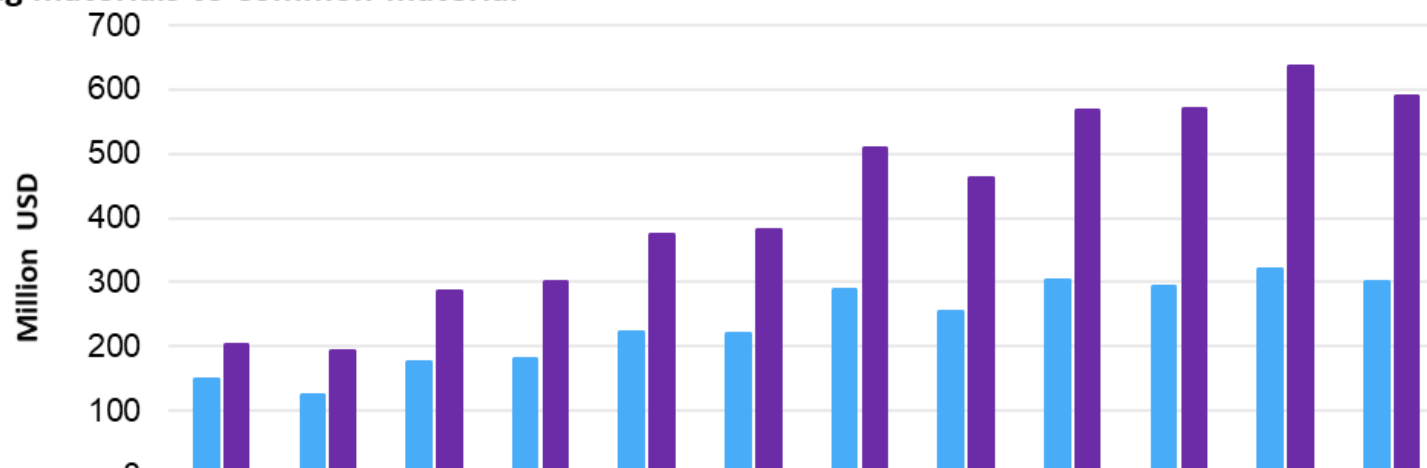
- 8.0" _2048x1536
- 8.4" _2560x1600
- 9.7" _2048x1536
- 10.1" _1280x800
- 10.5" _2560x1600

Foldable OLED panels

- 6.7" _2636x1080 flexible
- 7.3" _2048x1536 flexible

OLED Materials Market Tracker

Emitting materials vs Common material



■ Emitting material	149	124	176	181	224	220	290	255	303	294	320	302
■ Common material	204	194	286	302	375	381	508	461	567	569	635	590


Common material: HTL, ETL/EIL, aETL, HBL, R', G', B' prime, CGL, CPL
 Source: Omdia

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Revenue forecast for OLED materials market

- AMOLED materials demand and forecast
- Materials supply analysis
- Forecast on materials using newly developed devices
- AMOLED industry and market trend
- Short-term demand by AMOLED panel maker
- Long-term demand by AMOLED industry
- Competition analysis

Related Content: Display Manufacturing, Technology & Components Service Area Coverage



Service Area Package: **Display Manufacturing, Technology & Components**

- OLED & LCD Supply Demand & Equipment Intelligence Service
- OLED & Flexible Display Intelligence Service
- Foldable Display Tech/ Market Report
- MicroLED Display Tech/ Market Report
- Mini LED Backlight Market Tracker
- Display Glass Market Tracker
- OLED Display Roadmap Tracker
- Display Driver IC Market Tracker
- OLED Materials Market Tracker
- Display Optical Film Market Tracker
- Large Area Display Cost Model
- Smartphone & Tablet Display Cost Model
- OLED Display Cost Model**
- Display Dynamics Viewpoint Service

About Omdia's Display Manufacturing, Technology & Components Research

Industry's most comprehensive coverage of the display supply chain focusing on upstream segments of panel and manufacturing technologies, equipment, as well as materials, components, and costs.

Our research team is based in Asia with extensive years of experience and have previously worked at FPD companies. Omdia's primary research approach is surveying display supply chain companies, creating unique and highly data oriented analysis.

Strong focus in the "connect the dots" between various parts of the FPD industry, upstream, downstream, and to consumer electronics. Omdia research team deep dives of the many niche markets and technologies that characterize the front end of display industry.

Related Content: Display and Consumer Devices Service Area Coverage

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Tom Coate
Customer Success
Manager



Kâren Dyer
Customer Success
Manager



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 @OmdiaHQ | [ondia.com](https://www.ondia.com)

Customer Success

E: customersuccess@ondia.com

SALES

US: +1 (212) 652 5335

APAC: +61 (0)396 016 700

EMEA: +44 (0)7771 980 316

ABOUT OMDIA

Omdia is a global technology research powerhouse, established following the merger of the research division of Informa Tech (Ovum, Heavy Reading, and Tractica) and the acquired Omdia technology research portfolio*. We combine the expertise of more than 400 analysts across the entire technology spectrum, covering 150 markets. We publish over 3,000 research reports annually, reaching more than 14,000 subscribers, and cover thousands of technology, media, and telecommunications companies.

Our exhaustive intelligence and deep technology expertise enable us to uncover actionable insights that help our customers connect the dots in today's constantly evolving technology environment and empower them to improve their businesses—today and tomorrow.

* The majority of Omdia technology research products and solutions were acquired by Informa in August 2019 and are now part of Omdia.