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
OLED Display Cost Model

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

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 © 2020 Omdia
Display Optical Film: Our Expert Analysts

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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

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

Common materials: HTL, ETL, eETL, HBL, R', G', B' prime, CGL, CPL
Source: Omdia

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

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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