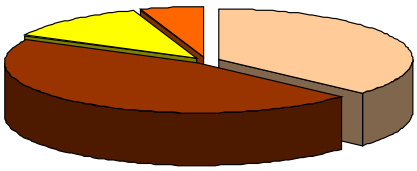
Announcement

LED Signage and Professional Display Systems and Sub-Systems Global Market Review & Forecast 2017-2027



This is the ElectroniCast review and forecast of worldwide use of LED-based digital and traditional signage and professional-use system and sub-system (system-parts). The forecast for each type, in turn, is segmented the major outdoor and indoor applications and into geographical region. Over 130 companies are profiled. Also, we provide a useful Company/Product Matrix in the Excel File.

ElectroniCast Consultants

LED Signage and Professional Display Systems and Sub-Systems Global Market Review & Forecast 2017-2027

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Also Included: Excel worksheets and PowerPoint slides Files
Fee: $4,990

10-Year Market Forecast

This market forecast report, which is available immediately, is part of a consultant service from ElectroniCast Consultants to our clients. This 2017-2027 market review and forecast is presented for light-emitting diode (LED) based signage and professional/commercial displays.

The market forecast covers LED system-parts, as well as the complete sign/display (system), which are used in stationary (non-vehicle) applications. LEDs are used in large outdoor video screens, digital billboards, sport/stadium displays, small indoor retail displays, channel-lettering/light-boxes, LED/LCD screens (used exclusively for professional display purposes), as well as lamps that provide light for traditional signage.

The market forecast of the LED-based signage and professional displays sub-systems and systems is segmented by the following end-user applications:

- Outdoor
  - Off Premise Outdoor (Roadway Billboards and Other Roadway)
  - On Premise Outdoor
- Indoor
  - Offices and Education
  - Entertainment, Sports, Restaurants, Hotels, Shopping, Other Similar
  - Transportation (Airports, Train/Bus Terminals, Other Similar)

The market data are segmented into the following geographic regions, plus a Global summary:

- America (North America, Central and South America)
- EMEA (Europe, Middle Eastern countries, plus Africa)
- APAC (Asia Pacific)

The market forecast data are segmented by the following functions:

- Consumption Value (US$, Million)
- Quantity (number/units: Million)
- Average Selling Prices (ASP $, each)

Below, are four levels (or "food chain") of LEDs. For the purposes of this ElectroniCast study, we quantify and provide the market forecast for "Level 3" and "Level 4"

Level 1 - LED chip

Level 2 – Packaged LED chip (single and multiple-chip)

Level 3 – Sub-System (sign/display "tile" module; backlighting; and front lighting)

Level 4 – System (LED sign or display screen and luminaire)

LEVEL 3 The market forecast data for the "Level 3" sub-system product category is shown below:

- LED Cluster-Type (Direct Lit) Tile Module (Digital Sign/Display)
  - Note: Typically, there are several (4-6) "Tiles Modules" per "Panel"
- LED Backlighting for LCD Screen (Digital Sign/Display)
- LED Backlighting for Box/Channel Letter Signs (Traditional Sign/Display)
- LED Front Lighting lamps/Arrays for Signs (Traditional Sign/Display)

Presentation Notes for the "Level 3" sub-system product category:

- One LED backlighting LCD unit is one continuous string or line or other configuration/pattern; therefore, there are several LEDs in one LCD screen backlighting unit
- One LED backlighting Box/Letter unit is one LED module or other device, which is could be assembled into a continuous string or line or other configuration or pattern; therefore, there could several LED modules in one LCD screen.
- LED units in vehicles are not included (cars, planes, buses, trains, ships, etc)
- LED units in LCD-based computer monitors, phones, tablets (etc) and LCD units used to view TV programming are not included/counted in this market data

LEVEL 4 The market forecast data for the "Level 4" complete system product category is shown below:

- LED Cluster-Type Screen
- LED-Based LCD Screen
- LED-Based Box/Channel Letter Signage/Display
- LED Luminaire for Conventional Signage/Display

Presentation Notes for the "Level 4" sub-system product category:

- LED units in vehicles are not included (cars, planes, buses, trains, ships, etc)
- LED-based in LCD (screen) use for professional signage or display ONLY; therefore, computer monitors, phones, tablets (etc) and TV viewing are not included/counted in this market data
- Some LCD screens are used as a single (one) system unit; however, LCD screens are also used in a multiple screen arrangement of two or more screens (multiple screen arrangements are counted as one system)
- Any outdoor-qualified/rated unit that is used indoors is counted as an indoor unit
- LED Luminaire for Conventional Signage includes the light fixture and the light source (bulb or array)
- All values included associated hardware mounting apparatus and immediate wiring parts

About ElectroniCast

ElectroniCast, founded in 1981, specializes in forecasting technology and global market trends in fiber optics communication components and devices, as well providing market data on light emitting diodes used in lighting.

As an independent consultancy we offer multi-client and custom market research studies to the world's leading companies based on comprehensive, in- depth analysis of quantitative and qualitative factors. This includes technology forecasting, markets and applications forecasting, strategic planning, competitive analysis, customer-satisfaction surveys and marketing/sales consultation. ElectroniCast, founded as a technology-based independent consulting firm, meets the information needs of the investment community, industry planners and related suppliers.

Market Research Methodology

Market analysis and technology forecasting are complex tasks. Any predictions of the shape and trends of technology and economic movement start from the notion that the germ of what will be important tomorrow is present, although smaller or larger or in a different form, in our environment today. However, taking as a basis for a prediction the assumptions of current, conventional belief creates a set of preconceived notions that can lead to serious mistakes. ElectroniCast, instead, looks to the basic driving forces.

This study is based on analysis of information obtained continually over the past several years, but updated through February 2018. During this period, ElectroniCast analysts performed interviews with authoritative and representative individuals in the LED manufacturing (materials, chips, packaging, devices, associated parts/pieces, fittings/fixtures, and complete system) and advertisement, transportation, various sports/entertainment, hospitality/related, communication, government-based users (local, state/provincial, federal), display industry, and other-related. The interviews were conducted principally with:

- Engineers, marketing personnel and management at manufacturers of LEDs, sub-system parts and complete signage/display systems, as well as other competing technologies.
- Design group leaders, engineers, marketing personnel and market planners at major users and potential users of LEDs, and signage/display sub-systems and complete systems.
- Other industry experts, including those focused on laws/regulations, intellectual property/patents, standards activities, trade associations, and investments.

The interviews covered issues of technology, R&D support, pricing, contract size, reliability, documentation, installation/maintenance crafts, standards, supplier competition and other topics.

Customers and distributors also were interviewed, to obtain their estimates of quantities received and average prices paid. Customer estimates of historical and expected near term future growth of their application are obtained. Their views of use of new technology products were obtained.

The analyst then considered customer expectations of near term growth in their application, plus forecasted economic payback of investment, technology trends and changes in government regulations/laws in each geographical region, to derive estimated growth rates of quantity and price of each product subset in each application. These forecasted growth rates are combined with the estimated baseline data to obtain the long-range forecasts at the lowest detailed level of each product and application.

A full review of published information was also performed to supplement information obtained through interviews. The following sources were reviewed:

- Professional technical journals and papers
- Trade press articles
- Technical conference proceedings
- Product literature
- Company profile and financial information
- Additional information based on previous ElectroniCast market studies
- Personal knowledge of the research team.

In analyzing and forecasting the complexities of the regional markets for light emitting diode products, it is essential that the market research team have a good and a deep understanding of the technology and of the industry. ElectroniCast members who participated in this report were qualified.

Bottom-up Methodology ElectroniCast forecasts, as illustrated in the forecast data structure, are developed initially at the lowest detail level, then summed to successively higher levels. The background market research focuses on the amount of each type of product used in each application in the base year (2017), and the prices paid at the first transaction from the manufacturer. This forms the base year data. ElectroniCast analysts then forecast the growth rates in component quantity use in each application, along with price trends, based on competitive, economic and technology forecast trends, and apply these to derive long term forecasts at the lowest application levels. The usage growth rate forecasts depend heavily on analysis of overall end user trends toward equipment usage and economic payback.

Proprietary Statement

One-Fee Policy

All employees of the client company/organization may use this report, worldwide at the consultant service subscription fee shown in the front pages of this announcement.

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