THE WORLDWIDE ELECTRONICS ASSEMBLY MARKET FOR LED GENERAL LIGHTING - 2011 EDITION


Report Highlights

- **LED Technical Trends**
  - Major Components and Modules of LED Lamps
  - LED Lamp Manufacturing Process
  - LED Manufacturing Supply Chain
  - Transition within Lighting Industry Structure

- **LED Cost Trends and Industry Structure**
  - LED Cost Factors in General Lighting, 2009
  - LED Lighting Cost per Kilo Lumen over Time
  - General Lighting LED BOM, 2010 & 2015
  - LED Materials and Package Types, 2010 & 2015
  - LED Chip Count per Lamp, 2009–2015 (Units)

- **LED Market and Forecast, 2010-2015**
  - Total LED General Lighting Lamps, 2009–2015 (M Units)
  - Total LED Lamp Assembly Value, 2009–2015 ($M)
  - PCB and Box Assemblies % of Total LED Manufacturing Costs

- **Outsourcing and Manufacturing Trends**
  - CM Production of LED Lamps, 2009–2015
  - ODM Production of LED Lamps, 2009–2015
  - OEMs and Subcontractors for LED Lamps, 2010
The Worldwide Electronics Assembly Market for LED General Lighting - 2011 Edition is NVR’s first foray into the exploding market for LED lighting. While this subject is widely covered by many other market research companies, this is the first time that anyone has examined the total costs involved in the market for manufacturing LEDs from a Cost of Goods Sold (COGS) standpoint. Whereas most of the coverage found today looks at the LED chip or IC market size, NVR’s report examines the packaging, thermal management, optics, printed circuit board (PCB) assembly including drivers and related electrical components, final (box) assembly and test of the LED fixture. This survey is for the leading LED lighting applications’ including:

- Replacement Lamps
- Architectural
- Entertainment
- Retail Display
- Commercial/Industrial
- Outdoor Lighting
- Off-grid/Alternative
- Residential Lighting
- Consumer Lighting
- Emergency/exit
- Special Lettering
- Other

This special report examines the major components and modules in LED lights, packaging and material trends, LED comparison costs over time, and the manufacturing supply chain and assembly trends. NVR’s long-standing experience in tracking electronics assembly by OEM, EMS, and ODM supplier, is expanded to include leading LED OEMs along with the major subcontracting alliances and partnerships being established today. As a result, PCB and box assembly trends as a percent of total manufacturing costs for the leading LED lighting applications are quantified. Finally, estimates on the LED lamp assembly revenue per region are predicted, along with the percentage of in-house versus outsourced manufacturing of finished goods.

The Worldwide Electronics Assembly Market for LED General Lighting - 2011 Edition is presented in three separate formats. The report is published as a 36-page PowerPoint presentation with the titles of each slide summarized on the following page. It is sold for $1995. It is supported by an Excel spreadsheet file, which is sold for an additional $500. Lastly, a PDF file containing profiles of 140 leading LED lighting suppliers (partial list on page 4) can be purchased at an additional cost of $500.

Randall Sherman is the president of New Venture Research Corp., a California market research and business consulting firm focused on the EMS and OEM electronics manufacturing industries, and serves as a principal analyst for this report. Mr. Sherman has more than 20 years’ experience in technology and business research. He began his career as a telecommunication network design engineer. He has held senior positions at various market research firms including Creative Strategies and Frost and Sullivan. Mr. Sherman obtained his undergraduate degree in Astrophysics and holds two master’s degrees - an MSEE from the University of Colorado and an MBA from the Edinburgh School of Business.

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3M Company
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Acuity Brands
Advanced Optoelectronic
AIXTRON AG
Applied Materials
Arima Optoelectronics
Asahi Glass
AU Optronics
Avago Technologies
Aveso
BridgeLUX
Cambridge Display Tech.
Casio Computer
Century Epitech
Chemei Innolux
Chi Mei Lighting
Citizen Electronics
Cooper Lighting
Cree, Inc.
Delta Optoelectronics
Dowa Elect. Materials
DuPont Microcircuit Mat.
Edison Opto
elumin8
Epilight Technology
Epistar Corp.
Everlight Electronics
Formosa Epitaxy
Foxsemicon Int. Tech.
FUJIFILM Dimatix
GE App. & Lighting
HELIO Optoelectronics
Hitachi Cable
Hubbell Lighting
ilumisys
K-Bridge Electronics
KOITO Manufacturing
Konica Minolta
LedEngin
LEDtronics
LG Innotek
LG Philips LCD
Lighting Science Group
Lite-On Optoelectronics
LSI Industries
Lumileds Lighting
Luminus Devices
MLED, Ltd.
M.L.S. Electronics
Neo Neon
Nexxus Commercial Lgt.
Nichia Corp.
Novaled AG
OPTEK Technology
OSA Opto Light
OSRAM
Panasonic Elect. Works
PerkinElmer
Perlight
Pioneer Corp.
Prime View Intl.
ProLight Opto
QD Visions
Radiant Opto
ROHM Semiconductor
Rubicon Technology
Samsung SDI
Sanken Electric
Schneider Electric
Schreder
Seiko Electric
SemiLEDs
Seoul Semiconductor
Sharp Corp.
Shenzhen Fangda Semi.
Shina Optoelectric
ST Microelectronics
Stanley Electric
Sumation Corp.
Sumitomo Chemical
Taeson LCD
Taiyo Nippon Sanso
Targetti
Tekcore
The Brinkman Corp.
Toppan Printing
Toshiba Mobile Display
Toyoda Gosei
TSMC
Traxon Technologies
Unity Opto
Universal Display Corp.
UPEC Electronics
Veeco Instruments
Vishay Intertechnology
Westinghouse Lighting
Zumtobel

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