

Chip-On-Board Light Emitting Diodes (COB LEDs): Market Research Report

<https://marketpublishers.com/r/CFBF3DEAC6BEN.html>

Date: December 2018

Pages: 305

Price: US\$ 5,600.00 (Single User License)

ID: CFBF3DEAC6BEN

Abstracts

This report analyzes the worldwide markets for Chip-on-Board Light Emitting Diodes (COB LEDs) in US\$ Thousand by the following Applications: Automotive (Head Lamp, Interior Lighting, Rear Light, & Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential, & Others), and Others. The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific, Middle East & Africa, and Latin America.

Annual estimates and forecasts are provided for the period 2016 through 2024.

Also, a five-year historic analysis is provided for these markets.

Market data and analytics are derived from primary and secondary research. Company profiles are primarily based on public domain information including company URLs.

The report profiles 55 companies including many key and niche players such as -

Acuity Brands Lighting, Inc.

Bridgelux, Inc.

Citizen Electronics Co., Ltd.

Cree, Inc.

Everlight Electronics Co., Ltd.

Excelitas Technologies® Corp.

Contents

1. INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS

Study Reliability and Reporting Limitations

Data Interpretation & Reporting Level

Quantitative Techniques & Analytics

Product Definitions and Scope of Study

2. INDUSTRY OVERVIEW

Chip-on-Board (COB) Technology: Enabling Easy, Fast, Perfect & Connective LED Lighting

Growth Drivers in a Nutshell

Superior Attributes of Chip-on-Board LEDs Over Conventional LEDs Lead to Widespread Adoption

Rapid Penetration of LED Lighting Worldwide: Foundation for Market Growth

Table 1. Global LED Lighting Penetration (%) in the Total Lighting Market: 2012 to 2022P (includes corresponding Graph/Chart)

Outlook

Asia-Pacific Offers Huge Untapped Market Potential for COB LEDs

Table 2. Global COB LEDs Market - Geographic Regions Ranked by Value CAGR for 2016-2024: Asia-Pacific, Latin America, Middle East & Africa, Europe, USA, Canada, and Japan (includes corresponding Graph/Chart)

3. MARKET TRENDS, ISSUES & DRIVERS

Growing Prominence of Smart Lighting Worldwide Drives Strong Demand for COB LEDs

Table 3. Smart Home Penetration (%) in Select Region/Country for 2017 (includes corresponding Graph/Chart)

Surging Electricity Consumption Provides the Perfect Platform for Market Expansion

Table 4. Global Electricity Demand by Region/Country (2016-2040): Breakdown of Demand (Thousand TWh) for Australia, Brazil, Canada, China, Europe, India, Japan, Middle East & North Africa, South East Asia, USA, and Rest of World (includes corresponding Graph/Chart)

Favorable Demographic Trends Strengthens Market Prospects

Table 5. World Population by Geographic Region (2000-2050) (in Million) (includes corresponding Graph/Chart)

Burgeoning Middle Class Population

Table 6. Global Middle Class Population (in Million) and as a Percentage of Total Population: 2005, 2015, 2025 & 2035 (includes corresponding Graph/Chart)

Table 7. Global Middle Class Spending (in US\$ Trillion) by Geographic Region (2017, 2025P & 2030P) (includes corresponding Graph/Chart)

Exponential Increase in Urban Population

Table 8. World Urban Population in Thousands: 1950-2050P (includes corresponding Graph/Chart)

Table 9. Degree of Urbanization Worldwide: Urban Population as a % of Total Population by Geographic Region for the Years 2000, 2018 & 2030 (includes corresponding Graph/Chart)

COB LEDs Adoption to Vary Across Segments in the Illumination Application Area

Illumination Segments: Key Factors Impacting Adoption

The Inevitable Shift of General Lighting towards SSL Technology Bodes Well for Market Growth

Road Map for Inefficient Light Source Banning

Incandescent Bulb Phase-Out Road Map for Major Regions/Countries

Schedule of Incandescent Bulb Ban in Select Regions/Countries

COB LED Arrays: Ensuring Uniform Architectural Lighting Experience throughout Installed Lifetime

COB LEDs: Preferred Choice for Efficient Highlighting of Merchandise in the Retail Sector

Residential Sector: The Fastest Growing Illumination Application Segment in the Long Run

Outdoor Lighting Dominate Adoption of COB LEDs for Illumination

Growing Automobiles Production Favors Market Penetration in the Automotive Sector

Table 10. World Production of Passenger Cars: Breakdown of Annual Production Figures in '000 Units for Years 2017 & 2020 by Geographic Region/Country (includes corresponding Graph/Chart)

Table 11. World Production of Commercial Vehicles: Breakdown of Annual Production Figures in '000 Units for Years 2017 & 2020 by Geographic Region/Country (includes corresponding Graph/Chart)

Table 12. Global Market for Automotive Lights by Segment (2017): Percentage Breakdown of Value Sales for Fog Lamps/ DRLs, Head Lamps/ Front Lamps, Interior Lights, Rear Lights and Side Lights (includes corresponding Graph/Chart)

Increasing Focus on Energy Efficient Building Technologies Augurs Well for the Market Recovery in Global Construction Activity Strengthen Market Demand in the Near Term
Increasing Demand for Large Screen TVs to Boost Demand in Backlighting Application
Developing Asian Countries: Spearheading Growth for COB LED Backlighting
Rising Popularity of Lighter, Slimmer and Brighter Display Monitors Drives Demand in the Medical Sector

4. GLOBAL LEDS MARKET: A MACRO PERSPECTIVE

Backlighting for Large Area Displays: The Traditional Application Area for LEDs

LED Lighting: The Future of General Lighting

Change in Focus of LED Applications

Noteworthy Trends for the LED Market in 2016

Penetration of Flip Chip LEDs into LED TV Market to Increase

LED to Continue Replacing Traditional Lighting Solutions

Use of LED Lights in Automotive Applications to Increase

Focus on Non-Visible LED Applications to Increase
Market Growth to Slow Down in the Near Term Due to Oversupply
Sharp Decline in Unit Prices to Come to a Halt
SMEs Take the Exit Route
New LED Policies and Business Models to Emerge in China
LED and Other Lighting Technologies: A Comparison
Favorable Government Policies Promote LED Lighting Adoption
Major Lighting Policies Worldwide Promoting Penetration of LEDs
Key Challenges Confronting LED Lighting in the Near Term
High Price Continues to be a Major Drawback
Longer Lifespan of LEDs to Reduce Replacement Market Demand
Efficiency Improvement Requirements
Quality and Reliability Concerns
Lack of Consumer Awareness
LED Makers Consolidate to Remain Profitable in an Oversupplied Market
Lighting: A Tough Market for LED Makers

5. PRODUCT OVERVIEW

Chip-on-Board LED Technology: A Prelude
COB LED Package Manufacturing Process
COB LEDs: Application Areas
Automotive Lighting Applications of COB LEDs
General Illumination Applications of COB LEDs
Hospitality
Architectural
Outdoor Lighting
Residential Lighting
Industrial Lighting
Office Space Lighting
Retail Lighting
Other Applications
DIP, SMD, COB and MCOB LEDs: A Comparison
Dual In-Line Package (DIP) LED
Surface Mounted Device (SMD) Chips
Chips-on-Board (COB) Technology
Multiple Chip-on-Board (MCOB) Technology

6. COMPETITIVE LANDSCAPE

COB LEDs Market – A Highly Fragmented Market

Table 13. Leading Packaged LED Companies Worldwide (2018): Percentage Market Share Breakdown for Cree, LG Innotek, Lumileds, Nichia, Osram, Samsung, Seoul Semiconductor, and Others (includes corresponding Graph/Chart)

Table 14. Leading LED Luminaire Companies Worldwide (2018): Percentage Market Share for Acuity Brands, Osram, Philips, Cree, and Others (includes corresponding Graph/Chart)

Select Leading Commercial COB LED Arrays by Major Manufacturers

Vero and ES Rectangle Array Series by Bridgelux

ZC Series by Seoul Semiconductor

XLamp CXA by Cree

Zenigata by Sharp

Zhaga Consortium Standardizes COB Modules

6.1 Focus on Select Global Players

Acuity Brands Lighting, Inc. (USA)

Bridgelux, Inc. (USA)

Citizen Electronics Co., Ltd. (Japan)

Cree, Inc. (USA)

Everlight Electronics Co., Ltd. (Taiwan)

Excelitas Technologies Corp. (USA)

General Electric Company (USA)

Havells India Limited (India)

LEDVANCE GmbH (Germany)

Leiso Lighting (Dongguan) Tech. Limited (China)

Lextar Electronics Corporation (Taiwan)

LG Innotek (South Korea)

Lumagine, LLC (USA)

Lumileds Holding B. V (Netherlands)

Luminous Devices, Inc. (USA)

Nichia Corporation (Japan)

Osram Licht AG (Germany)

ProPhotonix Limited (USA)

Samsung Electronics Co., Ltd. (South Korea)

Seoul Semiconductor Co., Ltd. (South Korea)

Sharp Corporation (Japan)
Signify N. V. (The Netherlands)
Zumtobel Group AG (Austria)
Tridonic GmbH & Co KG (Austria)
6.2 COB LEDs Innovations/Introductions
Cree Launches XLamp eTone LEDs
Luminus Devices Releases Horticulture COBs with 14mm and 22mm LES
Lextar to Release Micro LED Chip Technologies
LG Innotek Releases Eye-Pleasing (EP) LED
Clore Introduces LNC2251 1500 Lumen COB LED Flood Light
Nichia Introduces Discrete Color Options in Direct Mountable Chip Series
Osram Unveils Oslon Pure 1010 Prototype
Lumileds Introduces LUXEON CoB Core Range
Luminus Devices Unveils Fourth Generation Chip-On-Board LED Technology (Gen 4)
Excelitas Introduces New APOLED Customizable Single-Chip LED Package
Cree Announces New XLamp CMA High Current LED Arrays
Lumileds Introduces Three New Products to its LUXEON SunPlus Series
Osram Introduces Oslux LED for Mobile Devices
Lumileds Adds Three New Products to its LUXEON CoB Core Range
Lumileds Introduces LUXEON CoB Core Range – High Density Products
SiliconCore Launches LISA (LED In Silicon Array) Platform
6.3 Recent Industry Activity
Philips Lighting Changes Names to Signify
OSRAM Divests LEDVANCE to Chinese Investment Consortium
FOVE Partners with Osram for Tiny ChipLEDs
Seoul Semiconductor Starts Mass Production of its LED COB Package

7. GLOBAL MARKET PERSPECTIVE

Table 15. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 16. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/ Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with

Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 17. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Analysis by Application

Table 18. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Automotive Sector by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 19. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Automotive Sector by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 20. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Automotive Sector by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 21. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Automotive Sector by Application - Head Lamp, Interior Lighting, Rear Light and Others Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 22. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Automotive Sector by Application - Head Lamp, Interior Lighting, Rear Light and Others Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 23. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Automotive Sector by Application - Head Lamp, Interior Lighting, Rear Light and Others Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 24. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Automotive Head Lamp by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 25. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Automotive Head Lamp by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 26. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Automotive Head Lamp by Geographic Region/Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 27. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Automotive Interior Lighting by Geographic Region/ Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 28. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Automotive Interior Lighting by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 29. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Automotive Interior Lighting by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 30. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Automotive Rear Lighting by Geographic Region/ Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 31. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Automotive Rear Lighting by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 32. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Automotive Rear Lighting by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 33. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Other Automotive Lighting Applications by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 34. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Other Automotive Lighting Applications by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 35. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Other Automotive Lighting Applications by Geographic Region/Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 36. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Illumination Sector by Geographic Region/Country - US, Canada,

Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 37. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Illumination Sector by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 38. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Illumination Sector by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 39. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Illumination Sector by Application - Architectural, Hospitality, Outdoor Lighting, Residential and Others Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 40. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Illumination Sector by Application - Architectural, Hospitality, Outdoor Lighting, Residential and Others Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 41. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Illumination Sector by Application - Architectural, Hospitality, Outdoor Lighting, Residential and Others Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 42. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Architectural Illumination by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 43. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in

Architectural Illumination by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 44. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Architectural Illumination by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 45. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Hospitality Illumination by Geographic Region/ Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 46. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Hospitality Illumination by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 47. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Hospitality Illumination by Geographic Region/Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 48. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Outdoor Lighting by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 49. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Outdoor Lighting by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011

through 2015 (includes corresponding Graph/Chart)

Table 50. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Outdoor Lighting by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 51. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Residential Illumination by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 52. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Residential Illumination by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 53. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Residential Illumination by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 54. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Other Illumination Applications by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 55. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Other Illumination Applications by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 56. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in

Other Illumination Applications by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Table 57. World Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes in Other Applications by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 58. World Historic Review for Chip-on-Board (COB) Light Emitting Diodes in Other Applications by Geographic Region/Country - US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 59. World 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes in Other Applications by Geographic Region/ Country - Percentage Breakdown of Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), Middle East & Africa and Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8. REGIONAL MARKET PERSPECTIVE

8.1 The United States

A. Market Analysis

Increasing Adoption of LED Lighting Bodes Well for COB LEDs Penetration
Recovery in Automobiles Production to Drive COB LEDs Market Growth

Table 60. US Automotive Market (2014-2017): Breakdown of Production for Passenger Cars and Commercial Vehicles in Thousand (includes corresponding Graph/Chart)

Rising Penetration of LED Outdoor Lighting Benefits COB LED Lighting Demand
Electric Street Lighting Technologies in the US
Steady Recovery in Residential and Non-Residential Construction Bodes Well for COB LEDs

Table 61. Residential Construction in the US (2008-2019F): Number of Housing Starts by Type - Single-Family Units and Multi-Family Units (in '000) (includes corresponding Graph/Chart)

Table 62. Projected Growth (%) of the US Construction Market over the Period 2016-2024 by Sector (includes corresponding Graph/Chart)

Table 63. US Non-Residential Construction Market by Segment (2017): Percentage Share Breakdown of Investments for Commercial & Office, Industrial & Others, and Institutional (includes corresponding Graph/Chart)

Table 64. US Private Non-Residential Construction Market by Sector (2017): Percentage Share Breakdown of Construction Spend for Commercial, Communication, Education, Healthcare, Lodging, Manufacturing, Office, Power, and Others (includes corresponding Graph/Chart)

US Lighting Industry Trends

US Lighting Market: A Macro Perspective

Table 65. Efficient Alternatives to Incandescent Bulbs

Lighting Moving Beyond the Functional Aspect

US Consumer Choice Skewed towards Imported Lighting Products

Regulations Governing Lighting Manufacture and Disposal

B. Market Analytics

Table 66. The US Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 67. The US Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and

Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 68. The US 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.2 Canada

A. Market Analysis

COB LED Demand to Benefit from Recovery in the Housing Market

Table 69. Housing Starts (in Thousand Units) in Canada for the Years 2010 through 2017 (includes corresponding Graph/Chart)

Table 70. Canadian Non-Residential Construction Sector's Capital Expenditure in US\$ Billion: 2010-2017 (includes corresponding Graph/Chart)

B. Market Analytics

Table 71. Canadian Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 72. Canadian Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 73. Canadian 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality,

Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.3 Japan

A. Market Analysis

LEDs Fast Penetrate the Japanese Lighting Market, Make Way for COB LEDs
Construction Market Impacts COB LED Sales

Table 74. Housing Starts (in Thousand Units) in Japan for the Years 2010 through 2017 (includes corresponding Graph/Chart)

Tsunami & Earthquake Help Spur Construction Activity in the Country
Lighting Companies in Japan Strategize to Differentiate as LED Penetration Reaches 100%

B. Market Analytics

Table 75. Japanese Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 76. Japanese Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 77. Japanese 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4 Europe

A. Market Analysis

Europe Offers Strong Potential for Growth of COB LEDs
Recovery in Construction Activity to Drive Steady Growth in Demand

Table 78. Construction Industry in Europe (2014-2018): Percentage Change in Construction Output for Major Countries (includes corresponding Graph/Chart)

Bright Future for LED Street Lightings in Europe
Central and Eastern Europe: The New Focus Area for Market Growth
B. Market Analytics

Table 79. European Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - France, Germany, Italy, UK, Spain, Russia and Rest of Europe Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 80. European Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - France, Germany, Italy, UK, Spain, Russia and Rest of Europe Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 81. European 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/ Country - Percentage Breakdown of Revenues for France, Germany, Italy, UK, Spain, Russia and Rest of Europe Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Analysis by Application

Table 82. European Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 83. European Historic Review for Chip-on-Board (COB) Light Emitting Diodes by

Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 84. European 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.1 France

A. Market Analysis

COB LED Market to Accelerate in France as LED Penetrates

B. Market Analytics

Table 85. French Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 86. French Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 87. French 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.2 Germany

A. Market Analysis

Resurgence in Construction Activity Promotes Market Growth in Germany

Table 88. Number of New Buildings Constructed in Germany: 2013-2017 (includes corresponding Graph/Chart)

B. Market Analytics

Table 89. German Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 90. German Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 91. German 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.3 Italy

Market Analysis

Table 92. Italian Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 93. Italian Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 94. Italian 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.4 The United Kingdom

A. Market Analysis

UK Phase-out of Energy Inefficient Lamps Augurs Well for COB LED Lighting

B. Market Analytics

Table 95. The UK Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 96. The UK Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 97. The UK 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.5 Spain Market Analysis

Table 98. Spanish Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 99. Spanish Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 100. Spanish 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.6 Russia

A. Market Analysis

Booming Infrastructure Environment: A Major Growth Driver for Efficient Lighting Systems

Major Characteristics of the Russian Lighting Market

Cheap Chinese Imports Poses a Major Concern

B. Market Analytics

Table 101. Russian Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 102. Russian Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 103. Russian 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.4.7 Rest of Europe Market Analysis

Table 104. Rest of Europe Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 105. Rest of Europe Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 106. Rest of Europe 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive,

Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.5 Asia-Pacific

A. Market Analysis

Asia-Pacific: The Power House of LED Materials and Manufacture

The Fastest Growing COB LEDs Market Worldwide

Growing Construction Spending and Urban Population: Important Opportunity Indicators

Table 107. Projected Growth in the Asian Construction Market by Region and Sector (2014-2020) (includes corresponding Graph/Chart)

Table 108. Urban Population in Major Countries in Asia-Pacific (in Thousand): 2018 & 2025 (includes corresponding Graph/Chart)

B. Market Analytics

Table 109. Asia-Pacific Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - China, India and Rest of Asia-Pacific Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 110. Asia-Pacific Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - China, India and Rest of Asia-Pacific Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 111. Asia-Pacific 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - Percentage Breakdown of Revenues for China, India and Rest of Asia-Pacific Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Analysis by Application

Table 112. Asia-Pacific Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting,

Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 113. Asia-Pacific Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 114. Asia-Pacific 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.5.1 China

A. Market Analysis

China: The Largest LED Producer Worldwide

An Overview of the Chinese Lighting Market

The Global Lighting Production Hub

China Announces the Schedule for Incandescent Bulb Phase Out

Scheduled Phase Out of Incandescent Lamps in China

B. Market Analytics

Table 115. Chinese Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 116. Chinese Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 117. Chinese 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive,

Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.5.2 India

A. Market Analysis

LED Technology: A Key Solution for Curbing Energy Demand, Benefits Market Prospects

Incandescent Bulbs Sustain Leadership Position in India, for the Present

Rapid Urbanization and Rising Affluence Drive Demand for Higher Priced and Designer Luminaires

Table 118. Urbanization in India (2010-2018): Urban Population as a Percentage of Total Population (includes corresponding Graph/Chart)

Table 119. Percentage Share Breakdown of Indian Households by Income Group (2015 & 2025) (includes corresponding Graph/Chart)

Increasing Residential Construction Drive Market Demand

Spurt in Residential and Commercial Construction in Tier-2 and Tier-3 Cities

Indian Market for Street Lights: LEDs taking over from HIDs

Key advantages of LED Lighting in Street Lights

B. Market Analytics

Table 120. Indian Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 121. Indian Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 122. Indian 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.5.3 Rest of Asia-Pacific Market Analysis

Table 123. Rest of Asia-Pacific Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 124. Rest of Asia-Pacific Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 125. Rest of Asia-Pacific 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.6 Middle East & Africa Market Analysis

Table 126. Middle East & Africa Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 127. Middle East & Africa Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 128. Middle East & Africa 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural,

Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.7 Latin America

A. Market Analysis

Growing Construction Activity in Latin America to Drive Market Expansion

B. Market Analytics

Table 129. Latin American Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - Brazil and Rest of Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 130. Latin American Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/Country - Brazil and Rest of Latin America Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 131. Latin American 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Geographic Region/ Country - Percentage Breakdown of Revenues for Brazil and Rest of Latin America Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

Analysis by Application

Table 132. Latin American Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 133. Latin American Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 134. Latin American 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive (Head Lamp, Interior Lighting, Rear Light and Others), Illumination (Architectural, Hospitality, Outdoor Lighting, Residential and Others) and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.7.1 Brazil Market Analysis

Table 135. Brazilian Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 136. Brazilian Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 137. Brazilian 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

8.7.2 Rest of Latin America Market Analysis

Table 138. Rest of Latin America Recent Past, Current & Future Analysis for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2016 through 2024 (includes corresponding Graph/Chart)

Table 139. Rest of Latin America Historic Review for Chip-on-Board (COB) Light Emitting Diodes by Application - Automotive, Illumination and Other Application Markets Independently Analyzed with Annual Revenues in US\$ Thousand for Years 2011 through 2015 (includes corresponding Graph/Chart)

Table 140. Rest of Latin America 14-Year Perspective for Chip-on-Board (COB) Light Emitting Diodes by Application - Percentage Breakdown of Revenues for Automotive, Illumination and Other Application Markets for Years 2011, 2018 and 2024 (includes corresponding Graph/Chart)

9. COMPANY PROFILES

Total Companies Profiled: 55 (including Divisions/Subsidiaries - 58)

The United States (18)

Japan (4)

Europe (11)

Germany (4)

The United Kingdom (1)

Italy (1)

Rest of Europe (5)

Asia-Pacific (Excluding Japan) (25)

I would like to order

Product name: Chip-On-Board Light Emitting Diodes (COB LEDs): Market Research Report

Product link: <https://marketpublishers.com/r/CFBF3DEAC6BEN.html>

Price: US\$ 5,600.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/CFBF3DEAC6BEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:
Last name:
Email:
Company:
Address:
City:
Zip code:
Country:
Tel:
Fax:
Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970