

ElectroniCast Consultants



Asia Pacific Market Forecast

Solid-State Lighting (SSL) General Lighting LED Lamp Consumption Market Forecast (2010-2015)

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Asia Pacific Market Review and Forecast This report, by ElectroniCast Consultants, provides the research findings of our study of the Asia Pacific (APAC) consumption of Light Emitting Diode (LED) lamps (also known as “consumer-level bulbs”), which are used in luminaires in stationary/fixed location (non-vehicle/non-portable) solid-state lighting (SSL) General Lighting applications. The lamps are used in new construction, as well as retrofitting/replacement of existing (installed-based) lamps.

General Lighting provides the main illumination of an area. In this study, we provide a market review for the year 2010 plus our forecast and analysis (2011-2015) of LED lamps used for general lighting, including interior and exterior decorative and functional lighting for residential, commercial and government areas.

For the purposes of this study, ElectroniCast Consultants includes Directional Lighting, Supplementary Lighting, Street Lighting and Architectural Lighting in the General Lighting category.

LEDs are used in both functional and decorative light fixtures, with an advantage of energy savings. Compared to incandescent lighting, LED-based solid-state lighting (SSL) delivers visible light with reduced heat. In addition, its solid-state nature provides for greater resistance to shock, vibration, and wear, thereby significantly increasing its lifespan.

LED Level Quantified in the ElectroniCast Study Below, are five levels (or “food chain”) pertaining to the LED marketplace. For the purposes of this ElectroniCast study, we quantify and provide a market forecast for “Level 3”

Level 1 - The chip or die

Level 2 - The Packaged LED

Level 3 – Lamp (Consumer-Level Bulb, Globe, Linear Tube, Panel)

Level 4 - Luminaire (light fixture/lamp holder/fitting)

The following segments quantify the Asia Pacific region:

- People's Republic of China (PRC)
- Japan
- Republic of Korea
- Rest of Asia Pacific

This report provides the 2010 market data review and 2011-2015 forecast by the following functions:

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

The value is determined by multiplying the number of units (lamps) by the average selling price (ASP) in US Dollars. The ASPs are not retail prices; the prices are based on the price of the LED lamp at the initial factory level (prior to FOB – Free On Board). The value is then based on the end-use application in the each country or sub-region in the Asia Pacific region.

This study is based on analysis of information obtained continually over the past nine years, but updated through middle of August 2011.

During the market research process, ElectroniCast analysts performed interviews with authoritative and representative individuals in the LED and lighting industry, plus – R&D and factory/manufacturing, from the standpoint of both suppliers and users of LED and lighting illumination products.

Forecast Lighting Demand Growth Based on primary research (interviews and evaluations) with engineers and product planners, ElectroniCast Consultants can see ideas and then (eventually) concepts about 3-7 years before innovation solutions (products) are announced in the public domain. Once we feel confident that these ideas and concepts will become innovative solutions (new products), we set anticipated usage into the market forecast. Therefore, as we are looking as several years, many of the future products may not even be at the idea-stage yet. ElectroniCast Consultants, in effect, forecast lighting demand growth, which will drive demand for increased capability/capacity LEDs; therefore, we have expertise of what to look for. We help our clients find the next window of opportunity.

Market Forecast Product Categories This market forecast of the Asia Pacific region consumption is presented for five major lamp-type categories. The lamp categories, in turn, may have multiple sub-categories, which are determined by physical size of the lamp.

Note: Lower-level products, which are indented in the list shown in Table 1, are summed-up to the higher-level product category stated above it.

Table 1
ElectroniCast Market Forecast Data Base Hierachy Structure
LED Lamp Product Category List

Parabolic aluminized reflector (PAR)

PAR16
PAR20
PAR30
PAR38
PAR56
PAR64
PAR-Types: Other (Miscellaneous) Sizes

General Service & Decorative: Globe, Other (Candle, Fancy, Other)

Multifaceted reflector (MR) Compatible

MR16
MR11 / Other MR

Linear / Tube

< 1200mm
> 1200mm

Street / Parking-lot / Campus / Similar (Parks, Walkways)

Increasingly, the automatic assembly and test manufacturing process for LED solid-state lighting products allow for mass-production capability. In addition, over the next few years, the average selling prices of the SSL general lighting products will be driven lower, as a result of production efficiencies, yield improvements (aided by quality controls), competition (both market competition and technology competition), marketing/sales distribution improvements, and other factors.

Market Opportunity Analysis – Market Dynamics The study process by ElectroniCast Consultants takes into account the following points:

- Standards (including general regulations & standards, environmental issues, etc.)
- Policies and schemes for promoting the penetration of LED lighting
- Industry trends in LED lighting fixtures
- Distribution Channel (Electronics stores, other stores, Web-based, other)
- LED Lighting industry competitive environment

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