Demand for MOCVD precursor set to double as LED market booms

Global demand for precursor, a material used in manufacturing of light-emitting diodes (LEDs), is set to more than double from 2012 to 2016, as the market for LED lighting booms, according to a new LED material report on MOCVD Precursor, published by IHS (NYSE: IHS).

The market for precursor used in the metal-organic chemical vapor deposition (MOCVD) manufacturing process for making LEDs is set to rise to 69 tons in 2016, up 114 percent from 32 tons in 2012. It is expected to amount to 48.6 tons in 2013.

According to the report, the boom in the precursor market reflects the rising operating rate of MOCVD as the LED lighting market grows.

Precursor is a core material that ensures the optimal light efficiency for each LED epi layer. It is used in the MOCVD process, which is the most important process in manufacturing LED chips. Major precursors include trimethylgallium (TMGa), trimethyl indium (TMIn), trimethyl aluminum (TMA), triethylgallium (TEGa) and bis(cyclopentadienyl) magnesium (Cp2Mg).

The largest buyers of MOCVD equipment—South Korea, Taiwan and China—account for about 80% of the global demand of precursors. China, which is generating the highest growth in installation of MOCVD equipment among the three countries, is expected to account for 45% of the global demand of precursors in 2016.

In the nascent stage of the LED market, Dow Chemical Co. was the unrivaled leader in the precursor market. However, with the recent growth in precursor demand, new players have been investing in R&D and manufacturing facilities and aggressively breaking into the market with low prices for similar quality. This will intensify competition further among precursor makers. Major suppliers include Dow Chemical, SAFC (Sigma-Aldrich), and Akzo Nobel N.V. The increasing competition will be positive news to LED chip makers, as they will be able to enjoy lower prices, while this will obviously deteriorate profits of the precursor suppliers in the long run.

This report provides a thorough analysis on the LED MOCVD precursor market, which is experiencing growing demands and increasing competition, driven by the growth of the LED lighting market. It also analyzes the markets for different kinds of precursors by region and major LED chip makers.
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