

SiAlON phosphors ‘ALONBRIGHT’ for white LED module are put on the market

Denki Kagaku Kogyo (DENKA) launched SiAlON phosphors named ALONBRIGHT for white LED module in the market since last autumn.

DENKA was licensed to manufacture the phosphors by National Institute for Materials Science (NIMS) which has the basic patents, and succeeded in the mass production applying the nitride synthesis technique which has been the core technology of DENKA. The total sales of the first year are amounted to be more than \$20M.

Energy reduction and elimination of pollutants are global trend even in the home appliances. One of the examples is the replacement of Cold Cathode Fluorescent Lamp (CCFL) with Light Emitting Diode (LED) for the backlighting of Liquid Crystal Display (LCD) which is applied to the Flat Panel Television. This replacement may contribute to the drastic reduction of the total power consumption and the mercury removal.

Brightness is an important factor of white LED module used in LCD TV to improve the visual quality. High power loading for brightness brings heat up of the module with conventional phosphors resulting in the decrease of intensity and color shift. On the contrary, LED modules with SiAlON phosphor are less influenced by temperature in the luminescence intensity and color deviation. These characteristics help the heat management of LED back lighting LCD, and LCD television keeps the visual quality at the high power operation.

Our target is the de facto standardization of SiAlON in the phosphors for back lighting LED.

In the course of the development of the phosphor for back lighting application, SHARP Ltd, R&D Div. has made collaboration with DENKA to improve the LCD televisions.

DENKA has grand planning to prepare a variety of phosphors for LCD televisions improving color control technique obtained through the collaboration with NIMS. LED lighting is also our important market and some of phosphors are developed for this expanding market.

DENKA has a new strategy to provide many kinds of products in the LED market. Apart from phosphors, thermal conductive plates (HITT PLATE developed for PC motherboard and AGSP developed for package plate), thermal conductive sheet and spacer, thermal conductive adhesives, MMC (Metal Matrix Composite) wafer for high power LED, and ceramic parts for MO-CVD equipment are developed and provided on demands of the customers.

DENKA will present appropriate solutions to meet a variety of demands in the expanding LED market.

[Inquiry]

Nihonbashi Mitsui Tower, 2-1-1, Nihonbashi-Muromachi, Chuo-ku, Tokyo 103-8338, JAPAN

Denki Kagaku Kogyo Kabushikikaisha, Electronic Components, Electronic Materials Division,
Mr. Sakawa,

TEL+81-3-5290-5542, FAX+81-3-5290-5289