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Isiphor® BOSE

Dear Sir or Madam,

Merck KGaA and its affiliates are actively pursuing research work on the development of new materials to serve our customers with the best available products for use in their application. Our products are patent protected, if applicable. In view of these efforts Merck is clearly in a position to defend the exclusivity of its products and on the other hand to respect the existence of third party patent rights.

Our Isiphor® BOSE materials for example are produced according to the patent family around DE 10 2005 051 063 A.

To avoid conflicts with third party patents, we perform thorough "freedom to operate" analyses for our products prior to market introduction. According to our analysis Isiphor® BOSE as material is not embraced by any granted, valid third party patents.

As there are many patents protecting applications of phosphor materials in LEDs and even more patents protecting special LEDs with specific device layout or material combinations, we recommend that our customers carry out an own analysis to determine the patent situation for their application. Especially, we would like to mention the patent family based on Austrian patent application AT 21542000, with issued patents in several countries, such as US 6,943,380. It is our understanding that our Isiphor® BOSE materials would fit into the description of earth alkali ortho silicate materials acc. to these patents and therefore the application of this material in white light LED's based on a blue- or UV-emitting diode might require a license under these patents.



As mentioned before, we therefore would like to encourage our customers to perform an own patent evaluation.

Merck KGaA

Dr. Kunkel

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