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Investigation of high energy efficiency of white LEDs JUNHO JEONG, Sengban Patent & Science Laboratory, Albany, NY 12205, HO-KI JEONG, Sengban Patent & Science Laboratory, 432-22 Namyedong, Ulsan, Korean — White LEDs with high energy efficiency on the single chip emitting blue light Since the white LEDs with UV light source made on the single chip emit a little of UV light, it produces physical mutagens and heat that reduces energy efficiency. In order to solve these problems, the white LEDs on single chip emitting blue light has been researched by using the law of the energy conservation related to electron scattering. Because blue wavelength, which passes through phosphors or p-n junctions, is converted to orange, yellow or red wavelengths without e-h direct recombination, energy loss is very low. And we have researched how to fabricate white LEDs high current (more than 1.0 A) and voltage as heat loss of conventional white LEDs.

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