

First-ever commercialized OLED made exclusively from phosphorescent OLED materials

OLED Lighting

Features

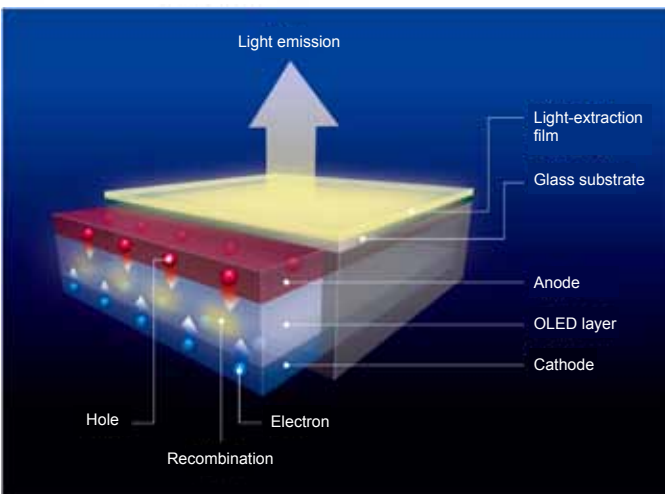
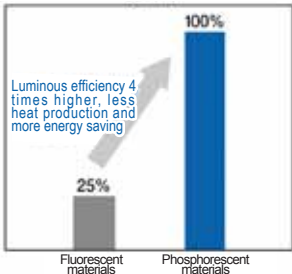
- High energy efficiency (the theoretical luminous efficiency of phosphorescent OLED materials is 4 times higher than that of conventional fluorescent materials)
- Low heat generation
- Mercury-free

Overview

(Technical principles, actions, etc.)

Konica Minolta has developed "light technologies" for photography, the company's main business area since its foundation. Currently, Konica Minolta is engaged in business areas including information technology, optics, diagnostic imaging and measuring instruments, taking full advantage of its 4 core technologies in "materials," "optics," "nano fabrication" and "imaging." Backed by its expertise in "light technologies," Konica Minolta takes a new step into the world of lighting with its "OLED lighting." The thin and lightweight area light source of OLED lighting is also high in energy efficiency, cool in operation and mercury-free –features which Konica Minolta regards as ideal for an environmentally-friendly, next-generation lighting solution. The key to high-efficiency OLED lighting is said to be phosphorescent OLED materials, which have a theoretical luminous efficiency 4 times higher than conventional fluorescent OLED materials. Konica Minolta has successfully developed proprietary blue phosphorescent OLED materials, and commercialized the world's first OLED made exclusively from phosphorescent OLED materials.

Comparison of luminous efficiencies of luminescent materials (theoretical values)

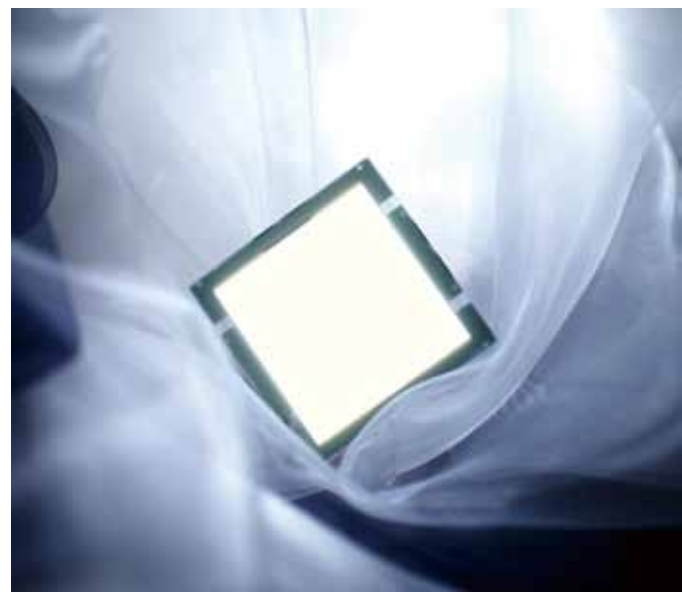


Effects

Although OLED is being developed in many different fields, its core light emitting element derives from either of two types of materials – "fluorescent materials" that have already been in actual use in mobile phone displays, etc., or "phosphorescent materials" used in OLED lighting devices by Konica Minolta.

The luminous efficiencies of the two types of materials are quite different. The luminous efficiency of fluorescent materials is 25%, whereas that of phosphorescent materials is 100% (both are theoretical values). A higher luminous efficiency leads to device advantages such as less heat production and more energy saving.

This means that phosphorescent materials are essentially ideal for lighting and displays.



UniversalPHOLED™ Phosphorescent OLED Technology from Universal Display Corporation.

Applicable field
Lighting fixtures, light objects, decorative lights
Lighting fixtures, interior lights for vehicles and planes

Water	Energy saving/Energy recovery	ENERGY	New energy	Waste disposal/Recycling/Resource saving	Air	Soil	Other
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*Note: This publication introduces examples of technologies and products believed useful towards solving environmental and energy issues. In no way does it constitute guarantees concerning their transfer or sale.