

INTEMATIX INTELLECTUAL PROPERTY

About Our LED Phosphor Patents

Intematix Intellectual Property Leadership



Patent Statistics

- Over 180 issued patents worldwide
- Over 290 pending patent applications
- More than 100 issued US patents
- Filed in all major markets including: The United States, Korea, Japan, Taiwan, China, and Europe
- Patents cover compositions and LED applications

Product & Technology Families

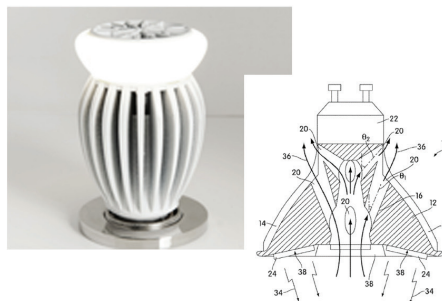
- **Phosphor Materials:** Composition; White Conversion Applications; and Phosphor Delivery Solutions
- **Lighting, Display & Phosphor Applications:** Lighting and Display Systems
- **Other:** Various technology, not directly related to phosphor solutions for LED lighting systems

Intematix's extensive Intellectual Property (IP) portfolio gives us competitive advantages in all of our product and application areas. Intematix IP includes key phosphor material compositions, including GAL, red nitrides, NYAG and silicate phosphors, and LED applications. Moreover, we are committed to continuously increase the strength of our patent portfolio by investing in research and development dedicated to advancing phosphor materials, new innovative delivery systems, including remote phosphor and phosphor pastes, quantum dots and other important lighting materials, components, systems and applications. Our expertise includes: luminescent materials, light and color mixing, LED lighting assemblies and optics, displays and signs.

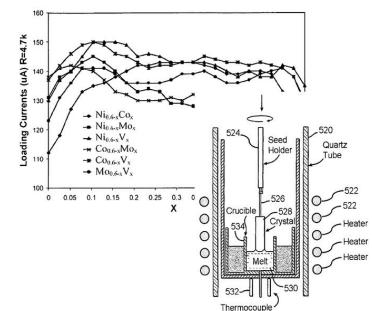
Phosphor Materials



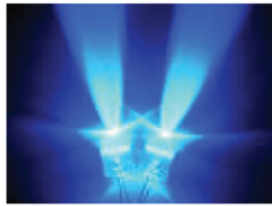
Lighting, Display & Phosphor Applications



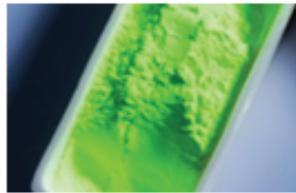
Other



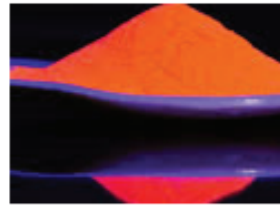
White Conversion IP



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Any
Blue LED

GAL
phosphor

XR
phosphor

**Intematix
Patent
Protected!**

- **Intematix Patent Protected**
- **Enhanced Indemnification Protection**

Key Intematix US Patent Collection: Phosphor Materials

Category	Number	Title
Phosphor Material	8,679,367	Green-Emitting (oxy)Nitride-Based Phosphors and Light-Emitting Device Using the Same
Phosphor Material	8,663,502	Red-Emitting Nitride-Based Phosphors
Phosphor Material	8,597,545	Red-Emitting Nitride-Based Calcium-Stabilized Phosphors
Phosphor Material	8,529,791	Green-Emitting, Garnet-Based Phosphors in General and Backlighting Applications
Phosphor Material	8,475,683	Yellow-Green to Yellow-Emitting Phosphors Based on Halogenated Aluminates
Phosphor Material	8,274,215	Nitride-Based Red-Emitting Phosphors in RGB Lighting Systems

About Intematix

Intematix develops essential phosphor materials to drive the LED lighting revolution. The company's comprehensive range of products and solutions can be used to build foundations for the world's LED lighting products and systems including general lighting, displays, automotive and many others. A broad selection of products and innovative delivery systems accelerate time-to-market, improve light quality and efficacy and reduce costs. For more information, please visit www.intematix.com.

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