

**Supporting Information: Thermally robust $\text{Al}_2\text{O}_3\text{-La}_3\text{Si}_6\text{N}_{11}\text{:Ce}^{3+}$
composite phosphor-in-glass (PiG) films for high-power and
brightness laser-driven lighting**

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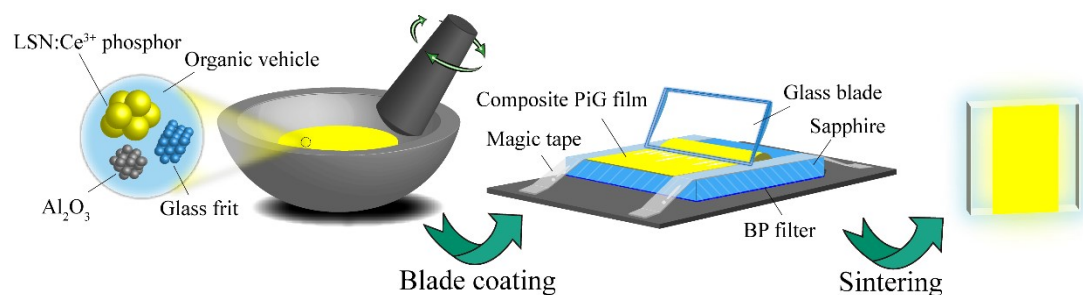


Figure S1 Fabrication of the $\text{Al}_2\text{O}_3\text{-LSN:Ce}^{3+}$ composite PiG film on a 1DPC-coated sapphire substrate.

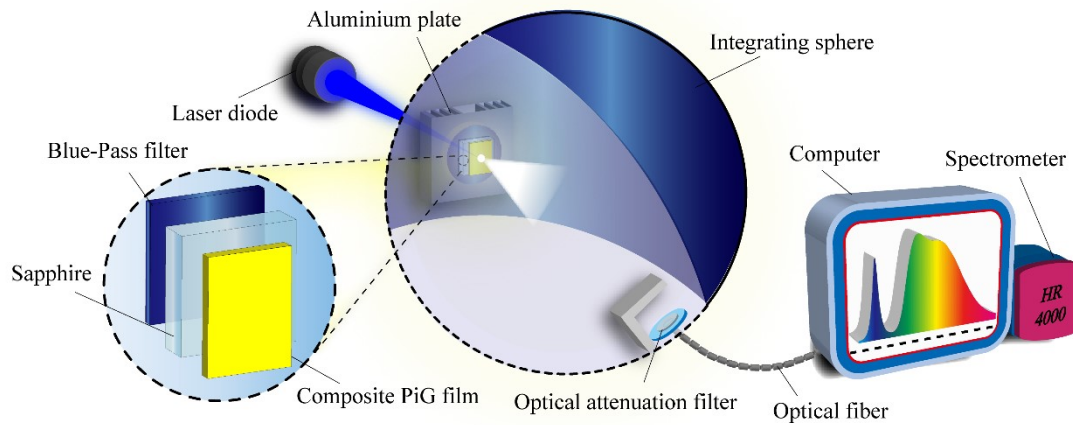


Figure S2 Schematics of measuring the optical properties of laser-driven white light in a transmissive configuration.

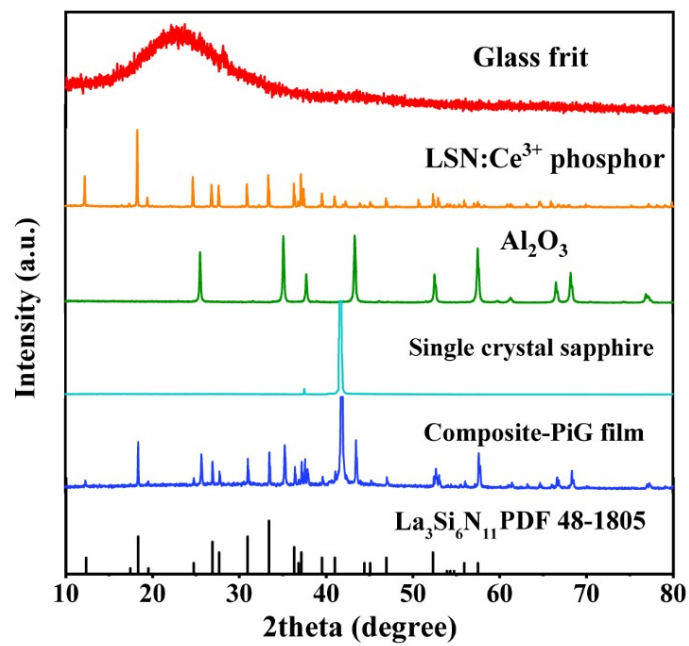


Figure S3. XRD patterns of glass frits, LSN:Ce³⁺, Al₂O₃ particles, single crystal sapphire, and the composite PiG film.

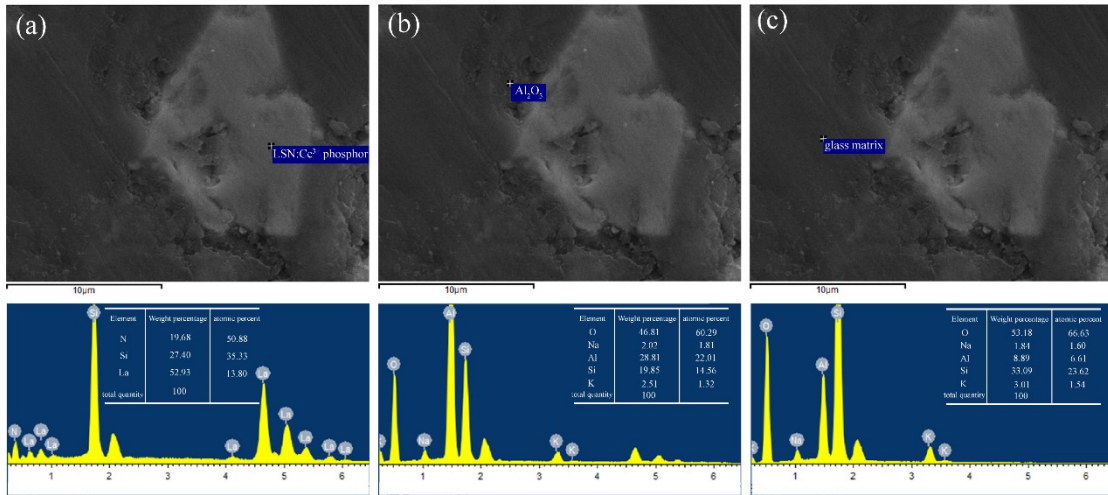


Figure S4 Elemental composition of LSN: Ce³⁺ phosphor particles quantified by the EDS.

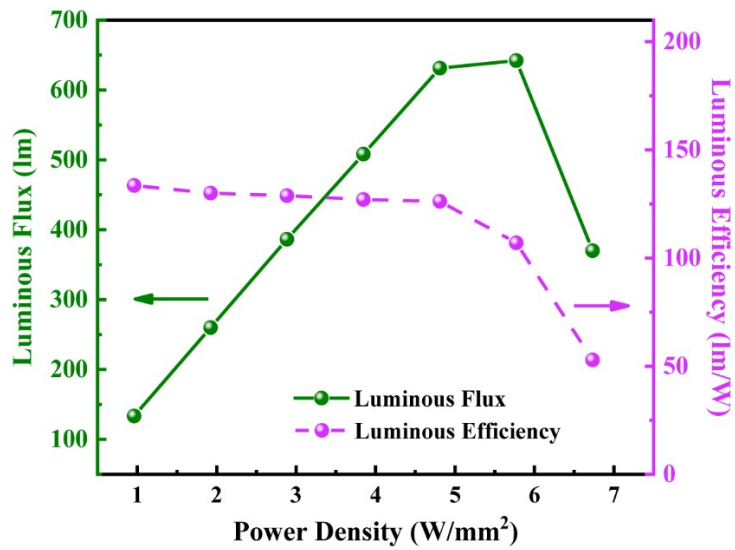


Figure S5 Luminous flux and luminous efficiency of the M3G2A5-50 sample.