

Demonstration of low-cost mass production of high-performance α -Ga₂O₃ power semiconductors (FLOSFIA INC.)



City	Year of Establishment	Founder	Website
Kyoto City	2011	Toshimi Hitora	https://flosfia.com

Partner VC	Latest round of Fundraising	Valuation
—	Series E	JPY 14,500 million

Contact Information :
 tel: 075-963-5202
 e-mail: info@flosfia.com

Website : <https://flosfia.com>

○ Business Plan

We will develop high-functionality and low-cost technology for power semiconductor devices using α -Ga₂O₃ (corundum-structured gallium oxide), a new material that demonstrates excellent performance specifically for power semiconductor applications, and by establishing mass production technology that achieves both high functionality and low cost and implementing it in society, we aim to reduce power conversion loss in a wide range of application fields, including electric vehicles, robots, power supplies, and inverters, and expand the market.

○ Research Outline

This R&D project will develop high-functionality and low-cost technology for power semiconductor devices using a new material α -Ga₂O₃, and solve issues through optimization of device structure and process, reliability evaluation, and customer feedback. By achieving the development items listed below, we aim to clear the important levels of "high functionality" and "low cost".

- (1) Small chip size device design and development
- (2) Low-cost process design and development
- (3) Larger wafer diameter
- (4) Chip miniaturization
- (5) Ensuring reliability

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Materials	DMP 2023~2025FY	JPY 300 million	—

As of February, 2024