

GaN Technology

Top-100 IP Profiles – December 2016

What are patent portfolio characteristics of the main companies and research laboratories involved in the GaN technology?



REPORT OUTLINE

- GaN Technology
- Top-100 IP profiles
- December 2016
- PDF file
- €1,990 (corporate license)
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KEY FEATURES OF THE REPORT

The report provides essential patent data for **top-100 IP players** involved in the **GaN technology**.

For each player, the report includes :

- **Time evolution** of patent publications
- Map of **granted patents** and **pending patent applications**
- Patent portfolio **segmentation**
- **Highly cited patents**
- Main **IP competitors** and main **IP collaborators**

OBJECTIVE OF THE REPORT

- Understand the **IP environment** of GaN technology
- Understand **IP strategy** of main players in GaN technology
- Identify **key patents**, **collaborations** and **competitors** of each player.

RELATED REPORTS

- [GaN Devices for Power Electronics Patent Investigation](#) (Knowmade, 2015)
- [GaN-on-Silicon Patent Investigation](#) (Knowmade, 2014)
- [GaN Substrate Patent Landscape](#) (Knowmade, 2014)
- [Power GaN 2016: Epitaxy and Devices, Applications, and Technology Trends](#) (Yole Développement, 2016)
- [GaN RF Devices Market: Applications, Players, Technology, and Substrates 2016-2022](#) (Yole Développement, 2016)

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Access to the portfolio analysis of the top-100 IP players in GaN technology

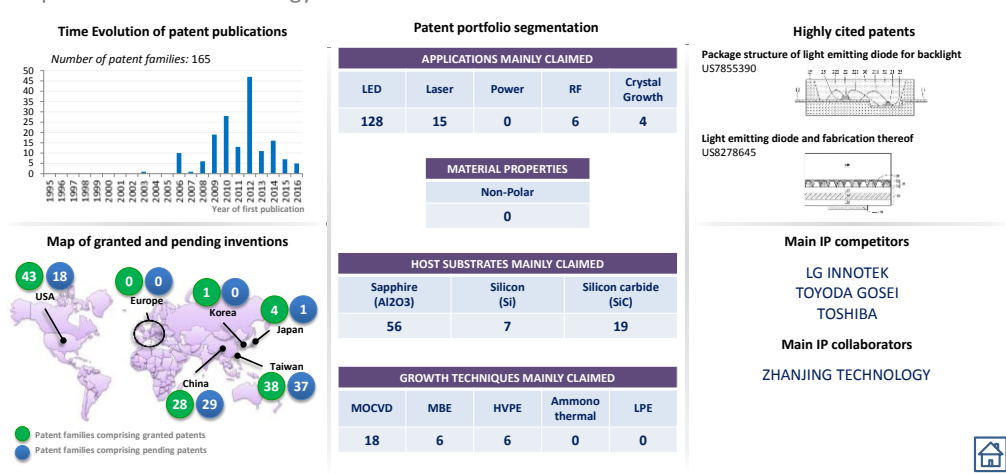
The field of III-N semiconductors has shown an intensive patenting activity since early 1990s, with a substantial increase during the past decade. Today, more than 76,200 patents and patent applications related to over 39,700 inventions on GaN technology have been published worldwide through November 2016. This fact is correlated with a rapid growth of the industrial activity related to GaN, mainly due to light-emitting diodes, but also to the emergence of lasers and high-power/high-frequency electronics. Moreover, the current diversification of GaN-related research activities is remarkable, ranging from advanced optical sources and single-electron devices to physical, chemical, and biological sensors, optical detectors, and energy converters. In this dynamic and large context, it is necessary to have a clear overview of main companies and research laboratories involved in this technology domain.

The report provides essential patent data for IP players related to GaN technology. It identifies 100 major patent holders involved in GaN technology, and its provides in a single slide the IP profile of each main patent holder including: time evolution of patent publications, geographic map of patenting activity, technical segments, highly cited patents, main IP competitors and IP collaborators.

Patent portfolio analysis: Example with AOT

ADVANCED OPTOELECTRONIC TECHNOLOGY

IP profile for GaN technology



Time evolution of patent publications shows the number of patent publications of the company between 1995 and 2016. The number of patent families related to GaN technology is also indicated. Moreover, for each country or geographical zone (USA, Europe, Korea, Japan, Taiwan and China), a mapping of patenting activity is presented. A patent portfolio segmentation is provided to understand the technologies claimed by each main assignee. This segmentation shows the number of patent families by application (LED, LASER, Power, RF and Crystal growth), growth substrate (Sapphire, Silicon, Silicon Carbide) and growth technique (MOCVD, MBE, HVPE, Ammonothermal and LPE). A selection of patents receiving a high number of citations is provided to identify quickly key technologies filed by each patent assignee. Main competitors have been selected for each IP player. This selection based on patent citations allows to identify companies with similar patented technologies. Furthermore, on the base on patent co-filings, reassignments and licenses, main IP collaborators have been identified. All this information available on a single slide for each player make easier the assessment of their IP situation in GaN field.

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