

FACT SHEET

CHINAPLAS 2025, Shenzhen, China, April 15, 2025

SMART DEVICE FOR ARTIFICIAL INTELLIGENCE

OVERVIEW

Artificial intelligence (AI) has become an integral part of modern life. From personalized recommendations in daily life to optimizing corporate decision-making and enhancing efficiency across all sectors of the economy, AI is reshaping the way we live and work. With a projected compound annual growth rate (CAGR) of 36.6% from 2024 to 2030, the global AI market is anticipated to reach \$1,811.8 billion by 2030¹. In China, the AI industry has also witnessed remarkable growth, with its core sector reaching an estimated scale of ¥600 billion as of June 2024².

The rapid evolution of AI has fuelled demand from both server and client end. Specialized data centers tailored to manage heavy AI workloads are being deployed, featuring advanced materials and components of rigorous performance and durability. AI-powered smart devices are being embraced by consumers, not only for their intelligence, but also for their advantage on new function, design and advanced material.

To meet the growing demands driven by AI, SABIC has developed a diverse portfolio of materials that offer high performance. By ensuring long-term efficiency, reliability and other comprehensive performance, SABIC's innovative solutions are supporting the future of AI.

INDUSTRY LANDSCAPE

Shifting the focus to access to AI, consumer electronics equipped with AI capabilities, such as laptops and smartphones, now have new selling points to attract consumers. More powerful functionalities, along with higher integration, more complex components, and sleeker, thinner designs, have become the new trends in smart devices for materials to adapt.

Specialized AI data centers must support advanced hardware for high-speed, reliable data transfer in limited space. AI data centers require numerous high-speed fiber optic transceivers and single-mode fibers. Co-Packaged Optical technology, which places optical connections closer to the main switching ASIC (Application Specific Integrated Circuit), is key to increasing bandwidth and reducing power consumption. However, this introduces challenges for productivity and cost efficiency in on-board optical and SMT reflow assembly processes.

SABIC offers advanced solutions to address the challenges faced by AI data centers and add to the overall performance of AI smart devices. By integrating more sustainable solutions with cutting-edge performance, SABIC supports the ongoing advancement and wider adoption of AI data centers and consumer electronics, paving the way for a smarter and more sustainable future.

¹ Artificial Intelligence Market, Grand View Research, 2023

² China Internet Network Information Center, 2025

SABIC SOLUTIONS

- **SABIC's Comprehensive Solutions for Smart Devices:**
 - **For gaming notebook covers,** SABIC offers CYCOLOY™ post-consumer recycled (PCR) and virgin PC/ABS solution. Made with high-quality materials, the TRUCIRCLE™ PCR solution provides comprehensive performance similar to traditional grades and maintains batch stability through formula optimization, effectively meeting design, processing and usage requirements.
 - **For mobile phone front covers,** SABIC offers LEXAN™ PC, a 20% glass-fiber reinforced PC solution 3212M. This material has high rigidity, impact performance and flow capability required for injection molding of thin-walled parts with an enhanced aesthetic finish. It's can also be suitable for metal insert molding with a high bonding force.
 - **For antenna splitters on phone frames,** SABIC's LNP™ compounds materials are compatible with nano-molding technology (NMT), an innovative molding process that produces hybrid plastic-metal parts, with high strength, water resistance and enhanced design flexibility. These materials incorporate a variety of base resins, including chemically upcycled PBT from discarded PET bottles. Our newest grade, LNP™ THERMOTUF™ WF0087N compound, offers good flame retardancy (UL 94V0 at 1.0mm), colorability and chemical resistance, making it an ideal solution for high-performance components in modern electronic devices.
 - **For the laser direct structuring (LDS) process,** SABIC LNP™ THERMOCOMP™ WF006V compound's high modulus is used for the molding of small thin-walled parts. It enables good surface quality, improving the aesthetics of electronic components, as well as good signal gain and LDS performance. It offers better chemical resistance and hydrolytic stability while lowering warpage compared to traditional materials. In addition, the product has good impact resistance and laser welding capabilities.
 - **For mobile phone speaker box and antenna frame,** SABIC's LNP™ ELCRIN™ EXL4412B copolymer resin is 20% glass fiber reinforced PC copolymer with partial component synthesized from bio-based feedstock. It offers CO2 emissions reduction compared to a traditional grade. EXL4412B resin is an injection moldable grade with good mechanical properties and processability and is an ideal candidate for a broad range of applications that require a combination of stiffness, impact performance and good chemical resistance.
- **SABIC offers ULTEM™ 1000R resin solution for fiber optical connector and ULTEM™ 1010 resin for optical lenses used in AI data center.** With its good dimensional stability, balanced mechanical properties and resistance to harsh environments, the material effectively ensures the connectors' and lenses' performance during assembly and operation, thereby helping end users achieve long-term reliability of optical connection.
- **SABIC's ULTEM™ ATX200 resin for high density data storage** offers good dimensional stability, high strength and low density to help customer achieve light weight design. Its low out gassing also ensures cleanness of the inside environment.