

AGC Develops Flexible Antenna Design Technology for Millimeter Wave with Ultra-low Transmission Loss

Tokyo, May 20, 2019—AGC, a world-leading manufacturer of glass, chemicals and high-tech materials, has succeeded in developing flexible antenna design technology for millimeter wave*¹ that realizes ultra-low transmission loss*². This innovative technology not only enables low-loss transmission, but also realizes an antenna that is lightweight, thin, and flexible, which makes it possible to install millimeter-wave antennas across a wide range of use-cases that include mobility (i.e. vehicles) as well as electronic devices, industrial equipment and much more. To respond to the approaching IoT era, in which the number of internet-connected devices will reportedly reach some 50 billion devices by 2020, AGC is now focusing efforts on R&D and marketing.

There is great demand for materials with low transmission loss to use as substrate in high-frequency-band antennas for millimeter-wave transmission in next-generation high-speed communication technologies. When it comes to IoT applications, lightweight construction, compactness, and stylish design are also considered important needs.

AGC's fluoropolymer Fluon+™ ("Fluon Plus") EA-2000 is a product that offers the same superior heat resistance, water resistance, and electrical properties of fluorinated resin while adding the plus of adhesive properties. By combining EA-2000 with this newly developed flexible antenna design technology, AGC has realized a product that offers ultra-low transmission loss suited for millimeter-wave band alongside the advantages of lightweight construction and flexibility.



Flexible antenna



Flexible antenna(Transparent type)

Under its long-term management strategy, "Vision 2025," the AGC Group has positioned mobility and electronics business as key strategic business areas. In particular, AGC regards the practical application of next-generation high-speed communication technologies as a major business opportunity, and accordingly has focused efforts on developing glass antennas that add wireless base station capabilities to existing windows or that can be used as glass-mounted or synthetic fused silica glass antennas for connected cars; increasing the production of fluoropolymers for printed circuit boards; and acquiring a US-based business in the printed circuit board CCL*³ sector. With this newly developed flexible antenna design technology, AGC intends to accelerate the identification of practical applications in the IoT field and their marketing efforts. AGC is committed to aggressively expanding its business while also contributing to the development of next-generation high-speed communication technologies

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*The company changed its name from Asahi Glass Co., Ltd. to AGC Inc. on July 1, 2018.

*Handling of personal information is governed by our privacy policy.

by combining the technologies in glass, electronics, and chemicals that the company has built up and refined through years of experience.

Notes:

*1: Millimeter wave: high-frequency band radio waves exceeding the 28 GHz band. This technology permits the sending and receiving of high-speed high-volume data.

*2: Low transmission loss: Refers to the level of degradation of an electrical signal in communication lines.

*3: CCL: Copper clad laminate.

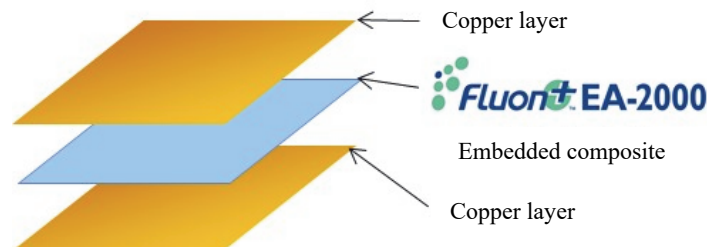
REFERENCE

■ About the AGC Group

AGC Inc.(Headquarters: Tokyo, President & CEO: Takuya Shimamura) is the parent company of the AGC Group, a world-leading glass solution provider and supplier of flat, automotive and display glass, chemicals, ceramics and other high-tech materials and components. Based on more than a century of technical innovation, the AGC Group has developed a wide range of cutting-edge products. The AGC Group employs some 50,000 people worldwide and generates annual sales of approximately 1.5 trillion Japanese yen through business in about 30 countries. For more information, please visit www.agc.com/en

■ About flexible CCL material schematic

The newly developed flexible antenna design technology uses flexible CCL as the antenna materials.



Flexible CCL material schematic

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