

**AGC develops AN Rezosta™ glass substrate for large high-definition displays**

*The new glass successfully contributes production of higher resolution and larger panels by its Young's modulus highest in the world*

Tokyo, May 9 2019—AGC (Headquarters: Tokyo; President: Takuya Shimamura) has succeeded in developing "AN Rezosta™," a large area glass substrate with among the highest Young's modulus in the world for use in large high-definition displays. The company plans to propose the new glass to customers and also aims to establish its mass production system by the end of 2019.

In recent years, high-resolution and high-refresh-rate panels have been widely applied to large-sized TVs or signage which is called 8K as well as to mid-sized displays such as gaming and laptop monitors.

Manufacturing process of these panels requires thicker metal film and/or higher process temperature due to IGZO\*1 TFT array processes. This also requires that glass substrate should have less warp against stress by the metal film (i.e.: should have a higher Young's modulus) and also should have a less shrinkage when the glass subjected to heat treatment with elevated temperature.

Depending on the customer's application, AGC has previously offered "AN100" applicable for all generation substrates and "AN Wizus™" produced mainly in 6th-generation for small, ultra-high-resolution panels. However, to achieve better performance and productivity for large, ultra-high-resolution, high-refresh-rate panels, the company has successfully developed "AN Rezosta™," a large area glass substrate which has a higher Young's modulus and less thermal shrinkage than AN100.

With the industry's highest Young's modulus of 85 GPa, low thermal shrinkage, and capability of production of 8th-generation and larger area, "AN Rezosta™" will contribute to improving performance and productivity in the large, ultra-high-resolution, high-refresh-rate panels of its customers.

AGC continues to develop new glass material design and a wide range of glass technologies, including advanced glass production technologies based on float processes, to contribute to development of the display industry, whose technology is expected to continue to advance in the coming years.

Key features of AN Rezosta™

	AN100	AN Wizus™	AN Rezosta™
Young's modulus*2	77 GPa	85 GPa	<b>85 GPa</b>
Thermal shrinkage *2 *3	9 ppm	5 ppm	<b>7 ppm</b>
Typical substrate sizes	All generation	6th-generation 1500 mm x 1850 mm	<b>8th-generation 2200 mm x 2500 mm</b>
TFT array process	a-Si*4	LTPS*5	<b>a-Si/IGZO</b>

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MEDIA INQUIRIES

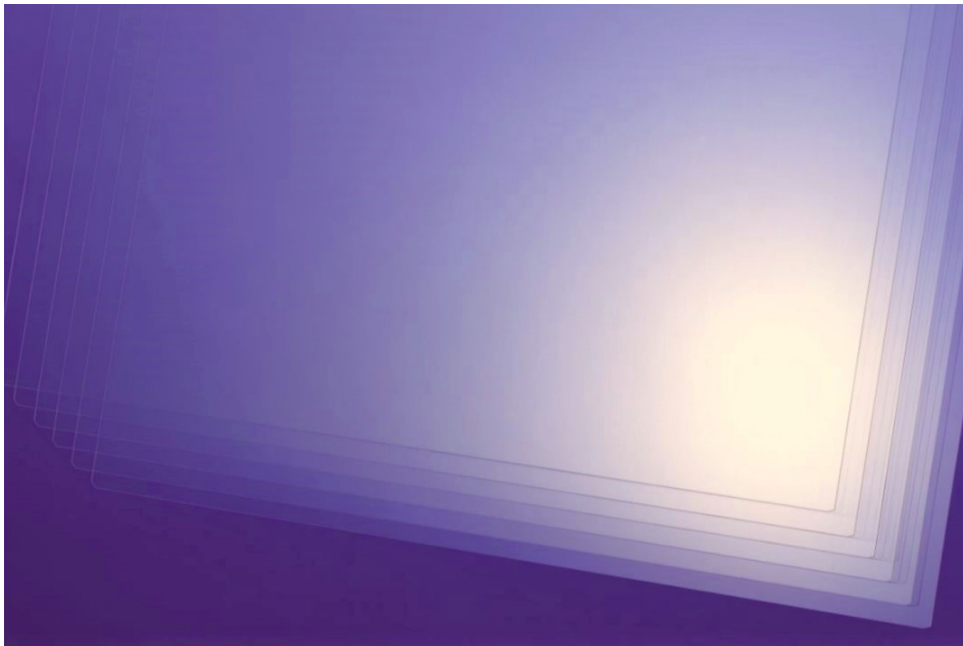
Kazumi Tamaki, General Manager, Corporate Communications & Investor Relations Division  
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Notes:

- \*1: A kind of oxide semiconductor
- \*2: Based on AGC measurement results
- \*3: Shrinkage rate after 1 hour of 450°C heat treatment
- \*4: Amorphous silicon
- \*5: Low-temperature polysilicon

[Product Image]



AN Rezosta™

Images can be downloaded by visiting the URL or reading the QR code listed below.

<https://agc2.box.com/s/55x2h9aov4iau9zz48axxfr1sxlojeka>

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