

Thermal Flow Technology Supports Our Newest OLED Panel

Panasonic's new flagship Z95B Series OLED TVs are available in 55", 65", and 77" units and represent a huge step forward in display performance. These models combine state-of-the-art panel engineering with game-changing thermal management.

The driving force behind this evolution is Panasonic's proprietary ThermalFlow technology, which is designed to unlock the full potential of Primary RGB Tandem OLED panels while maintaining picture accuracy and unit longevity.

What Is Thermal Flow Technology?

Thermal Flow technology is Panasonic's aerodynamic-inspired cooling system integrated into the Z95B series. Taking design strategies from race-car airflow management, ThermalFlow uses internal vents and tactically positioned heat-generating components to push heat upwards and out of the unit, which effectively manages thermal load across the panel.

Instead of using fans or heat sinks, the ThermalFlow system uses passive airflow to dissipate heat away from the OLED panel. This allows the panel to operate at high brightness without risking colour shifts or burn-in.

How It Enhances OLED Panel Heat Management

The Primary RGB Tandem panel uses a four-layer system for red, green, and dual blue light layers, which boosts peak brightness by up to 40% over older OLED generations. Although this is fantastic from a viewing perspective, it increases heat output, which would quickly become an issue.

Panasonic's ThermalFlow system deals with this issue by evacuating unwanted heat and allowing the panel to operate at its maximum while preserving image stability and extending longevity.

Benefits of Thermal Flow for Viewing Experience

Higher Sustained Brightness and Improved Picture Quality

One of the biggest benefits of ThermalFlow is that it allows the panel to operate at peak performance without overheating. This leads to consistently brighter and more vivid colours and is particularly noticeable when viewing HDR content.

Broader Colour Volume without Risk

As Panasonic's ThermalFlow technology effectively manages potential heat issues, the Primary RGB Tandem panel can provide broader colour volume without suffering from longevity issues or inaccuracies. This also means viewers in well-lit rooms can enjoy ultra-realistic images, which wasn't possible with older OLED displays.

Reduced Burn-In Risk and Extended Lifespan

ThermalFlow keeps the panel's temperature under control throughout use, which helps reduce issues older OLED models dealt with, such as degradation and burn-in. Other than immediately improving the viewing experience, this also means units benefit from increased longevity.

Reliable 144Hz Gaming and HDR Performance

The Z95B delivers up to 144 Hz refresh rate and supports AMD FreeSync Premium and NVIDIA G-SYNC. Paired with a dedicated True Game Mode, this is a fantastic option for gamers, with units providing stunning but stable visuals with minimal drift.

Technical Synergy: Thermal Flow and Tandem OLED

One of the most impressive things about the Panasonic Z9B5 series is that it uses multiple engineering developments to enhance the home viewing experience. The combination of the Primary RGB Tandem OLED panel and ThermalFlow technology works together to enable new levels of performance in brightness and colour reproduction while also increasing panel reliability and extending longevity.

The four-stack Tandem OLED panel requires thermal regulation to operate at its highest specifications. ThermalFlow addresses this by ensuring that, even at maximum output, the panel remains at a suitable temperature.

The synergy between technologies is then further enhanced by the inclusion of Panasonic's HXC Pro AI II Processor. This best-in-class processor uses real-time analysis to adjust picture settings and optimise dynamic range. As ThermalFlow ensures the panel can operate at peak output, this means the processor then has greater freedom to push the display closer to its technical limits.

Stylish Design with Silent Performance

Traditional cooling systems often relied on fans, which had the downside of adding unwanted sounds to the room. On the contrary, ThermalFlow uses a passive cooling system and, therefore, works silently. This is important because it leads to more immersive viewing

experiences and is especially noticeable when playing a game or watching a dramatic film where audio cues are essential.

This cooling approach has also enabled a sleeker, more refined unit design. With no need for bulky fans or heat sinks, the Z95B model is slim and ideal for both wall mounting and placement in crowded home setups, whether you prefer the [55"](#), [65"](#), or [77"](#) model.

Heat Reallocation and Audio Upgrades

The benefits of ThermalFlow technology aren't reserved to image, with the repositioning of heat-generating audio components, including the subwoofer, lowering internal temperatures. Not only does this increase the longevity of such components, but it also improves acoustic separation. As the Z95B series includes the 360° Soundscape Pro system, the units deliver a wide and more immersive audio experience without the risk of distortion, even during high-volume playback.

Conclusion

Panasonic's ThermalFlow technology is a game-changer for consumers searching for major upgrades to their older setups. As a foundational component of the Z95B series, it helps combine the visual benefits of the cutting-edge Tandem OLED panel with aerodynamic heat management. For the consumer, this paves the way for a more immersive experience, whether you're watching HDR content or enjoying low-lag gaming in True Game Mode.