

Unique driving techniques for high image quality REAL-4K LCOS panel
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ABSTRACT

In recent years the 4K display and projection markets have increased greatly. Canon entered the market with the addition of a high quality compact projector that utilizes three native 4K LCOS reflective panels that help produce outstanding imagery. The high resolution and small 0.7” size of the LCOS panels, helps ensure the projector achieves highly-detailed 4K resolution while maintaining a compact form-factor.

LCOS panels modulate each individual pixel of liquid crystal with a digital drive method. The digital drive creates an advantage by resolving high resolution silicon backplane circuit due to its stableness of electrical characteristics, however it also presents a disadvantage in some aspects - for example, image artifact or motion blur.

Canon’s unique driving algorithms effectively reduce these disadvantages – ultimately improving overall image quality.

Canon’s latest 4K projector, the 4K600STZ is equipped with these unique driving techniques. In this paper, we’ll discuss the “unique driving techniques” Canon utilized in its projector development.

BIO

Masayuki Abe

Masayuki Abe is a **lead** engineer in PJ Business Promotion Center at Canon INC.

He is responsible for the design of LCOS devices and picture quality.

Canon’s projectors use various kinds of liquid crystal panels.

He has worked in the design of the picture quality with these panels and improved the quality of Canon projectors.

He also played an important role in the development of the 4K image quality of 4K600STZ.