

The wonders of Ukiyo-e, delivered in bright, vivid colors at 20,000 lm on AC 100 V



HITOHATA, INC.
Immersive Experience!
Ukiyoe Motion Exhibition
NAGOYA

Installation: July 2023
Location: Nagoya, Japan

The Challenge

To share the beauty of Japanese Ukiyo-e with the world, we needed bright projection in a venue with limited electrical capacity.

The Solution

MZ20K series projectors can deliver brightness of 20,000 lm on AC 100 V. Achieving high brightness while lowering power consumption, they are well suited to venues with limited electrical capacity.

This was the only projector that could create an immersive museum experience in an environment with limited electrical capacity.

Mr. Takeaki Higashiyama
Representative Director
HITOHATA, INC.

Note: Job title at the time this report was submitted.

Background

A digital museum that transports you to a world of Ukiyo-e

Immersive Experience! Ukiyoe Motion Exhibition NAGOYA was produced by HITOHATA, INC. and started in July 2023. The exhibition used projection mapping to depict moving Ukiyo-e (woodblock prints) based on over 300 works by world-renowned artists, including Katsushika Hokusai, Utagawa Kuniyoshi, and Utagawa Hiroshige. It offered an immersive museum experience unlike any other in the world, a joy for adults and children alike. The venue comprised nine themed 3D video spaces and an introduction to the Ukiyo-e that were the basis for the digital artworks. To fully convey the vivid colors and delicate brush strokes of Ukiyo-e, the organizers installed the LCD Projector PT-MZ20K and PT-MZ16K, deploying 22 units in total.

Reason for Choosing Panasonic

Delivering up to 20,000 lm on AC 100 V

According to HITOHATA Representative Director Mr. Takeaki Higashiyama, image brightness was the most important element in expressing the qualities of Ukiyo-e. "At HITOHATA, we have used Panasonic projectors for various projection mapping projects over a long period of time and found them to be reliable and easy to use. This venue was designed to exhibit paintings, so the available electrical capacity was limited, and it would have been difficult to install a 200 V power supply. We chose the PT-MZ20K because it can achieve brightness of 20,000 lm on 100 V instead of the 200 V typically required. That made it a unique device that could give us the brightness we envisaged."

An Ukiyo-e exhibition crafted by HITOHATA

Since its establishment in 2019, HITOHATA has created projection mapping rooted in Japanese cultural traditions and local cultural attractions. Immersive Experience! Ukiyoe Motion Exhibition NAGOYA was a special event created in partnership between HITOHATA and TV Aichi to commemorate the broadcaster's 40th anniversary. The event took the theme of Ukiyo-e in a new direction through an immersive digital museum experience and garnered widespread attention.



- Dates: Saturday, July 8 to Monday, August 28, 2023
 - Organizer: The Immersive Experience! Ukiyoe Motion Exhibition NAGOYA Executive Committee (TV Aichi, HITOHATA, INC., JUJI PRESS, LTD.)
 - Website: <https://www.ukiyoeemotion.com/en>
- *This exhibition has ended.

▲ At the venue entrance, the event title was displayed using Panasonic's Space Player.

Projection Mapping



◀ Chou took visitors on a journey through Japan's landscapes, featuring works such as Katsushika Hokusai's Thirty-Six Views of Mount Fuji. One PT-MZ20K projected onto the gate and another projected onto the wall, bringing the scene to life through bright, vibrant images.



◀ Sai was a space filled with flower and bird paintings. The brightness of 20,000 lm enabled the expression of delicate colors with a single unit. Mirrors in front of the seats created reflections that enhanced the sense of immersion.



▲ Ai was a world of indigo, acclaimed around the world as "Japan blue," and featured projections onto the walls and a 3D object in the center.



▲ A PT-MZ20K installed in the Ai space reproduced the "Japan blue" typical to Ukiyo-e.



▲ A PT-MZ16K was used in Ryu, a space themed around waterfalls. The projection shone through cloth to create the sensation of flowing water.



▲ Yu, an interactive space with anthropomorphic paintings and optical illusions, featured a PT-MZ16K.



▲ PT-MZ20Ks were used to depict a variety of colors in Rei, a space based on a world of cherry blossoms and paintings of women.



▲ In Gou, which featured dynamic depictions of fierce warriors, PT-MZ20Ks were used to create fiery red.



▲ In Rei, projection onto the floor created the sensation of cherry blossoms falling under visitors' feet and moving as they walked.



▲ In the final space, Miyabi (see main photo), seven PT-MZ20Ks projected onto the walls and a 3D mountain.

In the Customer's Own Words

We will continue to use these projectors for future events

Visitors spent a long time exploring the exhibition and posted a large number of photos and videos to social media. Based on that, we feel we managed to create an immersive museum experience with an Ukiyo-e theme that resonated with people. I was especially pleased when I saw people saying that their children really enjoyed it and recommending it to other families with kids.

We often handle projection mapping at castles and other cultural properties, and we will continue using the projectors we installed this time for such projects. By delivering 20,000 lm on 100 V input, they are also suitable for use at events at venues with setup restrictions. We hope to continue using them for various productions as we deliver new artistic experiences to even more people.



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Benefits

High-brightness projection that delivered the required totality of light

According to Mr. Takeaki Higashiyama, the high brightness is one of the secrets behind the exhibition's immersive feel. "In creating an immersive museum experience, the totality of light is extremely important. We designed all nine spaces to maximize the area and amount of light received as visitors explore. 20,000 lm projection was essential to achieve this effect, but conventional 20,000 lm models require AC 200 V input and are also rather large. Just when it seemed that the restrictions of the venue would make it impossible to achieve the level of performance we needed, the low power consumption and compactness of the PT-MZ20K, which can produce 20,000 lm on 100 V, gave us the totality of light we were looking for using the ideal number of units."

Brightness meets color reproduction to maximize the wonder of Ukiyo-e

Mr. Higashiyama also states that the projectors' rich color reproduction greatly contributed to the exhibition. "Ukiyo-e feature an abundance of colors. That includes indigo, which was highly-regarded by famous artists around the world, but also the vibrant hues of flowers and the colors of the kimonos featured in paintings of beautiful women. However, because so much time has passed since the originals were printed in the Edo period, the colors have faded over time. Originally, these works would have had even stronger, more vivid colors. This time, we used the advantages of digital technology to adjust the colors and try to reproduce their original hues, so we were particularly focused on the color adjustment. Having projectors that provide both high brightness and rich color reproduction was important to us, and enabled us to fully express the wonder of Ukiyo-e as they were at the time of their creation."

Installed equipment

- LCD Projector **PT-MZ20K x 14**
- LCD Projector **PT-MZ16K x 8**

