



CHRISTIE® MICROTILES™

THE NEW DIGITAL CANVAS

A SUSTAINABLE SOLUTION



CHRISTIE MICROTILES AND SUSTAINABLE BUILDING DESIGN

THE DIGITAL REVOLUTION

The world is going digital, and the architectural and design community is at the forefront of this revolution. Technologies such as the Internet and smartphones have not only generated new business models and consumer behaviors, they have transformed the way architects and designers think about information and social connections in the built environment. As a result, digital displays are widespread in public and commercial spaces, connecting people with information, entertainment and brand messages in real-time and on demand.

CHRISTIE MICROTILES: THE NEW DIGITAL CANVAS

Christie® MicroTiles™, a breakthrough digital display technology, give you the freedom to integrate digital media into your sustainable building design, your way. With an unobtrusive, modular building block format, Christie MicroTiles seamlessly blend into any environment, allowing your audience to focus on the intended message and not the technology being used to display it. Christie MicroTiles have the right combination of high brightness and rich contrast for demanding indoor, high ambient light environments. There's no glare or distracting reflections so your message is always clear.

EVALUATING THE SUSTAINABILITY OF DIGITAL DISPLAYS

Comparing the sustainability of alternative digital display solutions can be a complicated matter. Several product characteristics impact sustainability, including energy consumption (over the entire product lifecycle), durability, ergonomics, reusability and recyclability. Some of these characteristics are difficult to measure, and their relative importance may vary depending upon the application.

Common pitfalls include undervaluing or excluding the following sustainability costs, in terms of the waste material, energy and labor involved.

The cost required to manufacture, install and service a display

The additional cost involved in replacing a short-lived display compared with a long-lived one

The cost of damaged health, productivity and lost revenue resulting from poor ergonomics

The cost of potentially relocating or modifying the display as the building evolves

The cost of disposal and recycling

Christie MicroTiles are a sustainable and innovative digital display solution, scoring well in all the key product characteristics as follows:



ENERGY EFFICIENT MANUFACTURING:

Christie MicroTiles are manufactured in a world-class ISO 9001 and ISO 14001 manufacturing facility, where environmental targets are systematically measured, achieved and audited.

SIMPLE INSTALLATION:

The Christie MicroTiles design comprises lightweight building blocks that easily fit together and are simple to install, automatically sensing each other and adjusting to common brightness and color levels.

POWER EFFICIENT OPERATION:

Most tiled flat panel and rear projection systems offering both high resolution and comfortable brightness levels range in efficiency from 0.6 to 2.0 candelas per watt. A typical calibrated Christie MicroTiles array operates around 1.4 candelas per watt.

ENERGY SAVING:

The overall brightness of a Christie MicroTiles canvas can be adjusted to an appropriate level for the ambient light environment, saving energy and increasing product longevity.

QUICK AND EASY SERVICING:

Most conventional tiled displays either can't be serviced from the front, or require complex brackets or machinery to expose a tile in the middle or bottom of an array. By stark contrast, any Christie MicroTiles unit in a canvas can be serviced simply by removing the screen, revealing three components that each take less than 15 minutes to replace.



SOLID STATE COMPONENTS:

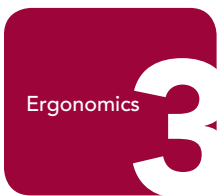
Christie MicroTiles combine highly reliable and long-lasting LED illumination and DLP® technology, with no consumables or moving parts that require periodic replacement or recalibration.

NO BURN-IN:

Unlike LCD and phosphor-based displays, Christie MicroTiles can show any static or moving content 24/7, with no chance of images burning permanently into the screen.

ROBUST SCREENS:

Whereas some tiled displays can be heavy with glass screens that are easily broken and difficult to replace, Christie MicroTiles screens are lightweight and durable.



COMFORTABLE BRIGHTNESS:

Christie MicroTiles offer an ideal level of controllable brightness for indoor high ambient light environments, comfortable for close-up viewing.

COOL TO THE TOUCH:

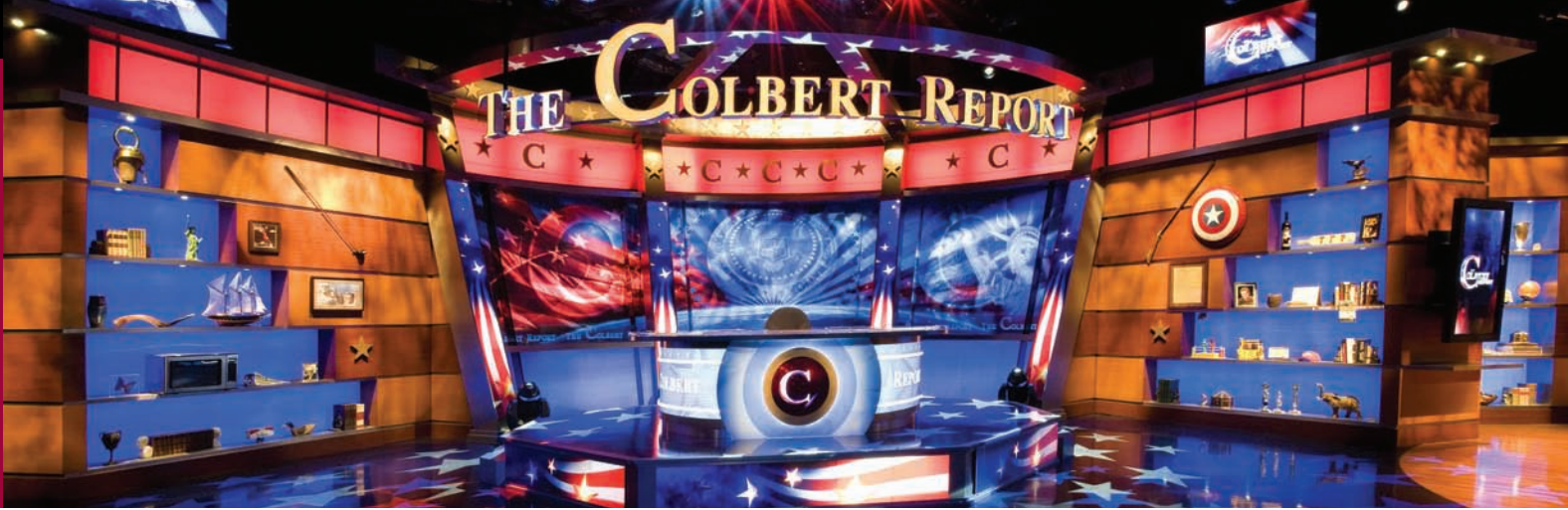
Unlike LCD, plasma, and surface-mounted LED displays, Christie MicroTiles do not radiate heat towards the viewer, making them ideal for indoor spaces and touchscreen applications where people are close to the display.

ARCHITECTURAL FORMS AND COLORS:

Providing almost limitless design flexibility and 50% more colors than a typical flat screen display, Christie MicroTiles are a visually compelling design element that people enjoy viewing and interacting with.

LOW NOISE:

Christie MicroTiles are popular in noise-sensitive environments, such as broadcast sets. Each tile contains two high efficiency fans, which only run as fast as they need to, keeping noise to a minimum.



▲ The Colbert Report set, New York

Reusability **4**

EXTENDED USEFUL LIFE:

The form factor and system design of Christie MicroTiles make them easy to disassemble and reassemble to fit any space or application, prolonging the useful life of the product.

UPGRADEABLE RESOLUTION:

Christie MicroTiles have enough native pixels to support practically any resolution, providing peace of mind that the system will not become outdated as requirements for new content, resolutions and applications evolve over time.

REFURBISHMENT PROGRAM:

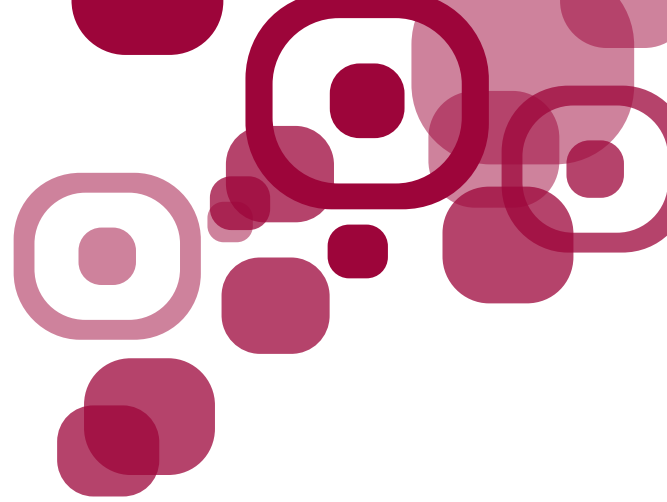
Once a light engine eventually fails, instead of throwing it away, return it to Christie for refurbishment.

Recyclability **5**

SAFE MATERIALS:

Christie MicroTiles include a solid metal housing and removable internal components, which total 80% recyclable and 90% recoverable materials. Christie MicroTiles also comply with the Restriction of Hazardous Substances (RoHS) directive, and do not include phosphors, mercury, or toxic liquid coolants.





TOTAL COST OF OWNERSHIP

Many of the features that make Christie MicroTiles a sustainable solution also reduce their total cost of ownership when compared with other products. For instance, the outstanding reliability and easy servicing of MicroTiles translates into hard savings by reducing replacement parts and labor requirements. Conversely, there are many hidden costs inherent in alternative technologies which are not captured in their initial capital investment.

LEED

Leadership in Energy and Environmental Design (LEED) is an internationally recognized green building certification system. Under the LEED system, products are preferred if they meet the ENERGY STAR standards for energy efficiency. Although projectors are not currently rated by ENERGY STAR, Christie actively supports the development of an ENERGY STAR specification for projection-based products.

Digital display products cannot directly earn LEED points, however, they can make a difference. For instance, under the "Innovation in Design" section of LEED, there is an opportunity for architects to apply MicroTiles as an educational tool for occupants. This would be an ideal use of MicroTiles, and may help to earn an innovation credit.

CHRISTIE: PIONEERS IN ENVIRONMENTAL RESPONSIBILITY

Christie is a global visual technologies company and is a wholly-owned subsidiary of Ushio, Inc., Japan, (JP:6925). Consistently setting standards by being the first to market some of the world's most advanced projectors and complete system displays, Christie is recognized as one of the most innovative visual technology companies in the world. From retail displays to Hollywood, mission critical command centers to classrooms and training simulators, Christie display solutions and projectors capture the attention of audiences around the world with dynamic and stunning images.

Christie embraces a sustainable approach to product development, and is working hard to educate our industry and community to consider sustainable alternatives. Christie is a leader and active participant in several environmental working groups, including the InfoComm Association's GreenAV Task Force, the InfoComm/ANSI Energy Management Standard committee to establish sustainable standards for AV, and the Sustainable Waterloo association to help green our local community.

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LUMINUS



For the most current specification information, please visit www.christiedigital.com/microtiles

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