Pixels™
Wall Mounted

Design and Installation Guide

December 2012
On the cover: Pixels mural shown with GE Tetra® Power Grid during installation.
For more information go to gelightingsolutions.com
Pixels™ wall-mounted Celebration™ panels from USG offer a turnkey system for displaying the unique perforated imagery art that Pixels makes possible.

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<tr>
<th>Planning Your System</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>For More Information</td>
<td></td>
</tr>
</tbody>
</table>

Overview—Wall-Mounted Systems
Pixels Panels
Design Elements
Components
Construction
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Components
Construction
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USG/GE Power Grid System Modules
Technical Service
800 USG.4YOU
Web Site
usg.com
### System Overview

#### Pixels Wall-Mounted Applications

<table>
<thead>
<tr>
<th>Features</th>
<th>Celebration™ panels and Celebration panels with Pixels™ imagery can be mounted to the vertical surface in two ways: directly to the surface using wall mount backer board system, or away from the vertical surface leaving a “cavity” in which to mount light sources for back lighting the image. Here are examples of each application.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Mounted</td>
<td>This backer board system is simple in both design and application while providing a hard surface directly behind the Celebration panel thus improving durability.</td>
</tr>
</tbody>
</table>

![Surface Mounted Application Image](image-url)
## System Overview

### Pixels Wall-Mounted Applications

<table>
<thead>
<tr>
<th>Frame Mounted</th>
</tr>
</thead>
<tbody>
<tr>
<td>The backlit system is also simplified in that it uses standard Fineline\textsuperscript{®} suspension — only mounted to the wall thus being quite familiar to contractors.</td>
</tr>
</tbody>
</table>

On the pages that follow, further explanation of the systems will clarify, in detail, how each can be used effectively depending on the design criteria and desired result.

An example of Pixels frame-mounted backlit installation with GE Tetra\textsuperscript{®} PowerGrid is on display at GE Lighting & Electrical Institute at historic Nela Park, Cleveland, OH (photo above)
## System Overview

### Design Elements

#### Shape

The overall shape of a wall-mounted system is determined by the size of the panels and their configuration and relationship to one another.

Available panel sizes are
- 2’ x 2’
- 2’ x 4’
- 2’ x 6’

<table>
<thead>
<tr>
<th>Panels</th>
<th>2’ x 2’ Pixels Celebration Panel</th>
<th>2’ x 4’ Pixels Celebration Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1.png" alt="2’ x 2’ Pixels Celebration Panel" /></td>
<td><img src="image2.png" alt="2’ x 4’ Pixels Celebration Panel" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2’ x 6’ Pixels Celebration Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image3.png" alt="2’ x 6’ Pixels Celebration Panel" /></td>
</tr>
</tbody>
</table>

**Note:** The Pixels image and design process itself is detailed in the Pixels Design Guide, IC566. Through that process the panels are ordered separately from the wall mount system.
System Overview

Design Elements

The Pixels panels can be arranged in any number of creative ways. As long as the 2’ module dimension is honored, almost any configuration can be achieved including altering the shape of the frame itself.

<table>
<thead>
<tr>
<th>Sample Configurations</th>
<th>6’ x 4’ System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>![2’ x 2’  2’ x 2’  2’ x 2’  2’ x 2’ (2’ x 4’  2’ x 4’  2’ x 4’)]</td>
</tr>
<tr>
<td></td>
<td>![2’ x 2’  2’ x 2’  2’ x 2’ (2’ x 4’  2’ x 4’)]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>8’ x 4’ System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>![2’ x 4’  2’ x 2’  2’ x 4’  2’ x 2’]</td>
</tr>
<tr>
<td></td>
<td>![2’ x 2’  2’ x 4’  2’ x 2’]</td>
</tr>
</tbody>
</table>
There is no limitation to the finished size of the system. The above examples are only to show the flexibility of panel layout and frame configuration.
System Overview

Design Elements

Photos can be used as is or combined with copy or graphics. Also see Pixels Design Guide (IC566) for a further understanding of Pixels graphics capabilities.

2’ x 4’ configuration

LIKE THE BRIDGES BEFORE US, WE BUILD TO ENDURE.
In addition to the Pixels Celebration panels (see page 4), the following components are unique to the surface-mounted system.

### Surface-Mounted Backer Boards

<table>
<thead>
<tr>
<th>Size</th>
<th>Code</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>2’ x 2’</td>
<td>WMBB24</td>
<td><img src="image1.png" alt="Image" /></td>
</tr>
<tr>
<td>2’ x 4’</td>
<td>WMBB48</td>
<td><img src="image2.png" alt="Image" /></td>
</tr>
<tr>
<td>2’ x 6’</td>
<td>WMBB72</td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
</tbody>
</table>

**Construction Detail**

**Backer Board Edge Profile**

- pre-drilled fastener hole
- adhesive backed poly bumper
## Surface-Mounted System

### Components

<table>
<thead>
<tr>
<th>Edge Trim</th>
<th>Backer Board Aluminum Trim</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Edge Trim Image]</td>
<td>![Backer Board Aluminum Trim Image]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fastener</th>
<th>Wall-Dog ™Fastener</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Fastener Image]</td>
<td>![Wall-Dog ™Fastener Image]</td>
</tr>
</tbody>
</table>

**Note:** Wall-Dog is a trademark of Powers Fasteners, Inc. For more information please visit [www.powers.com](http://www.powers.com)
Surface-Mounted System

Construction

The surface-mounted system consists of backer panels that are installed edge-to-edge directly to the wall surface.
### Surface-Mounted System

#### Construction

<table>
<thead>
<tr>
<th>Construction Details</th>
<th>A. Panel Intersection</th>
<th>B. Perimeter Edge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>adhesive backed</strong></td>
<td>Pixels panel or</td>
<td>backer board</td>
</tr>
<tr>
<td><strong>poly bumper</strong></td>
<td>Celebrations panel</td>
<td>drywall screw</td>
</tr>
<tr>
<td><strong>drywall screw</strong></td>
<td></td>
<td>backer board</td>
</tr>
<tr>
<td><strong>backer board</strong></td>
<td>SHEETROCK gypsum panel</td>
<td></td>
</tr>
<tr>
<td><strong>SHEETROCK gypsum panel</strong></td>
<td>Pixels panel or</td>
<td>aluminum trim</td>
</tr>
<tr>
<td></td>
<td>Celebrations panel</td>
<td>SHEETROCK gypsum panel</td>
</tr>
</tbody>
</table>

#### C. Corner

- Pixels panel or Celebrations panel
- 1/4" reveal
- Aluminum trim
Surface-Mounted System

Installation

**Note:** These installation instructions cover the basic rectangular design using 2’ x 2’ panels. There will be more complex designs that require a different or more complex grid layout.

**Step 1**

Establish a vertical and horizontal control line with a laser or chalk line that is at the intersection of 4 panels.

**Step 2**

In order to assure proper horizontal alignment, it is recommended that a temporary ledger board be installed on the horizontal control line the entire length of the finished wall installation.
**Step 3**

Begin the installation of the backer panels at the intersection of the vertical control line and the ledger board. Fasten to wall through the predrilled holes using appropriate anchor fasteners.

**Step 4**

Each consecutive panel will contact the previous panel along the entire length of the vertical leg. With the contact area free of debris, continue the installation in both directions working from the control line out.
Surface-Mounted System

Installation

**Step 5**

Using a straight edge on the vertical edge of the previously installed backer panel, align the second roll of backer panels with the first.

**Step 6**

Once the upper panels are all installed, remove the ledger board and install the bottom row of panels aligning them vertically as described in the previous step.
Step 7

Install the pre-mitered friction-fit trim into the panel kerf on all four sides. Screws may be loosened on backer panel perimeter to fit bottom leg of trim behind panel. Once all the trim is in place, re-tighten the perimeter screws.

Step 8

Gently pre-fit PIXELS panels in any order onto the backer panels. Using the heel of your hand, seat the PIXELS panel starting from top left uppermost corner to the right uppermost corner. Work down from both corners to the bottom until all edges are seated.

Installation Detail

1/4" reveal

PIXELS panel or Celebrations panel
Surface-Mounted System

Installation

Step 9

The finished system.
Frame-Mounted Backlit System

Components

In addition to the Pixels Celebration panels (see page 4), the following components are unique to the frame-mounted backlit system.

<table>
<thead>
<tr>
<th>Frame</th>
<th>Pre-Mitered Frame Segment</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Options</th>
<th>4&quot; Frame Profile</th>
<th>6&quot; Frame Profile</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>4&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td></td>
<td>3/4&quot;</td>
<td>7/8&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Elite Splice Plate</th>
<th>Perimeter Frame Attachment Clip (WMPFAC)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Elite Splice Plate</td>
<td>Perimeter Frame Attachment Clip (WMPFAC)</td>
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</tbody>
</table>
# Frame-Mounted Backlit System

## Components

<table>
<thead>
<tr>
<th>Grid</th>
<th>DXF Main Tee, Pre-Cut</th>
<th>DXF Cross Tee</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Grid" /></td>
<td><img src="image2" alt="Main Tee" /></td>
<td><img src="image3" alt="Cross Tee" /></td>
</tr>
<tr>
<td>Grid Attachment Clip (WMGAC)</td>
<td>Grid Support Bracket (WMGSB)</td>
<td></td>
</tr>
<tr>
<td><img src="image4" alt="Attachment Clip" /></td>
<td><img src="image5" alt="Support Bracket" /></td>
<td></td>
</tr>
</tbody>
</table>
# Frame-Mounted Backlit System

## Components

<table>
<thead>
<tr>
<th>Backlit Option</th>
<th>Foam Gasket</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image1.png" alt="Foam Gasket" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fasteners</th>
<th>Wall-Dog Fastener</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><img src="image2.png" alt="Wall-Dog Fastener" /></td>
</tr>
</tbody>
</table>

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Frame-Mounted Backlit System

Construction

- splice plate
- grid attachment clip
- DXF cross tee
- DXF main tee
- grid support bracket
- perimeter frame attachment clip
- Pixels™ Wall Mount Pre-Mitered Frame
- Pixels™ panel or CELEBRATIONS panel

PIXELS Design and Installation Guide
Frame-Mounted Backlit System

Construction

A. Typical Perimeter Edge

- PIXELS wall mount pre-mitered frame
- friction fit foam to seal off light leaks around perimeter
- SHEETROCK gypsum panel

B. Corner Splice

- PIXELS frame
- splice plate

C. Perimeter Attachment Clips

- PIXELS wall mount pre-mitered frame
- tee
- grid attachment clip
- perimeter frame attachment clip
- SHEETROCK gypsum panel

D. Grid Support Panel Intersection

- PIXELS panel or CELEBRATIONS panel
- grid support bracket
- bracket screw attached

E. Corner

- PIXELS panel or CELEBRATIONS panel
- PIXELS frame
Frame-Mounted Backlit System

Installation – Perimeter Frame

**Step 1**

Establish the bottom corner of the installation to be at least 8 inches off the floor and use a cross laser to determine both vertical and horizontal control lines.

**Step 2**

Install perimeter frame attachment clips (WMPFAC) inside of the trim per shop drawing supplied. Pre-assemble the corner splice into the bottom horizontal trim piece.

Note: These installation instructions cover the basic rectangular design using 2’ x 2’ panels. There will be more complex designs that require a different or more complex grid layout.
Frame-Mounted Backlit System

Installation – Perimeter Frame

Step 3
Align lower edge of trim with reference control line and screw attach to wall using appropriate fasteners and anchors as necessary. (Wall-Dog™ fasteners work well)

Step 4
Install adjacent vertical trim into the corner splice and attach to wall aligning with vertical laser line.
Step 5

Continue building perimeter trim frame per shop drawings. Verify that the frame is square by measuring diagonally corner to corner. If not square, adjust accordingly. FRAME MUST BE SQUARE!

Lighting

Once the perimeter trim frame is in place, lighting shall be installed per local codes and supplied shop drawings. The GE Tetra® PowerGrid system is an excellent choice for Pixels backlit systems. See USG/GE Designed Together to Work Together program on page 32 for more information.
Frame-Mounted Backlit System

Installation – Fineline® Grid

Step 1

Install grid attachment clip (WMGAC) into perimeter trim per shop drawings supplied.

Step 2

Beginning at the left side, attach main tee section to the grid attachment clip (WMGAC) and bend tabs to lock in place.
Frame-Mounted Backlit System

Installation – Fineline® Grid

Step 3
Attach cross tees per the shop drawing and locate the next main tee section.

Step 4
Attach cross tees to the top and bottom trim using WMGAC1.
Step 5
Continue this procedure from left to right until reaching the trim on the right side.

Step 6
Install wall mount grid support brackets (WMGSB) on main tees per shop drawings.
Step 7
Tuck foam into space between grid and trim to block light leaks. Be sure to push foam all the way to the face of the trim.

Step 8
Assure the system is square.
Frame-Mounted Backlit System

Installation – Pixels Panels

Step 9
Install Celebration or Pixel panels per shop drawings.

Step 10
The finished system.
# Appendix

## Sample Shop Drawings

### Bill of Materials

#### 4" Compasso Elms

<table>
<thead>
<tr>
<th>PART NO</th>
<th>DESCRIPTION</th>
<th>FINISH</th>
<th>QTY</th>
<th>DVD or QA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>104.08&quot; straight with 45° miter</td>
<td>mill</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>37.00&quot; straight with 45° miter</td>
<td>mill</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

#### Grid and Panels

<table>
<thead>
<tr>
<th>PART NO</th>
<th>DESCRIPTION</th>
<th>FINISH</th>
<th>QTY</th>
<th>DVD or QA</th>
</tr>
</thead>
<tbody>
<tr>
<td>67232</td>
<td>48&quot; x 38&quot; Celebration Panel</td>
<td>mill</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>57930</td>
<td>Soffit Plate</td>
<td>mill</td>
<td>1</td>
<td>9</td>
</tr>
</tbody>
</table>

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### Grid and Panels

#### Compasso Grid Elevation

```
1'-0"  1'-0"

104.08" straight with 45° miter

finish face
```

Scale 1" = 1'-0"
Appendix

USG | GE
Designed Together to Work Together

USG Pixels™
Wall-Mounted Systems
with GE Tetra® PowerGrid

GE Nela Park
100th Anniversary

GE Lighting will change
the way people light
and think about their world

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