

Design Guide



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<b>About the System</b>	<p>PIXELS™ turns CGC's proven metal ceilings and wall-mounted systems into a canvas upon which you can display images, designs or graphics that can transform an ordinary surface into an exciting interactive visual. PIXELS, enabled by Intelliperf Technology, turns photos or graphics into varied-size perforations in metal panels, looking very "op-art" close-up and resolving into a clear image at a distance. Because the image is created by perforations, acoustical properties exist.</p> <p>Page</p>
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<b>For More Information</b>	Website <a href="http://cgcinc.com">cgcinc.com</a>

# System Overview

<b>Metal Panels</b>	<ul style="list-style-type: none"><li>• Aluminum</li><li>• HRC (High Recycled Content) up to 90%</li><li>• PANZ®</li><li>• CELEBRATION™</li><li>• CURVATURA™</li></ul>
<b>Materials</b>	<ul style="list-style-type: none"><li>• Aluminum panels</li><li>• Acoustical backer</li></ul>
<b>Suspension System</b>	<ul style="list-style-type: none"><li>• FINELINE® (for CELEBRATION and FL edge PANZ panels)</li><li>• CENTRICITEE™ (for PANZ lay-in or FL edge panels)</li><li>• Wall-mounted (for CELEBRATION panels)</li></ul>
<b>Lighting</b>	<ul style="list-style-type: none"><li>• Metal panels can be backlit or up-lit</li><li>• Backer material can be black or white</li><li>• Image can be a positive or negative, negative for backlighting</li><li>• Open area of perforations typically do not exceed 15% (not for general illumination)</li></ul>
<b>Design Process</b>	<ul style="list-style-type: none"><li>• Determine application</li><li>• Select image</li><li>• Select application system (wall, ceiling, curved)</li><li>• Submit graphic to <a href="mailto:falnakk@cginc.com">falnakk@cginc.com</a></li><li>• Complete and submit project details on check sheet</li><li>• Scaled images will be returned via email to its originator for approval</li></ul>

# Design Guide

## Step 1: Select Image

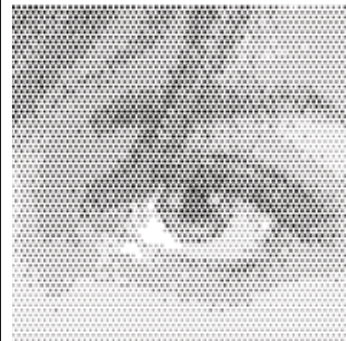
CGC's Ceilings Solutions Group will help you qualify your image or art during the design process. It starts with your selection of a photo, logo, or black and white art of your design.

- Typically, a higher contrast image will produce better results, but not always. See examples that follow.
- Select a photo from thinkstockphotos.com or provide your own image (logos, artwork, graphic) (300dpi minimum) (TIF, JPG and PDFs are acceptable).
- For custom images (not from thinkstockphotos.com), an image release statement must be completed.
- The selected image will be transformed into a perf pattern (areas of photograph are sampled for contrast and assigned a perforation diameter).
- Negative or positive. CGC can provide a negative or positive of the selected image. A negative image is where the light part of image is perforated. This is typically used for backlighting where the image will become positive. (See images below).

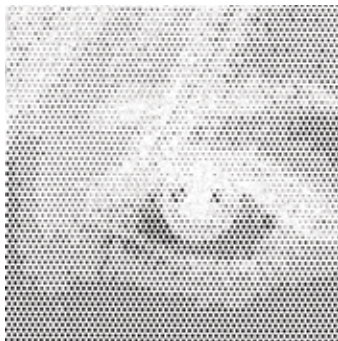
**Image**



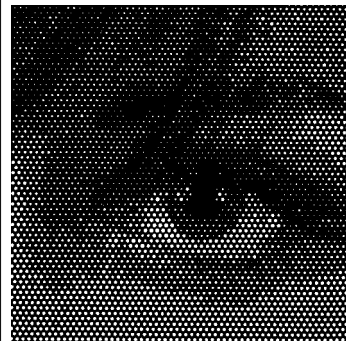
**Perforated Image**



**Negative Image, Backlit**



**Negative**



# Design Guide

**Step 2:  
Determine Canvas Size  
and Panel Size**

- Images can be displayed on a single panel or as a mural across multiple panels.
- See examples below of how the image can be spread across multiple panels.
- Individual panel size options (2'x2', 2'x4', 2'x6').

**Panel Configuration:**

**Ceiling**

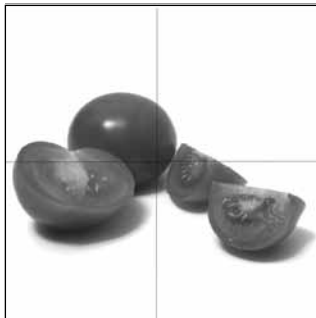
- CELEBRATION
- PANZ (FL or SQ)
- CURVATURA

**Walls**

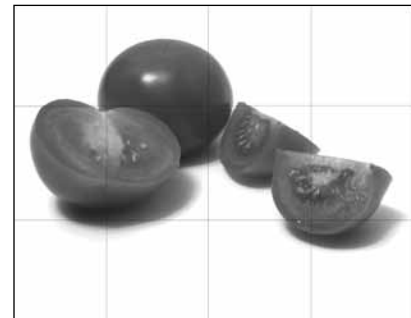
- CELEBRATION

**Examples**

**4'x4' canvas (2'x2' panels)**



**6'x12' canvas (2'x2' panels)**



**Exterior Installation**

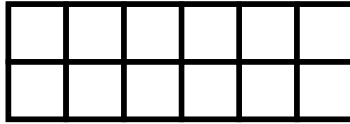
PIXELS can be used on protected exterior soffits with CELEBRATION panels and DXFEV FINELINE suspension system. Panel sizes can be 2'x2', 2'x4' or 2'x6'. Acoustical backer is not recommended for exterior use.

# Design Guide

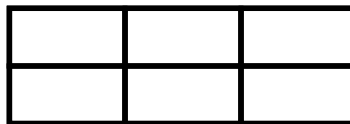
Layouts represent patterns only. Final canvas and total ceiling/wall size is up to the designer. No limit to image or canvas size.

## Step 3: Determine Panel Layout

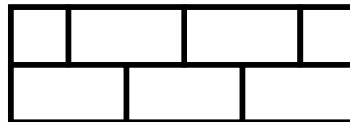
### 2'x2' Squares



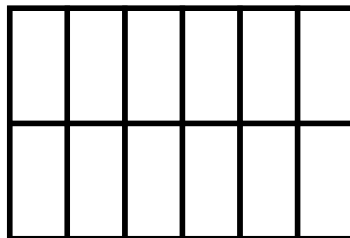
### 2'x4' Horizontal\*



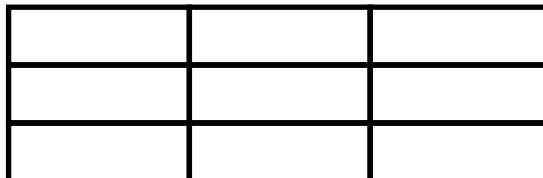
### 2'x4' Ashlar\*



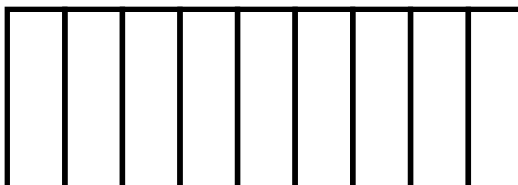
### 2'x4' Vertical\*



### 2'x6' Horizontal



### 2'x6' Vertical



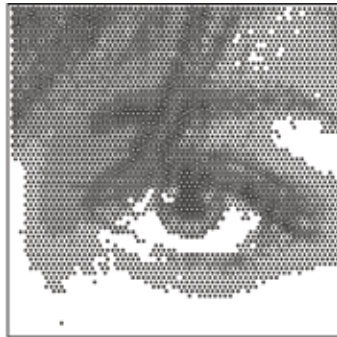
\*Note: 2'x4' not available for CURVATURA

# Design Guide

## Step 4: Determine Resolution

- The dynamic effect of the eye and brain creating the image at different distances with different hole sizes and hole densities.
- Three choices for perforation fidelity.

### Low Resolution



### Medium Resolution



### High Resolution

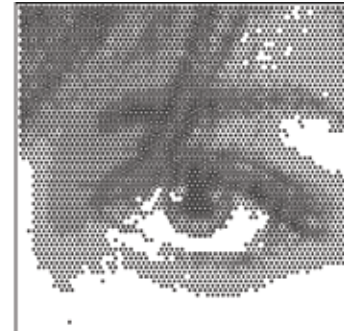


## Perforation Pattern Orientation

**Square:**  
Centerline of holes run 90° to panel sides



**Oblique:**  
Centerline of holes run 60° to panel sides

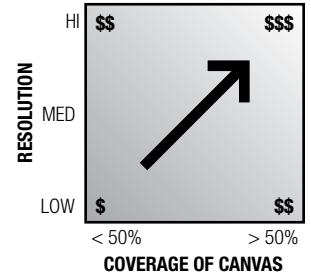


See [cgcinc.com/pixels](http://cgcinc.com/pixels) for full-size downloadable and printable images.

# Design Guide

## Design Considerations— Aesthetics and Budget

PIXELS gives you the opportunity to design and choose between higher resolution images and lower resolution images either for artistic considerations or to reduce cost. As resolution is increased, more perforations are required to create the image. Thus, higher resolution costs more than lower resolution. As well, if an image only takes up part of the canvas, the entire surface has a smaller percentage of perforations — also reducing costs.



**Low Resolution**  
Less than 50% coverage



Greater than 50% coverage



**Medium Resolution**  
Less than 50% coverage



Greater than 50% coverage



**High Resolution**  
Less than 50% coverage




Greater than 50% coverage



# Design Guide

**Step 5:**  
**Determine Image Evaluation**  
**Submit Check Sheet for Image Evaluation**

## IMAGE EVALUATION CHECK SHEET — LOCATED AT CGCINC.COM/PIXELS

<b>Check Sheet</b>	<b>Pixels™</b>	Web Site <a href="http://cgcinc.com">cgcinc.com</a>
	SAMPLE	<input checked="" type="checkbox"/> Please check appropriate boxes
Complete the following and send to <a href="mailto:falnakkarcgcinc.com">falnakkarcgcinc.com</a> . See PIXELS Design Guide for assistance.		
<b>Contact Information</b>	Name _____ Company or firm name _____ Phone _____ Contact e-mail _____ Project name _____	
<b>Image or Artwork Information</b>	<input type="checkbox"/> Photograph file/Graphic file • File name _____ • Attach image to e-mail • Attach Image Release Statement <input type="checkbox"/> Thinkstockphotos.com Image Number _____	
<b>Application</b>	<input type="checkbox"/> Ceiling <input type="checkbox"/> Wall <input type="checkbox"/> Curved (CURVATURA™ applications)	
<b>Size</b>	Canvas size (total area the image will reside) _____ ft x _____ ft Relative image size within the canvas size: _____ ft x _____ ft (or provide sketch)	
<b>Product Type</b>	<input type="checkbox"/> CELEBRATION™ <input type="checkbox"/> PANZ® FL <input type="checkbox"/> PANZ® SQ <input type="checkbox"/> CURVATURA	
<b>Panel Size</b>	<input type="checkbox"/> 2'x2' <input type="checkbox"/> 2'x4' <input type="checkbox"/> 2'x6'	
<b>Panel Layouts</b>	<input type="checkbox"/> 2'x2' Squares <input type="checkbox"/> 2'x4' Ashlar (alternating) rectangles* <input type="checkbox"/> 2'x6' Horizontal rectangles <input type="checkbox"/> 2'x6' Vertical rectangles	
<b>Panel Size</b>	<input type="checkbox"/> 2'x4' Horizontal rectangles* <input type="checkbox"/> 2'x4' Vertical rectangles* <input type="checkbox"/> 2'x6' Ashlar (alternating) rectangles	
<b>Perforation rendering</b>	<input type="checkbox"/> Low <input type="checkbox"/> Med <input type="checkbox"/> High	
<b>Resolution</b>	<input type="checkbox"/> Negative <input type="checkbox"/> Positive	
<b>Image Type</b>	<input type="checkbox"/> Square (90°) <input type="checkbox"/> Oblique (60°)	
<b>Orientation</b>	<input type="checkbox"/> Square (90°) <input type="checkbox"/> Oblique (60°)	
<b>Backer Option</b>	<input type="checkbox"/> Black ACOUSTIBOND™ backer <input type="checkbox"/> White ACOUSTIBOND™ backer <input type="checkbox"/> No backer	
<b>Panel Color</b>	<input type="checkbox"/> Flat White <input type="checkbox"/> Silver Satin <input type="checkbox"/> Metallic Copper <input type="checkbox"/> Metallic Gold	
<b>Panel Color</b>	<input type="checkbox"/> Metallic Oyster <input type="checkbox"/> Cherry <input type="checkbox"/> Maple <input type="checkbox"/> Oak	
<b>Design Review Process</b>	After the PIXELS check sheet has been processed the following will be emailed back to its originator. – A 36"x42" print that shows the image broken down into its panel sizes. This is suitable for printing on a full-sized plotter. – A full scale section for a highlighted area to show perf resolution and pattern. This is also suitable for printing on a full-sized plotter. – The CGC Ceilings Solutions Group will retain these files by job name for reference and approval at the time of an order.	
<b>Special Instructions</b>	_____ _____ _____ _____ _____	
<b>NOTE: CGC Inc. reserves the right to refuse a PIXELS order request should CGC deem an image to be inappropriate.</b> <small>* Not available in CURVATURA.</small>		
<b>CGC</b> <small>A USG COMPANY</small>	CGC Inc. 350 Burnhamthorpe Rd. W., 5th Fl Mississauga, ON L5B 3J1	IC565/10-10 © 2010, CGC Inc. Printed in Canada

### Design Review Process

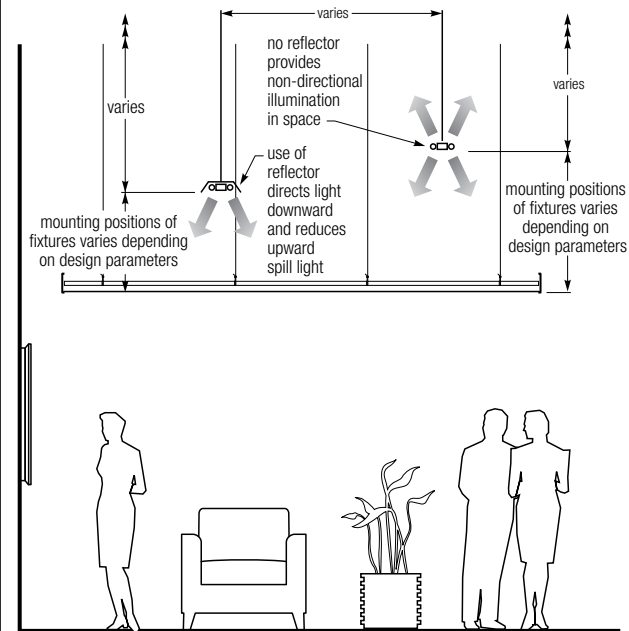
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# Design Guide

## Lighting

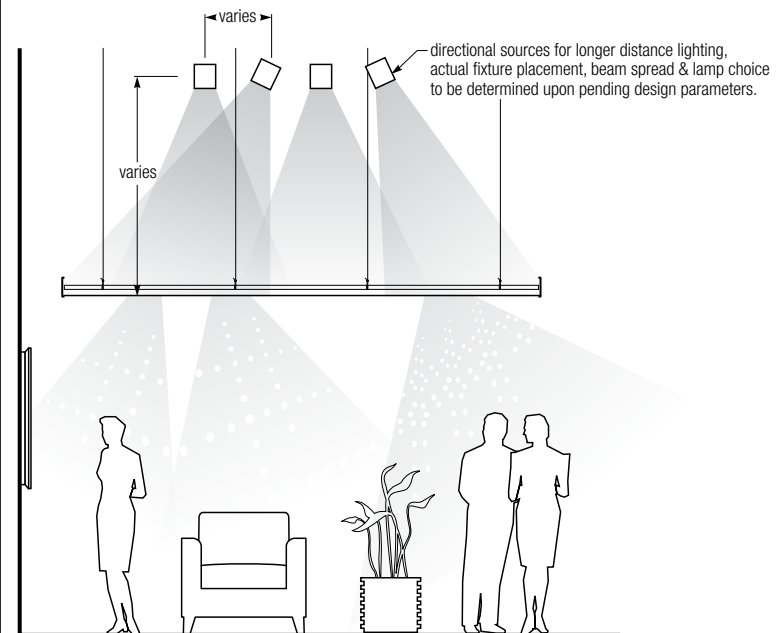
### Fluorescent Strip Fixtures

Fluorescent fixtures with no reflector provide non-directional illumination in space. Use of fixtures with a reflector directs light downward and reduces upward spill light.



### Point Source Incandescent or Halogen Fixtures

Where Acoustibond backer is not selected, the perforation pattern can be projected on walls and floors of the space. White Acoustibond backer will diffuse light to create an even glow.

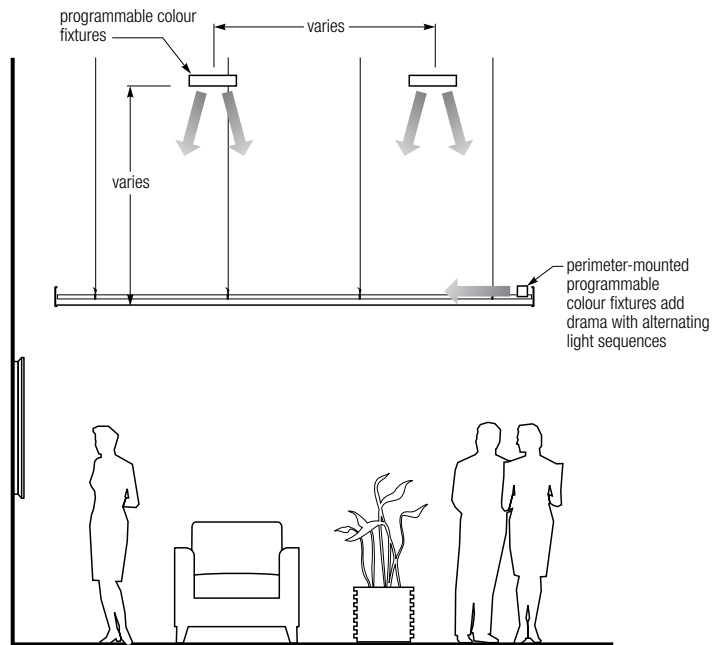


# Design Guide

## Lighting

### LED Light Sources—Single or Programmable

Programmable LEDs add an additional level of interest by allowing the opportunity to project the perforation pattern with changing colours.



Consult a lighting consultant for specific recommendations.

**Specification**

For PIXELS specification refer to the particular system application.

**Ceiling**

- CELEBRATION
- PANZ (FL or SQ)
- CURVATURA

**Walls**

- CELEBRATION

**Shipment and Installation**

Prior to manufacturing, your PIXELS ceiling or wall will be presented to the contractor for final approval. The entire canvas with specified imagery will be shipped with pre-numbered panels and accompanying shop drawings for proper and easy installation.