

# DIFFUSE™

Acoustic Diffusion Array System



## Exceptional diffusion. Small footprint.

The DIFFUSE system was engineered to provide warm accuracy, precise intelligibility and vast spaciousness to any acoustic environment.

The result of meticulous research and engineering, DIFFUSE was designed to scatter sound within an impossibly small profile. With a total thickness as narrow as one inch, DIFFUSE redefines what is possible within an acoustic space. Additionally, DIFFUSE is the only modular acoustic system available today. Tile DIFFUSE panels next to each other and the bandwidth increases. Increase the distance DIFFUSE stands from the wall, and the bandwidth increases even further.

DIFFUSE panels are available for upgrade to our DIFFUSE Elite system - arguably the most advanced acoustic system in existence.

DIFFUSE panels are also available with SoundTex absorptive backing, adding low-level absorption to correct problematic high-frequency flutter echoes.

Available in a wide variety of finishes, DIFFUSE also offers brilliant architectural appeal to any project.

DIFFUSE™. The World's only truly modular acoustic system.



ARITHMETIC

[www.arithmetic-design.com](http://www.arithmetic-design.com)

Engineered for discerning listeners.

Design: Aperture Diffraction Grating (ADG)

Slot sequence: Number theory based sequential diffusion.  
Sequence broadens with expansion of array.

Effective bandwidth: 350hz - 8000hz\*

Standoff distance: 0.25”(foam), 0.50”(foam), 1”, 1.75” and 2.5”

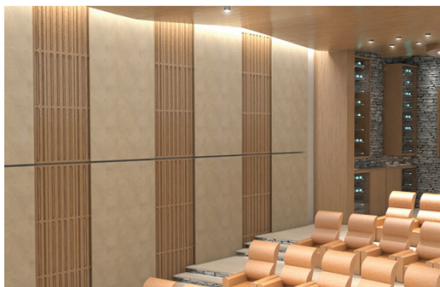
Available sizes(HxW): 2’x2’, 2’x4’, 4’x4’, 8’x4’, 12’x5’(Laminate only)

Crafted for perceptive designers.

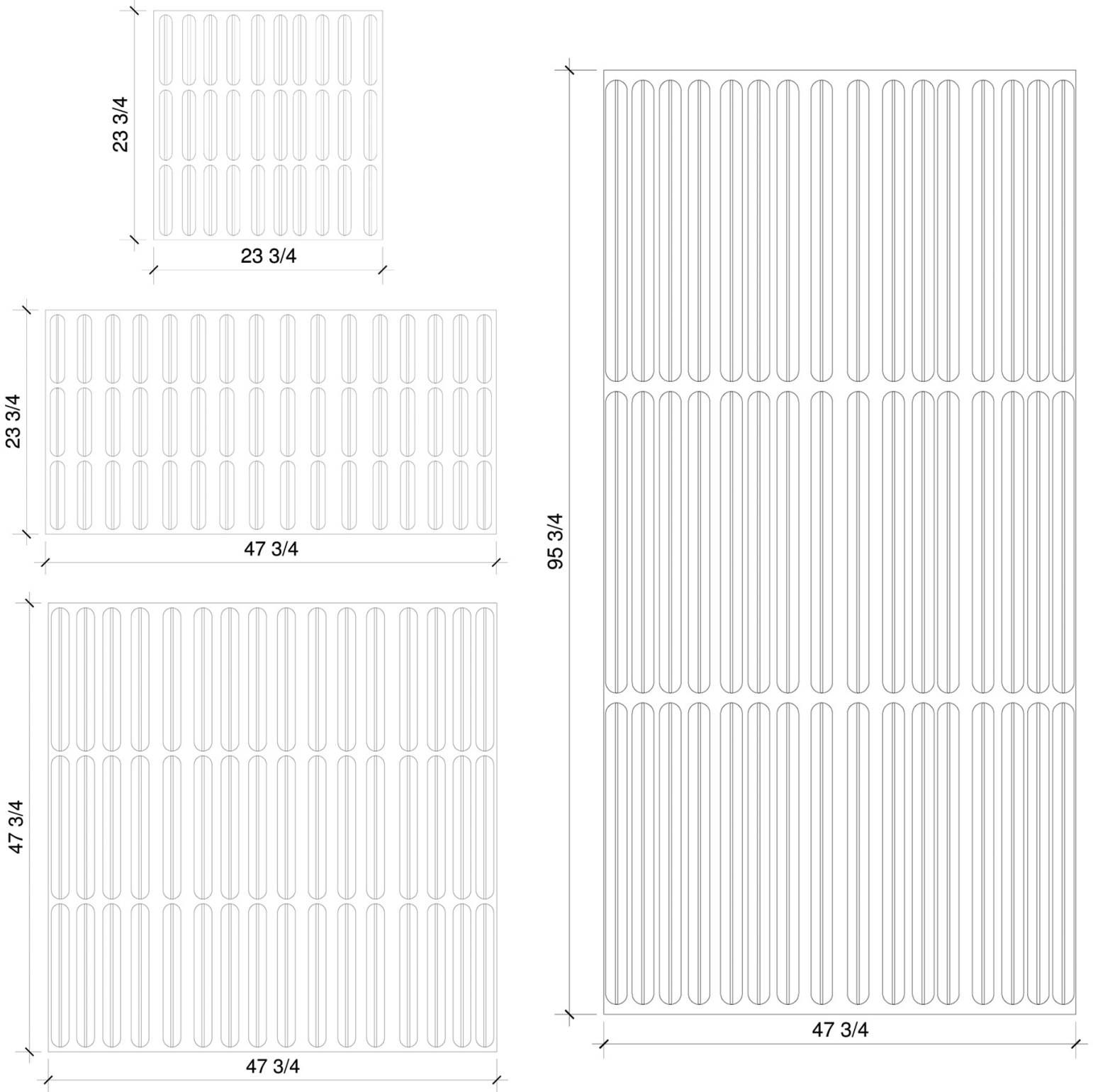
Available materials: EPP foam  
FR foam  
Laminated MDF  
Laminated FR MDF  
Baltic Birch Premium

Available finishes:

<b>Foam:</b>	White or Charcoal
<b>Baltic Birch:</b>	Premium clear or custom tint
<b>Laminated MDF:</b>	Beach Wood, Blonde Echo, Boardwalk, Brighton Walnut, Brushed Steel, Burma Cherry, Candle Glow, Chocolate Pear, Frosty White, Hard Rock Maple, Island Bamboo, Lauren Mahogany, Linear Ash, Merapi, Natural Maple, Orissa Cherry, Pacaya, Pearwood, Persian Cherry, Snow White, Stromboli, Summer Flame, Talas Cherry, Tawney Port, White Ash and Wild Cherry



# DIFFUSE Cutsheet

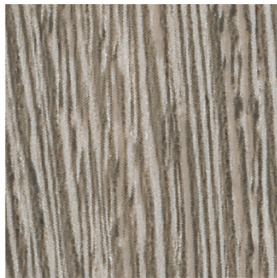


## DIFFUSE Color Samples

DIFFUSE is available in a wide variety of materials and finishes. Below are a few of the hardwood and laminate colors that are available. DIFFUSE is also available in white or black foam (not shown) for use in ceiling grids or behind cloth walls. Please contact Arithmetic Design for additional information.



Baltic Birch Premium



Beachwood



Lauren Mahogany



Merapi



Orissa Cherry



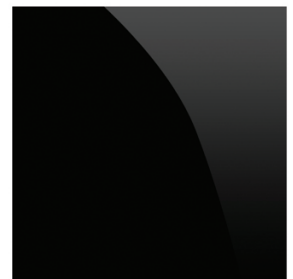
Hard Rock Maple



Pacaya



Wilson Cherry



High Gloss Black

Colors displayed above are intended for illustrative purposes only. Actual colors and tints may vary. Hardwoods will vary based on harvest and other natural variables.

Colors displayed above represent a small sample of available colors. Please visit our website or contact us for a complete listing of colors or samples of materials.

## DIFFUSE Acoustical Data



ISO - 17497 - 2		ASTM C-423a				
f (hz)	Scattering	Absorption				
		1" standoff sides closed	1" standoff sides open	3.5" + faced fiberglass board	3.5" + faced batting	
100	0.00	0.00	0.00	0.28	0.76	
125	0.00	0.00	0.00	0.38	0.72	
160	0.00	0.01	0.00	0.60	0.89	
200	0.00	0.00	0.01	0.90	0.89	
250	0.00	0.02	0.02	1.15	0.83	
315	0.00	0.04	0.03	1.16	0.70	
400	0.00	0.04	0.03	1.03	0.54	
500	0.85	0.08	0.05	0.61	0.35	
630	0.93	0.14	0.09	0.30	0.20	
800	0.88	0.21	0.16	0.28	0.16	
1000	0.76	0.19	0.16	0.30	0.18	
1250	0.72	0.16	0.15	0.28	0.20	
1600	0.71	0.15	0.14	0.25	0.21	
2000	0.70	0.14	0.12	0.21	0.22	
2500	0.69	0.12	0.12	0.19	0.23	
3150	0.66	0.13	0.13	0.17	0.21	
4000	0.73	0.15	0.13	0.15	0.21	
5000	0.75	0.18	0.18	0.23	0.29	
6300	0.76					
8000	0.71	SAA	0.11	0.09	0.57	0.40
		NRC	0.10	0.10	0.50	0.40

