

dnp Black Bead Screen™

for Projection Design F1 SXGA projectors



dnp has designed a special version of the dnp Black Bead Screen optimised for Projection Design F1 SXGA projector with 1:1 off-axis lens. It is the first optical rear projection screen to support this projector.

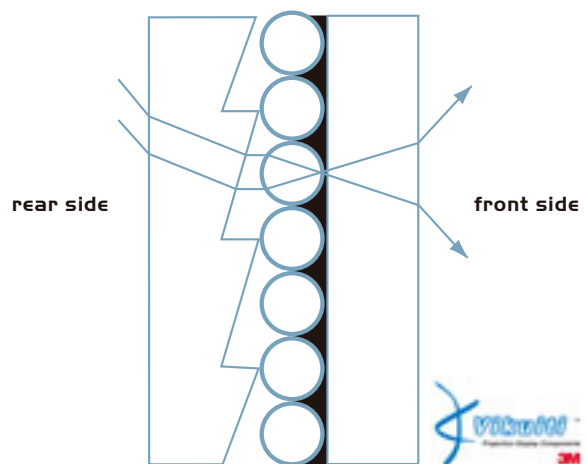
The F1 SXGA is an off-axis projector designed to project images at a steep angle from above or below the screen. In combination with the 1:1 lens, this makes it possible to reduce the built-in depth to 50% of the screen width. In order to get full value from the F1 projector you need a screen which is able to redirect the off-axis image and send it forward at right angles towards the viewers. And this is what the dnp BB PDF1 Screen does.

By using a special Fresnel lens with a centre off-set, the BB PDF1 Screen provides much brighter images in the direction of the viewers and far better brightness

uniformity than with any diffusion or conventional Fresnel screen.

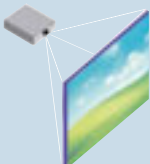
The BB PDF1 Screen combines a special off-set Fresnel lens with the world renowned Black Bead technology that produces crisp, high-contrast images – even in environments with high levels of ambient light.

- = The first optical screen for Projection Design F1 SXGA
- = Ultra-short built-in depth
- = Unsurpassed contrast and resolution
- = High centre-to-corner brightness uniformity
- = Wide horizontal and vertical viewing angles



screen profile (horizontal section)

The rear element of the BB PDF1 Screen consists of a special Fresnel lens with a centre off-set which directs all projected light forwards at right angles through the black layer on the front of the screen. The projected light exits through this optical filter, leaving an almost completely black area facing the viewer. The black area absorbs almost all the ambient light.



Rear projection

Rear projection means that the projector is placed behind the screen, shining straight forward towards the audience. The optical screen controls the light path and distributes bright, sharp images into a predefined viewing zone. Furthermore, the presenter and the audience can stand in front of the image without casting shadows. And with the projector equipment hidden behind the screen, the viewing area remains quiet, clean and tidy.

Screen specifications

BB PDF1 Screen	Type no.	65" BB PDF1 - 16:9 1565 9 135 11	67" BB PDF1 - 5:4 1567 9 135 11	70" BB PDF1 - 4:3 1570 9 135 10				
Dimensions								
Width	mm	1475 +/- 1	1365 +/- 1	1458 +/- 1				
Height	mm	846 +/- 1	1100 +/- 1	1103 +/- 1				
Rec. lens throw ratio range		1:1 - 104% off-axis	1:1 - 104% off-axis	1:1 - 104% off-axis				
Rec. projection distance range*	mm	1355	1355	1355				
Thickness	mm	6,2 +/- 0.4	6,2 +/- 0.4	6,2 +/- 0.4				
Weight	kg	9 +/- 10%	11 +/- 10%	12 +/- 10%				
Image area								
Width	mm	1439	1329	1422				
Height	mm	809	1064	1067				
Optical specifications								
Screen focal	mm	1355	1355	1355				

* General tolerance = +/- 15%, related to the actual screen focal length.

General specifications

Optical specifications	Peak Gain			
BB PDF1 Screen	1.0 +/- 0.2			

Subject to change without notice. Please check specification at time of ordering.

June 2004

Applications

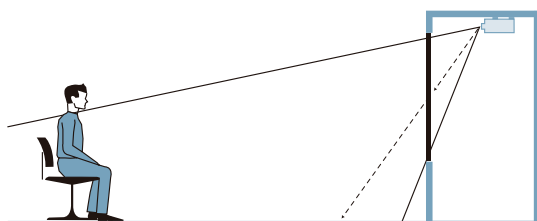
Typical applications for the BB PDF1 Screen are built-in presentation displays in high-end conference and meeting rooms with limited installation space. Due to the combination of off-axis projection and the use of

a 1:1 lens, the built-in depth of a 70" screen is only 0.75 metres with one mirror.

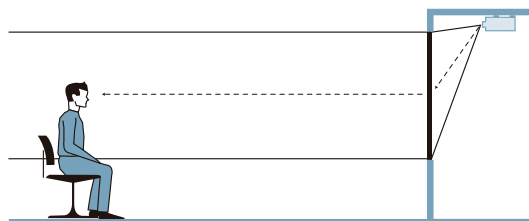
The dnp BB PDF1 Screen is available in 3 sizes: a 70" screen in 4:3 format;

a 67" screen in 5:4 format and a 65" in 16:9 format, which is perfectly suited to high-end home theatre installations.

Projection Design F1 SXGA projector used with a traditional screen



Projection Design F1 SXGA projector used with the dnp BB PDF1 Screen



Black Bead lens Fresnel lens



Optical screen technology

The dnp Black Bead Screen enhances the image for optimum viewing by combining the focusing ability of a Fresnel lens with the Black Bead lens's high contrast and resistance to ambient light. The result is brilliantly sharp images, high image uniformity and superb contrast – even in environments with extreme ambient light.

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Screens of the art