

dnp Contrast Filter Screen™



The dnp Contrast Filter Screen (CFS) is a new breakthrough in screen technology for control rooms and POS applications - combining high brightness with dramatically improved contrast and viewing angles.

The secret of the new CFS Screen, the successor to dnp's Ultra Contrast Screen series, is an advanced seven layer composite technology that combines brightness enhancing lens systems with a new high-contrast filter. This new lens architecture provides contrast ratios which are twice as high as those of the dnp Ultra Contrast Screen - yet simultaneously delivering even brighter images.

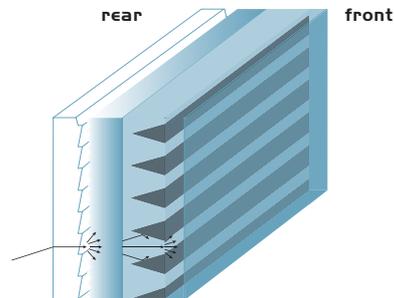
While the dnp UCS Screens have a brightness of gain 3.7, the new CFS Screen delivers a gain of 4.0. Moreover, the horizontal 1/2 gain angle has been improved from 24° to 34° offering superior image quality from even wider viewing angles. The vertical viewing angles have also been increased by more than 10% - from 7°

to 8° - to improve brightness uniformity in high display walls using several rows of screens.

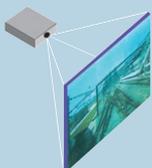
Another major improvement is the screen resolution. With an ultra-fine pitch of 0.065 mm, a 50" version of the screen provides a horizontal resolution of 15,000 lines and infinite vertical resolution. This eliminates any form of moiré problems with LCD and DLP projectors.

- = **Advanced 7 layer composite technology**
- = **New contrast filter with unsurpassed black levels**
- = **Enhanced brightness and image uniformity**
- = **Extra wide viewing angles**
- = **Superior sharpness and resolution**
- = **Compatible with LCD, DLP, LCOS, Light Valve and D-ILA projectors**

Screen profile (top view)



The Fresnel lens on the rear element refracts projected light directly through the screen. At the rear of the lenticular element, a film with ultra-fine pitch lenses spreads the light evenly to a diffuser layer. The next layer allows the rear projected light to pass through a high contrast filter with a pitch of 0.065 mm (that blocks incident light from degrading the image). The black lines which cover 60% of the screen surface, effectively absorb ambient light and prevent reflections from windows and room lighting. The impact of ambient light is further reduced by the matt layer on the screen surface, which also features an anti-static, scratch proof coating.



Rear projection

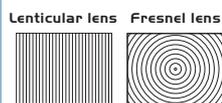
Rear projection means that the projector is placed behind the screen, shining straight forward towards the audience. The optical screen controls the light path and distributes bright, sharp images into a predefined viewing zone. Furthermore, the presenter and the audience can stand in front of the image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

Screen specifications

Contrast Filter Screen	Type no.	50" CFS 826 (4:3) I 550 8 082 65	50" CFS 870 (4:3) I 550 8 087 65	50" CFS 930 (4:3) I 550 8 095 65	50" CFS 786 (16:9) I 550 8 079 66	56" CFS 786 (16:9) I 556 8 079 66	61" CFS 1030 (16:9) I 560 8 103 66
Dimensions							
Width	mm	1035	1035	1035	1129,8	1263	1378
Height	mm	782	782	782	645,6	721	782
Rec. lens throw ratio range		0.7 - 0.95:1	0.75 - 1.0:1	0.8 - 1.1:1	0.6 - 0.8:1	0.55 - 0.95:1	0.75 - 0.9:1
Rec. projection distance range* mm		700 - 950	740 - 1000	790 - 1070	670 - 900	670 - 900	975 - 1185
Thickness	mm	4.0 +/- 0.3	4.0 +/- 0.3	4.0 +/- 0.3	4.0 +/- 0.3	4.0 +/- 0.3	4.0 +/- 0.3
Weight	kg	4.0 +/- 10%	4.0 +/- 10%	4.0 +/- 10%	3.6 +/- 10%	4.4 +/- 10%	5.3 +/- 10%
Image area							
Width	mm	1012	1012	1012	1106,8	1240	1355
Height	mm	759	759	759	622,6	698	759
Optical specifications							
Screen focal	mm	826	870	930	786	786	1030

* General tolerance = +/- 15%, related to the actual screen focal length.
Subject to change without notice. Please check specification at time of ordering.

April 2005



Optical screen technology

dnp optical screens enhance the image for optimum viewing by combining the focusing ability of a Fresnel lens with the distributive properties of a lenticular lens. The result is brilliantly sharp images, superb contrast and up to 4 times brighter images than conventional front or rear projection screens.

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Screens of the art