

Hints & Tips

- **Screen brightness has a fixed relationship to image area.** A screen of 2m squared is 50% dimmer than of one of 1m squared.
- **Screen area increases drastically relative to its diagonal size.** A small increase in the diagonal size is a big increase in image area. A 100" screen has four times the image of a 50" screen – and thus only 25% its brightness.
- **Screen brightness is also relative to gain.** But beware of some very creative claims here. Only dnp has a published standard for measuring gain - yet another reason you should **TRY BEFORE YOU BUY!** And make your trial in a truly representative location – rather than a conveniently controlled showroom or office.
- **Be very careful about vertical viewing angle:** it's a major cause of unexpected disappointment. The line of peak brightness is a line you draw from the projector lens, running through the centre of the screen. This is a law of physics - unless screens have specific optical technologies (such as dnp Holo, dnp Attention and dnp UCS).
- **Our eyes don't register light on a normal scale.** We can only register a difference when light levels double or halve. This is why the apparently super-bright screen in the showroom can look so weak in a shop window – and why a projector of 2,000 ANSI lumens seems hardly brighter than one of 1,000 ANSI lumens.
- **Contrast is the key.** The word 'bright' itself is misleading when applied to projection. Yes you do need a threshold level of brightness. But without proper black levels the image is a wash-out. Front screens – unlike rearpro screens – cannot distinguish between projected and other light; so ambient light 'pollutes' the black – ruining the contrast. **Without contrast there's no image, no matter how 'bright' it is.** Only optical screens from dnp can effectively combat high levels of ambient light and enhance projector contrast.
- **Screens in shop windows present special problems.** Glass is reflective. The greater the angle the light strikes glass, the more reflective it becomes; after approximately 45° it's more like a mirror. A normal office has approx 500 lux ambient light; outside on a bright sunny day it can be >120,000 lux (i.e. over 240 times brighter). So in some locations the brightest of projector/screen combinations might not be viewable at certain times of the day (unless the glass is treated). It needs planning and a sense of reality; each installation is different. This is why we have approx 14 types of screen materials and we always encourage people to **try before you buy**. A picture is worth a thousand words; a washed out bit of plastic is worth nothing.