WHITE PAPER

SONY

WUXGA or Full HD?

The Unexpected Difference for Presentations

The importance of screen height

With the ever-increasing resolution of computer displays and the availability of Full HD content wherever you look, users are quickly migrating to high resolution projectors.

And today's projectors can look great, doing a terrific job with all your content, from PowerPoint® presentations to Excel® spreadsheets, videoconferencing and online videos.

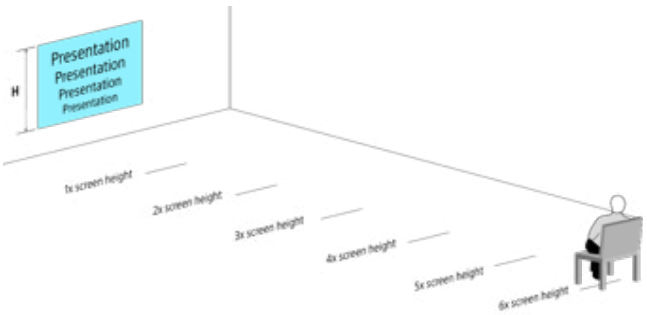
But users may be surprised to discover two nearly identical resolution choices: WUXGA (1920 x 1200) and Full HD (1920 x 1080). Why is there an 11% difference in resolution between the two? How does the difference come into play for practical applications?

And which image format is best for classroom and meeting room presentations? Sony created this document to answer these questions.

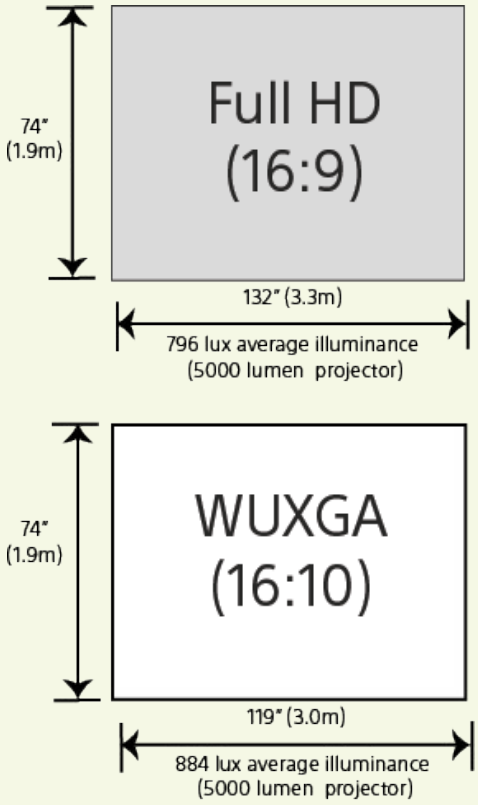
While projector installers must consider lumens and throw ratios, proper viewing also hinges on the suitability of a screen size for a given room. And the key index of screen size is height. In fact, for matching screen sizes to rooms, AV designers have long depended on the 4-6-8 Rule.

The rule proposes three different maximum seating distances, as multiples of screen height, for three different applications.

Not only is screen height crucial in successfully matching projectors to rooms, but it's also a crucial determinant in appreciating the difference between WUXGA and Full HD.



Application	Description	Maximum Seating Distance
Critical examination	Mission-critical review of detailed images including engineering, CAD/CAM and medical imaging.	4x screen height
Reading	Reviewing words and numbers, including PowerPoint slides, spreadsheets, Word® documents and web pages.	6x screen height
Passive viewing	General content, movies, video.	8x screen height



WUXGA is brighter

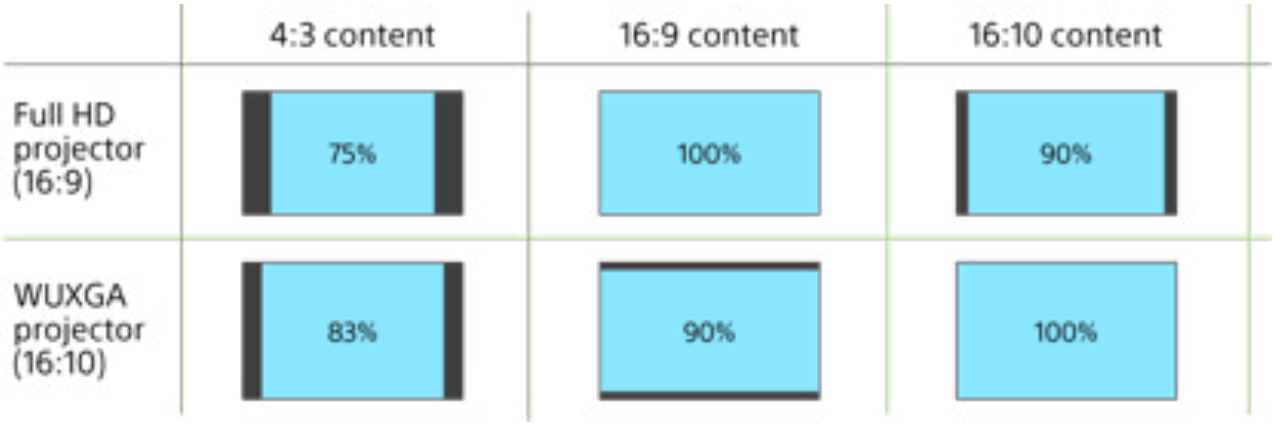
So how do WUXGA and Full HD projectors compare? We've seen that screen height is crucial. If the screen height is the same (matched for the room's purpose and viewing distances) and the specified light output is the same, then a WUXGA projector will be 11% brighter than a Full HD model. That's because the lumens become more spread out in Full HD projection.

WUXGA works well with the widest range of content

WUXGA has an aspect ratio (screen width to screen height) of 16:10. This is slightly closer to square than the Full HD aspect ratio of 16:9. At first glance, the difference may appear small. But it becomes substantial when we use projectors with different types of content: PowerPoint® slides, spreadsheets, engineering drawings, documents and websites.

WUXGA is a better fit for presentations

The PowerPoint and Keynote® presentations that are the focus of so many business meetings come in a choice of aspect ratios. While wide aspect ratios are gaining popularity, Bring Your Own Device presentations often originate from tablets in 3:2 or 4:3 formats and many legacy presentations are still formatted in 4:3. WUXGA is better suited to this broad range of possible sources. It can display three common aspect ratios (4:3, 16:9 and 16:10) with minimal loss of screen real estate. Less of the screen is wasted as letterbox or pillar-box black bars. More of the screen will be "live" content.



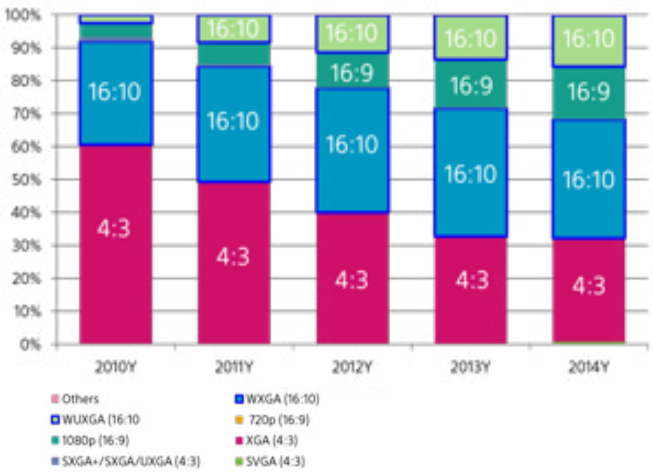
WUXGA is a better match for spreadsheets and engineering drawings

Of course, with 11% more pixels, the WUXGA projector can display 11% more information than a Full HD model. You can view more content without scrolling around computer windows. That's an important consideration if you need to review Excel® spreadsheets, engineering drawings or Computer Aided Design (CAD).

WUXGA is a better retrofit for 16:10 screens

16:10 projection is on a roll. Among projectors between 3,500 to 6,999 lumens, 16:10 has increased market share from around 35% in 2010 to roughly 50% in 2014.

The proliferation of 16:10 projection is an important factor for retrofits. If you're replacing an existing 16:10 projector throwing to a properly sized screen, a Full HD 16:9 projector will create an issue. The letterboxing effect will reduce your effective screen height, degrading legibility. Retrofitting with a WUXGA projector will maintain full screen height, maximising legibility.

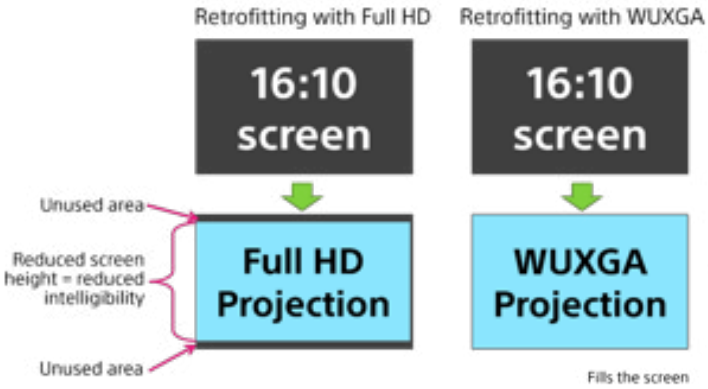


WUXGA is a better match for documents and websites

Most Word® documents, PDF files and websites are designed in "portrait" mode: the long dimension is vertical. Because WUXGA is taller than 16:9, it's a better match. Once again, you'll see 11% more information than with Full HD.

So what about Full HD?

At Sony, we believe Full HD is a great way to view entertainment content delivered in 16:9 format. That's why we created the world's first digital projector to support Full HD (our QUALIA™ 004 home theater projector back in 2003). And that's why we continue to be a leader in home theater Full HD projectors. That said, we believe Full HD projection is best suited when the overwhelming majority of content is 16:9 video. For general business and professional content, WUXGA is a better fit.



A final word

Compared to Full HD, WUXGA projection delivers notable advantages. We've seen that WUXGA is brighter for any given screen height that a room requires. WUXGA is a better fit for the wide range of content in business and professional applications ranging from education to research, engineering, faith, healthcare, government, image magnification and videoconferencing. And WUXGA is the best solution for the vast quantity of 16:10 screens already installed.

But even among WUXGA projectors, Sony's models stand apart. They've won repeated industry Best of Show, Best in Class, Best New Product and Hot Product awards.

Audiences appreciate the colour reproduction of Sony's 3LCD BrightEra® technology. Installers appreciate the versatility. And owners appreciate the estimated 20,000 hour operating life of Sony's available Z-Phosphor™ laser light source. For all these reasons, Sony's WUXGA projectors are industry favourites.

Sony is the leading supplier of AV/IT solutions to businesses across a wide variety of sectors including, **Media and Broadcast, Video Security, Medical, Digital Cinema and Displays**. It delivers products, systems and applications to enable the creation, manipulation and distribution of digital audio-visual content that add value to businesses and their customers. With over 25 years' experience in delivering innovative marketleading products, **Sony** is ideally placed to deliver exceptional quality and value to its customers. Collaborating with a network of established technology partners, **Sony** delivers end-to-end solutions that address the customer's needs, integrating software and systems to achieve each organisation's individual business goals. For more information please visit **www.pro.sony.eu**

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