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Large-Area Color Plasma Modular Screens

Plasma screens are designed on the basis of DC plasma panels. The panels in principle consist of two glass plates seperated by a ceramic mesh, forming a rectangular matrix of cells. The ceramic seperator bears horizontal and vertical electrodes, a hard seal along the perimeter of the panel enshures environmental protection. The space between the glass plates is filled with a mixture of noble gases, exciting red, green or blue phosphor pixels when a control signal is applied to two perpendicular electrodes.
The seamless structure of the panels permits stacking with minimal discontinuity in the image. Different element resolutions permit the adaptation to the various applications.

Standard Screens

Model	Pixel Resolution (RGB Trixel)	Trixel pitch (mm)	Total screen size (m)	Total weight (kg)
Plasma TV3 DC - 4 x 3	512 x 384	3	1.6 x 1.2	95
Plasma TV3 DC - 5 x 4	640 x 512	3	2.0 x 1.6	156
Plasma TV3 DC - 6 x 4	768 x 512	3	2.3 x 1.6	190
Plasma TV3 DC - 8 x 6*	1024 x 768	3	3.1 x 2.3	375
Plasma TV3 DC -10 x 8*	1280 x 1024	3	3.9 x 3.1	630
Plasma TV6 DC - 7 x 5	448 x 320	6	2.7 x 2.0	275
Plasma TV6 DC -10 x 8*	640 x 512	6	3.9 x 3.1	630
Plasma TV6 DC -12 x 10*	768 x 640	6	4.7 x 3.9	950
Plasma TV6 DC -16 x 12*	1024 x 768	6	6.2 x 4.7	1500
Plasma TV12 DC -10 x 8*	320 x 256	12	3.9 x 3.1	630
Plasma TV12 DC -12 x 10*	386 x 320	12	4.7 x 3.9	950
Plasma TV12 DC -16 x 12*	512 x 384	12	6.2 x 4.7	1500
Plasma TV12 DC -20 x 16*	640 x 512	12	7.8 x 6.2	2500
Plasma TV3 AC - 5 x 4	640 x 512	3	2.0 x 1.6	200
Plasma TV3 AC - 6 x 4*	768 x 512	3	2.3 x 1.6	250
Plasma TV3 AC - 8 x 6*	1024 x 768	3	3.1 x 2.3	500
Plasma TV3 AC -10 x 8*	1280 x 1024	3	3.9 x 3.1	800

* - Screen transformable in two subelements.

Three or more cells of the panel form a picture element (pixel). A module consists of 4 ea. seamless segments in the size of 193 x 193 mm. Panels can be manufactured with different pixel sizes and resolution:

- **64 x 64 pixels of 3 mm in size**
- **32 x 32 pixels of 6 mm in size**
- **16 x 16 pixels of 12 mm in size**

For comparison TV Standart PAL/ SECAM screen resolution 768 x 576 pixels.

For operation of Plasma Screens the following technical requirements should be met:

Hardware : Standart PC, two free PCI -Slots, Prozessor PII, 200Mhz
Software : Operating system Windows 9X, graphic medium standart

Customized adaptations are possible on request. Customized production will be in module raster of 40 cm.

Our large-area screens based on plasma panels are utilised to display computer and TV- images, text and graphics. They are compatible with the majority of multimedia graphic and video formats and have proven their reliability in industrial and military control centres. The functional capabilitities of our plasma large screens enable their use with Video- DVD/ Cassetterecorders/ Cameras, TV-receivers and the display of information from PC in all modes of SVGA adapters. Standardised elements enshure near unlimited scalability

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Modules

Module parameter	Plasma - TV3 DC	Plasma - TV6 DC	Plasma - TV12 DC	Plasma - TV3 AC
Resolution, (R,G,B trixel)	128 x 128	64 x 64	32 x 32	128 x 128
Pixel pitch, (mm)	3	6	12	3
Dimensions, (h,w,d, mm)	386 x 386 x 100			
Primary emission colors	R,G,B			
Number of colors	32768			16777216
White brightness, (cd/ m²)	45	100		250
Brightness non-uniformity, (%)	± 10			
Overal contrast, (rel. Units)	80 : 1			
Viewing angle, (degree)	± 70			
Operating temperature, °C	+5 - +45			-10 - +45
Main supply, (VAC 3-phase, Hz)	380 / 50			
Minimum viewing distance, m	3	6	12	3
Power consumption, (VA)	< 270		< 300	< 250
Weight, (kg)	7			10
Operating lifetime, (hrs.)	25000			45000

As compared with LED-based screens and Front-or Rear Projection-Beamer-Systems as well as Video-Cube-Walls, Plasma Screens are significantly lower in price, show an excellent image quality, high brightness and in particular superior uniformity and absence of grain effects in the image. They combine high contrast- and color ratio with wide angle view and excellent luminescence.

Due to the construction of the flat panels, requirements for space are minimised. Plasma screens may be attached to walls or hung from ceilings or stand freely in public access areas.

Plasma screens feature the advantages of significantly less thickness in comparison to video-cube-walls or projection systems, considerably less variation in brightness and color over the screen area and lower maintenance costs. Standardized elements enshure scalability to almost any screen size required. Different pixel resolutions allow for a wide variety of applications.

Solutions for home-video, office displays for presentations as well as cinema applications may be taylored to customer conception.