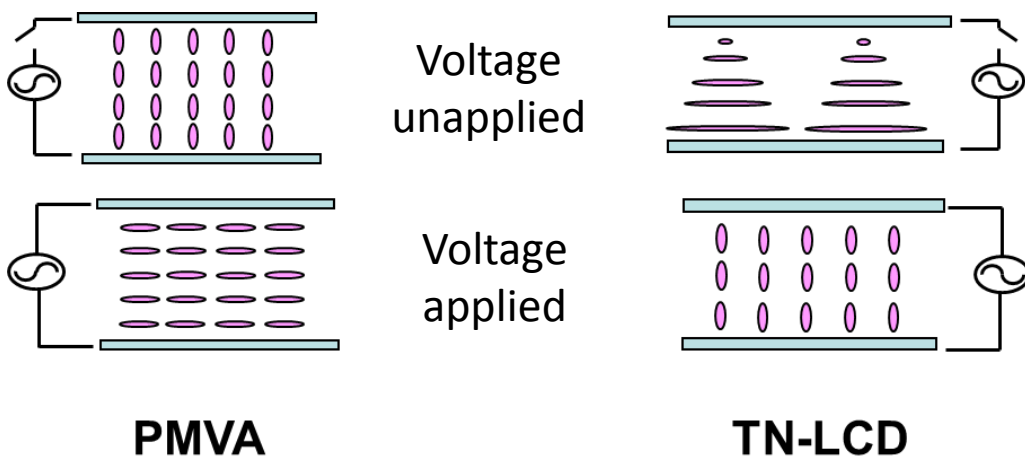


Information about PMVA Technology

The PMVA Technology stands for „**P**assive **M**atrix **V**ertical **A**lignment“ and describes the orientation of the crystals in specific.



In simple terms for PMVA can be said, that in a power-off status the display is opaque and if voltage is applied, the display becomes translucent - contrary to the TN technology. PMVA displays are therefore always negative, i.e. with real black background and white graphic elements or segments. PMVA displays are customer specific in general and always require a backlight

The above photo shows very vividly the possibility, as well as other technologies, to combine graphic elements and segments within one display!

Performance overview PMVA technology

The following chart, provides an overview about the PMVA technology characteristics. It shows, above all, the excellent contrast ratio and the ultra-wide viewing angle of these displays.

LCD Tech	Contrast	Viewing Cone	Response Time	Background vs Temp change
PMVA (Static~1/8duty)	1000:1	Wide Vertical / Horizontal ± 60	Normal ~100ms @ 25° C ~ 7000ms @ -30° C	No change
PMVA (1/16duty)	300:1	Wide Vertical +60° , -10° Horizontal ± 60	Normal ~100ms @ 25° C ~ 7000ms @ -30° C	No change
PMVA (1/32duty)	200:1	Wide Vertical +60° , -10° Horizontal ± 60	Normal ~100ms @ 25° C ~ 7000ms @ -30° C	No change
PMVA (1/64duty)	~100:1	Wide Vertical +60° , -10° Horizontal ± 60	Normal ~100ms @ 25° C ~ 7000ms @ -30° C	No change

Outstanding advantages of the PMVA Technology

- Deep black Background
- Temperature stability of the black value for the entire range of -30°C to +80°C
- Extremely wide viewing angle in all directions
- Very high contrast
- Sequential coloration available
- Suitable for all kinds of backlight
- Touch implementation possible

Usage of Touch Panels

The implementation of a touch screen is possible at any time. To avoid any visible streaks, in case of operation, a mechanical separation of display and touch is recommended and should be provided.

For any further question, please do not hesitate to contact us at any time.