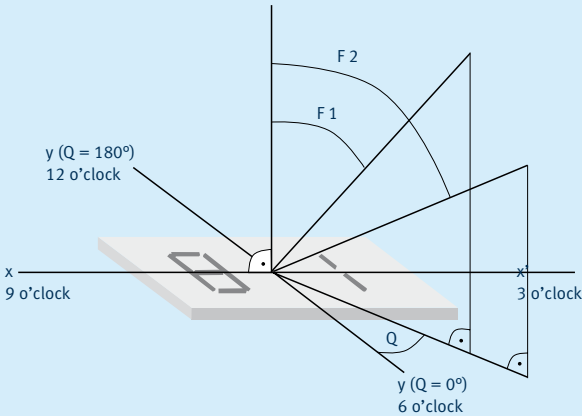


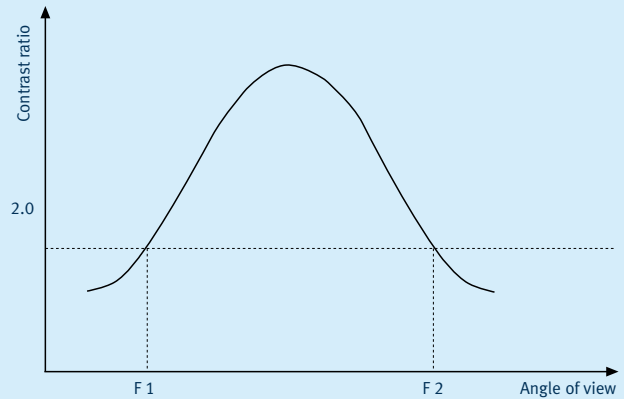


Optoelectronic features

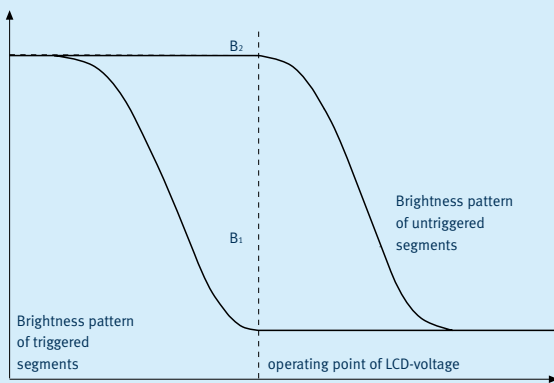
Definition of Q and F



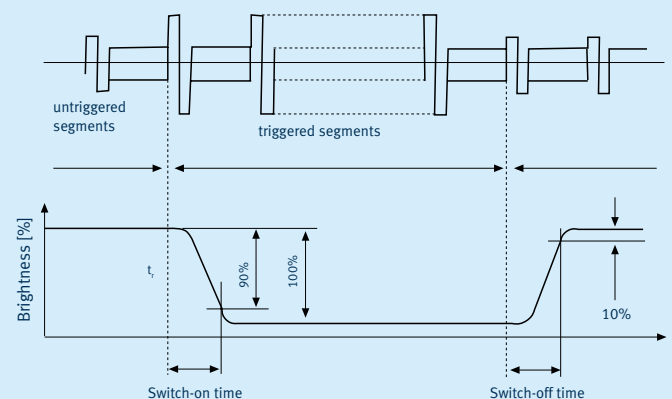
Definition of viewing angle F 1 and F 2



Definition of contrast ratio CR



Definition of switching times



Technology/Duty ratio	Duty 1/1	Duty 1/4	Duty 1/8	Duty 1/16	Duty 1/32	Duty 1/64	Duty 1/128
TN	Viewing cone X	70...-70		-	-	-	-
	Viewing cone Y	30...-60	30...-50	20...-40	-	-	-
	Operation temp	-40°C...+85°C		-30°C...+85°C	-	-	-
	Storage temp	-40°C...+90°C		-40°C...+90°C	-	-	-
STN	Viewing cone X	-	-	50...-50	45...-45	40...-40	35...-35
	Viewing cone Y	-	-	70...-60	70...-50	30...-45	25...-30
	Operation temp	-	-	-30°C...+85°C			-20°C...+80°C
	Storage temp	-	-	-40°C...+85°C			
FSTN	Viewing cone X	-	-	45...-45	40...-40	35...-35	30...-30
	Viewing cone Y	-	-	70...-60		70...-50	35...-40
	Operation temp	-	-	-30°C...+80°C			-20°C...+80°C
	Storage temp	-	-	-40°C...+85°C			

Remarks: The above data is for general reference only and may vary due to different display modes or illumination.

LCD controller reference table

Graphic

Controller	SEG	COM	Supply Voltage	Interface			Package				Special features
SBN1661	80	32	5V	parallel					SMD	DIE	
ST754x	102	68	1.7 to 3.3V	parallel	SPI	I ² C		COG			
ST757x	102	68	1.7 to 3.3V	parallel	SPI			COG			
SSD181x	132	64	2.7 to 3.3V	parallel	SPI		TAB	COG			
S1D1x60x	132	65	2.7 to 5.5V	parallel	SPI		TAB	COG			
ST756x	132	65	2.7 to 3.3V	parallel	SPI		TAB	COG			
NT753x	132	65	1.8 to 3.6V	parallel	SPI		TAB	COG			
PCF8535	133	65	5V			I ² C		COG			
NT7506	128	129	1.8 to 3.5V	parallel	SPI		TAB	COG			grey scale
SSD1854	128	160	1.8 to 3.3V	parallel	SPI	I ² C	TAB	COG			grey scale
S1D15E0x	160	132	1.7 to 3.6V	parallel	SPI		TAB	COG			MLS / grey
S1D1570x	200	65	2.4 to 5.5V	parallel	SPI		TAB	COG			
S1D153x	200	65	5V	parallel	SPI		TAB			DIE	
IST3x	240	128	2.4 to 3.6V	parallel	SPI		TAB	COG			
S1D1571x	256	81	2.7 to 5.5V	parallel	SPI		TAB	COG			MLS
UC160x	240	128	1.8 to 3.3V	parallel	SPI	I ² C	TAB	COG			
UC161x	256	160	1.8 to 3.3V	parallel	SPI	I ² C	TAB	COG			grey scale
ST752x	255	160	2.4 to 3.3V	parallel	SPI	I ² C	TAB	COG			grey scale
RA88xx	320	240	3.0 to 5.0V	parallel					SMD	DIE	char set
T6963	640	256	5V	parallel					SMD		char set
S1D13700	640	240	3.0 to 5.5V	parallel					SMD		char set/grey scale

Alphanumeric

Controller	SEG	COM	Supply Voltage	Interface			Package				Special features
ST706x	40	16	2.7 to 5.5V	parallel					SMD	DIE	
NT3881	40	16	4.5 to 5.5V	parallel					SMD	DIE	
PCF2119	80	18	1.5 to 5.5V	parallel		I ² C		COG			
NT760x	100	16	2.8 to 5.5V	parallel				COG			
SPLC093	80	26	2.4 to 5.5V	parallel	SPI			COG			
RW1067	80	34	2.7 to 5.5V	parallel	SPI					DIE	1000 chrs internal
ST703x	100	18	2.7 to 5.5V	parallel	SPI	I ² C		COG			

Segment

Controller	SEG	COM	Supply Voltage	Interface			Package				Special features
PCF857x	40	4	2.0 to 6.0V			I ² C		COG	SMD	DIE	
IST3040	40	4	2.4 to 3.6V		serial			COG			
RW1026	48	4	2.4 to 5.2V		serial					DIE	
HT162x	64	16	2.4 to 5.2V		serial			COG	SMD		

µC incl. LCD driver

Controller	SEG	COM
ATMEGA169	25	4
MSP430	40	4
PIC18C9	48	4