

## LCD 240x64 (/EL, /LED)

Mechanisch und elektrisch passend zu MT/GR-A Typen

### Displayauflösung

240 x 64 Pixel, 1/64 Duty

### Displayfarbe

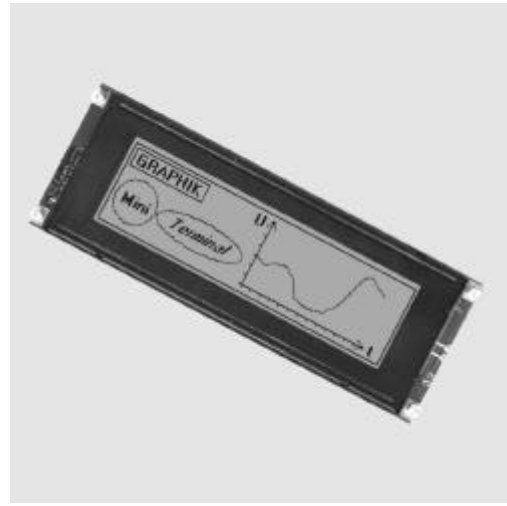
Gelb / Grün

### Hintergrundbeleuchtung

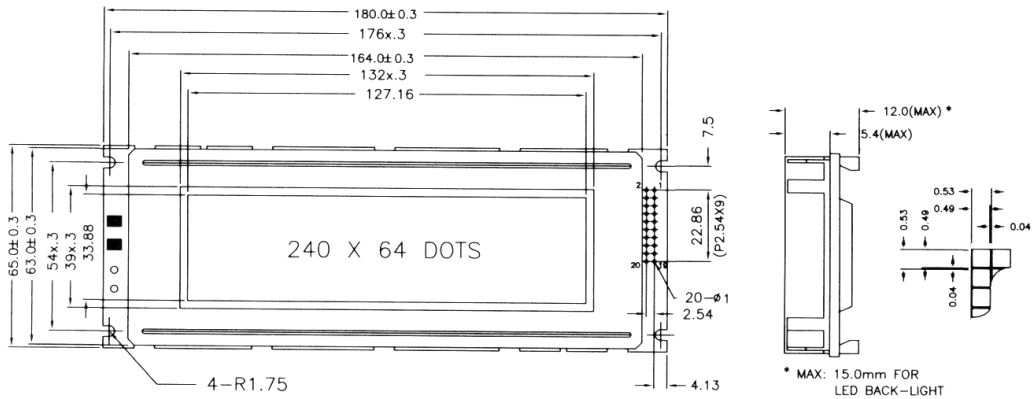
Ohne (reflektiv) für Typ LCD 240x64

EL für Typ LCD 240x64/EL

LED für Typ LCD 240x64/LED



## Datenblatt



### Absolute Maximum Ratings

Item	Symbol	Condition	Standard Value		Unit
			min.	max.	
Supply Voltage for Logic	$V_{DD} - V_{SS}$	$T_a = 25^\circ\text{C}$	0	7.0	V
Supply Voltage for LCD	$V_{DD} - V_{EE}$		-	25.0	V
Input Voltage	$V_I$		-0.3	$V_{DD}$	V
Operating Temperature	$T_{op}$		-	0	40
Storage Temperature	$T_{stg}$	-	-20	60	$^\circ\text{C}$

### Electrical Characteristics ( $T_a = 25^\circ\text{C}, V_{DD} = 5.0\text{V} \pm 0.25\text{V}, V_{EE} = -10.00\text{V}$ )

Item	Symbol	Condition	Standard Value			Unit	
			Min.	Typ.	Max.		
Supply Voltage for	Logic	$V_{DD} - V_{SS}$	-	4.75	5.0	5.25	V
	LCD	$V_{DD} - V_{EE}$	-	14	15.0	16.0	V
Supply Current for	Logic	$I_{DD}$	-	-	8.7	-	mA
	LCD	$I_{EE}$	-	-	2.0	-	mA
Operating Voltage LCD (Recommended)	$V_{DD} - V_O$	$0^\circ\text{C}$	-	12.5	-	V	
		$25^\circ\text{C}$	-	11.5	-	V	
		$40^\circ\text{C}$	-	10.5	-	V	
Input Voltage	H Level	$V_{IH}$	High Level	$0.7V_{DD}$	-	$V_{DD}$	V
	L Level	$V_{IL}$	Low Level	0	-	$0.3V_{DD}$	V

### Interface Pin Connection

Pin No	Symbol	Level	Description
1	FG	OV	Frame Ground
2	V <sub>SS</sub>	OV	Power Supply
3	V <sub>CC</sub>	5V	Power Supply
4	V <sub>O</sub>	Variable	Contrast adjust
5	$\overline{WR}$	L	Date write into T6963C
6	$\overline{RD}$	L	Date read from T6963C
7	$\overline{CE}$	L	Chip enable for T6963C
8	$C/\overline{D}$	H/L	Command/Date selection
9	NC	-	No Connect
10	$\overline{RESET}$	L	Initialize T6963C

Pin No	Symbol	Level	Description
11	DB0	H/L	Date Bit 0
12	DB1	H/L	Date Bit 1
13	DB2	H/L	Date Bit 2
14	DB3	H/L	Date Bit 3
15	DB4	H/L	Date Bit 4
16	DB5	H/L	Date Bit 5
17	DB6	H/L	Date Bit 6
18	DB7	H/L	Date Bit 7
19	FS	H/L	Font selection
20	NC	-	No connection