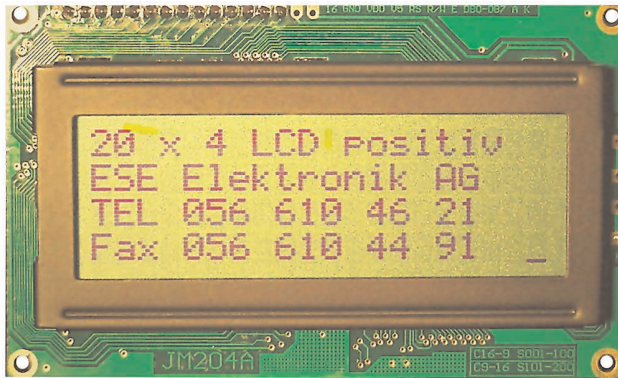


### JM 204 A

### LCD- Standard Charaktermodul



#### Hauptmerkmale

- 20 Charakter / 4 Zeilen
- Ziffernhöhe 4.83 mm
- Single Supply +5Volt
- STN-Technologie
- Einstellbarer Kontrast
- Option LED / EL- Beleuchtung

#### PIN Belegung

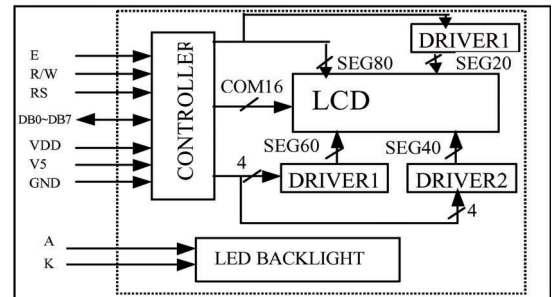
PIN	SYMBOL	SIGNAL DESCRIPTION
1	GND	GND
2	Vdd	Power Supply
3	V5	Adj. Contrast
4	RS	Register Select (H=Data, L=Instruction)
5	R/W	Read/Write L=MPU to LCM, H=LCM to MPU

PIN	SYMBOL	SIGNAL DESCRIPTION
6	E	Enable
7 to 14	DB0 to DB7	Data Bus for 4bit or 8bit Mode
15	A	Anode of LED Unit
16	K	Cathode of LED Unit

#### Spezifikationen ( Ta=25°C )

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage (logic)	Vdd-GND	-	4.5	5.0	5.5	V
Supply Current (logic)	Idd	Vdd=5.0	-	1.45	3.0	mA
Driving Current (LCD)	Iee		-	0.45	1.5	mA
Driving Voltage (LCD)	Vdd-V5		3.8	4.5	4.9	V
Input Voltage .. H ..	Vih		2.2	-	Vdd	V
Input Voltage .. L ..	Vil	...	-	...	V	
Output Voltage .. H ..	Voh	Ioh=-0.205mA	2.4	-	-	V
Output Voltage .. L ..	Vol	Iol=1.2mA	-	-	...	V
Option LED	I	ext. Resister	50	200	850	mA
Ambient temp.	t		0	-	55	°C

#### Block Diagramm



#### Mechanische Abmessungen

