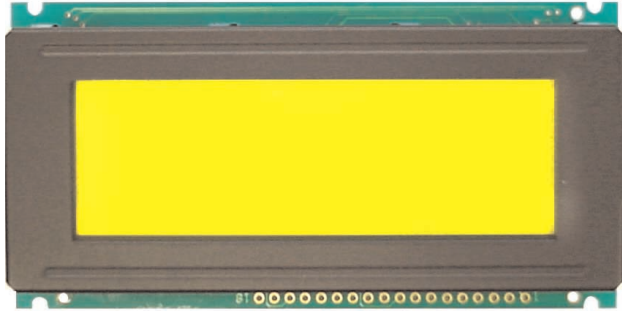


### JM 12032 A

### LCD- Standard Grafikmodul



#### Hauptmerkmale

- 120 x 32 dots
- Einstellbarer Kontrast
- STN- Technologie

#### Optionen

- LED / EL- Beleuchtung
- Erhöhter Temp. Bereich
- Farbige Reflektoren
- TN-FSTN Technologie

#### PIN Belegung

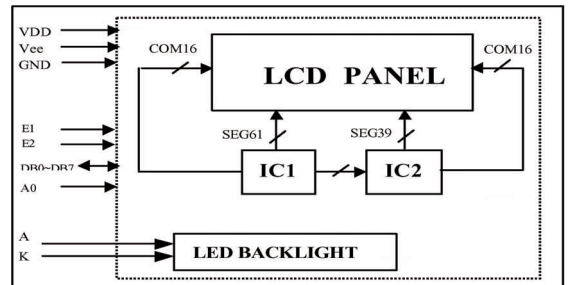
PIN	SYMBOL	SIGNAL DESCRIPTION
1	Vss	GND
2	Vdd	Power Supply
3	Vee	Power Supply for LCD
4	A0	Register Select (H=DATA, L=Instruction)
5	R/W	Read/Write L=MPU to LCM, H=LCM to MPU
6	E1	Enable for IC1

PIN	SYMBOL	SIGNAL DESCRIPTION
7	E2	Enable for IC2
8	NC	No connection
9 to 16	DB0 to DB7	Data Bus for 8bit Mode
..	A	Anode of LED Unit
18	K	Cathode of LED Unit

#### Spezifikationen ( Ta=25°C )

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Voltage (logic)	Vdd-Vss	-	4.5	5.0	5.5	V
Supply Current (logic)	Idd	Vdd=5.0	-	1.47	-	mA
Driving Current (LCD)	Iee	-	-	1.46	-	mA
Driving Voltage (LCD)	Vdd-Vee	25..	-	9.0	-	V
Input Voltage .. H ..	Vih	H	0.7Vdd	-	Vdd	V
Input Voltage .. L ..	Vil	L	Vss	-	0.3Vdd	V
Option LED	I	ext. Resistor	50	200.0	850.0	mA
Ambient temp.	t		0.0	-	55.0	°C

#### Block Diagramm



#### Mechanische Abmessungen

