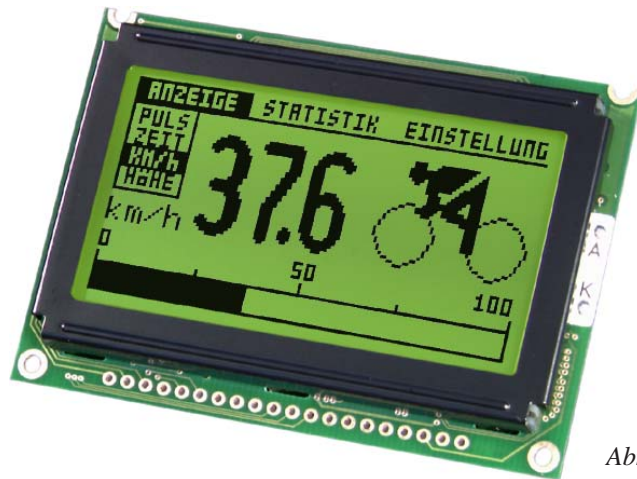


LCD- GRAFIK MODUL

128x64 PIXEL MIT LED-BELEUCHTUNG



Abmessungen 75x53mm

TECHNISCHE DATEN

- * KONTRASTREICHE SUPERTWIST ANZEIGE (UNBELEUCHTET: GRAU)
- * GELB-GRÜNE LED-HINTERGRUNDBELEUCHTUNG (typ. 100mA)
- * KONTROLLER HD 61202/3 INTEGRIERT
- * ANSCHLUß DIREKT AM 8-BIT DATENBUS
- * SPANNUNGSVERSORGUNG +5V / -3..-5V
- * BETRIEBSTEMPERATUR 0°C ... +50°C

OPTIONAL

- * BETRIEBSTEMPERATUR -20°C ... +70°C
- * ANSTEUER-IC MIT FONTS UND RS-232: **EA IC202-PGH**
- * EL-HINTERGRUNDBELEUCHTUNG (BLAU)
- * UNBELEUCHTETE ANZEIGE (REFLEKTIV)

BESTELLBEZEICHNUNG

LCD-GRAFIKMODUL 128x64 PIXEL
 LCD-GRAFIKMODUL 128x64 MIT EL-BELEUCHTUNG
 LCD-GRAFIKMODUL 128x64 MIT LED-BELEUCHTUNG
 FRONTRAHMEN MIT ENTSPIEGELTER SCHEIBE
 PASSENDER INVERTER FÜR EL-BELEUCHTUNG

EA P128-6N7
EA P128-6N7EL
EA P128-6N7LED
EA 017-17UKE
EA PSEL-93096/5V

LC-DISPLAY EA P128-6N7LED

Das Grafikdisplay ist in grauer Supertwisttechnik ausgeführt und mit einer grünen LED-Hintergrundbeleuchtung ausgestattet. Dadurch ist es auch bei unterschiedlichsten Lichtverhältnissen und Blickwinkeln sehr gut ablesbar.

Das Grafikmodul EA P128-6N7LED kann direkt an ein 6800- System angeschlossen werden.

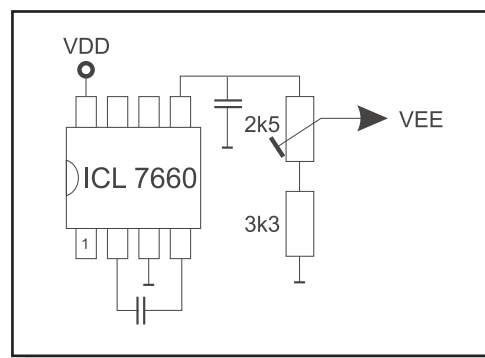
Um die LED-Beleuchtung in Betrieb zu nehmen, ist externer Vorwiderstand (ca. 10Ω bei 5V) erforderlich.

PINBELEGUNG

Pin	Symbol	Function
1	VDD	Power supply for logic (+5V)
2	GND	Ground potential (0V)
3	VEE	Operating voltage for LC driving (input)
4..11	D0..D7	Data bus line
12	/CS1	L: Chip selection left side
13	/CS2	L: Chip selection right side
14	RST	L: Reset
15	R/W	H: Data Read L: Data Write
16	D/I	H: Data input L: Instruction code input
17	E	Enable signal (falling edge)
18	GND	Ground potential (0V)
19	A	Anode for LED backlight
20	C	Cathode for LED backlight (R8)

KONTRASTSPANNUNG VEE

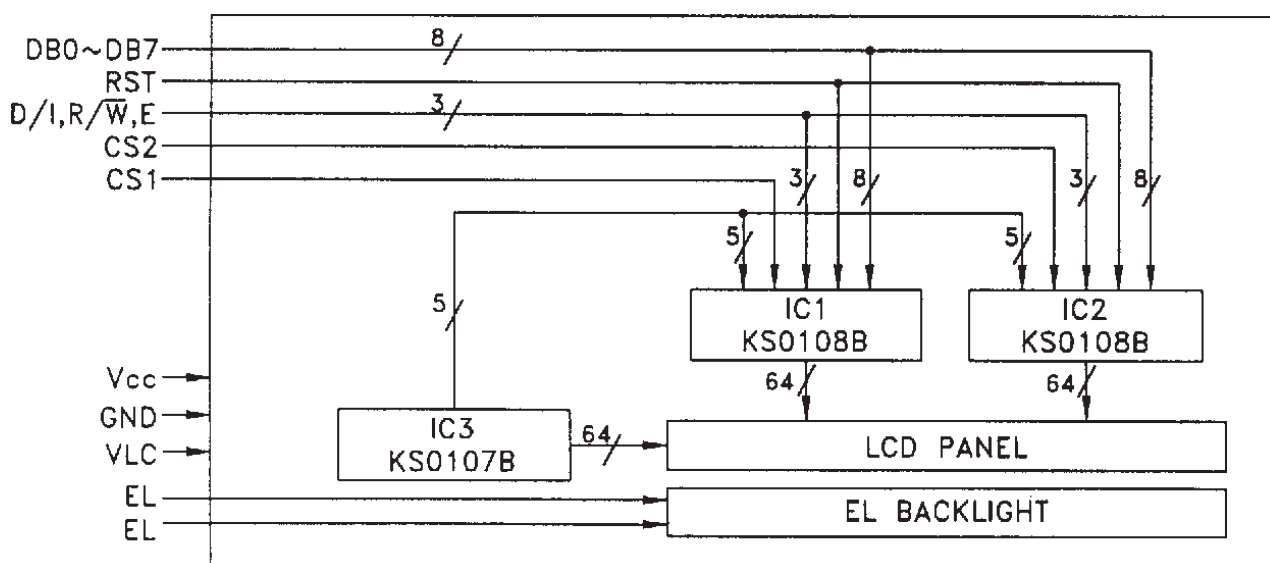
Am Pin 3 (VEE) ist zur Einstellung des Kontrastes eine einstellbare, negative Versorgungsspannung erforderlich.



Applikationsvorschlag



BLOCKDIAGRAMM



EA P128-6N7LED

ELECTRONIC ASSEMBLY

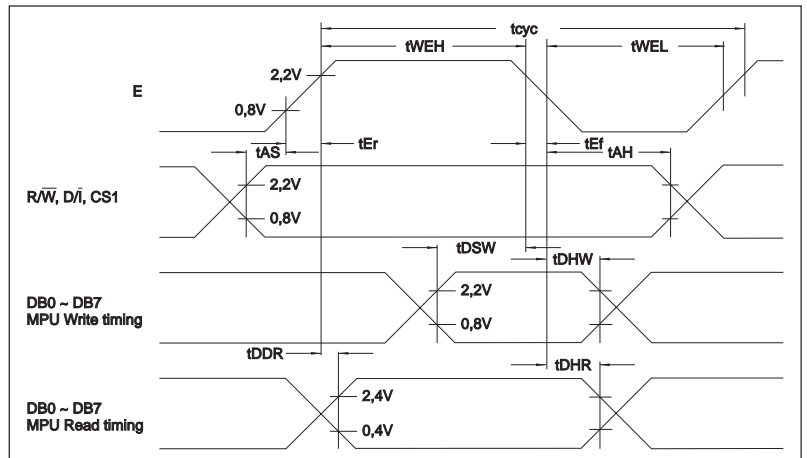
ABSOLUTE MAXIMUM RATING ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min	Max	Unit
Power supply for logic	VDD-VSS	0	7,0	V
Input voltage	VI	VSS	VDD	V
Operating temperature	Ta	0	+50	°C
Storage temperature	Tstg	-20	+70	°C

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Supply voltage	VDD	-	4,5	5,0	5,5	V
Supply current	IDD	VDD=5V	-	2,0	3,0	mA
High level input voltage for logic	VIH	-	2,4	-	VDD	V
Low level input voltage for logic	VIL	-	0	-	0,7	V
High level output voltage for logic	VOH	-IOH=0,6mA	VDD-0,4	-	VDD	V
Low level output voltage for logic	VOL	IOL=1,6mA	0	-	0,4	V
RES input high voltage	VIHR	-	0,7xVDD	-	VDD	V

TIMING CHARACTERISTICS

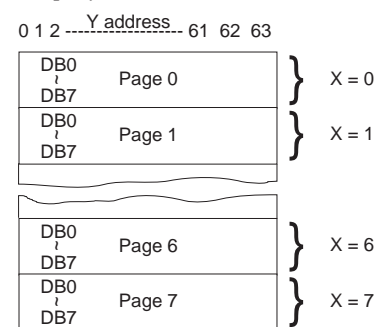
Parameter	Symb	Min	Typ	Max	Unit
Enable cycle time	t _{cy}	1000	-	-	ns
	t _{WEH}	450	-	-	ns
Enable Puls width	t _{WEL}	450	-	-	ns
	t _{Er}	-	-	25	ns
Enable raise time	t _{Er}	-	-	25	ns
Enable fall time	t _{Ef}	-	-	25	ns
Set-up time	t _{AS}	140	-	-	ns
Data set-up time	t _{DSW}	200	-	-	ns
Data delay time	t _{DDR}	-	-	320	ns
Address hold time	t _{AH}	10	-	-	ns
Data hold time (Write)	t _{DHW}	10	-	-	ns
Data hold time (Read)	t _{DHR}	20	-	-	ns



INSTRUCTION SET HD61202

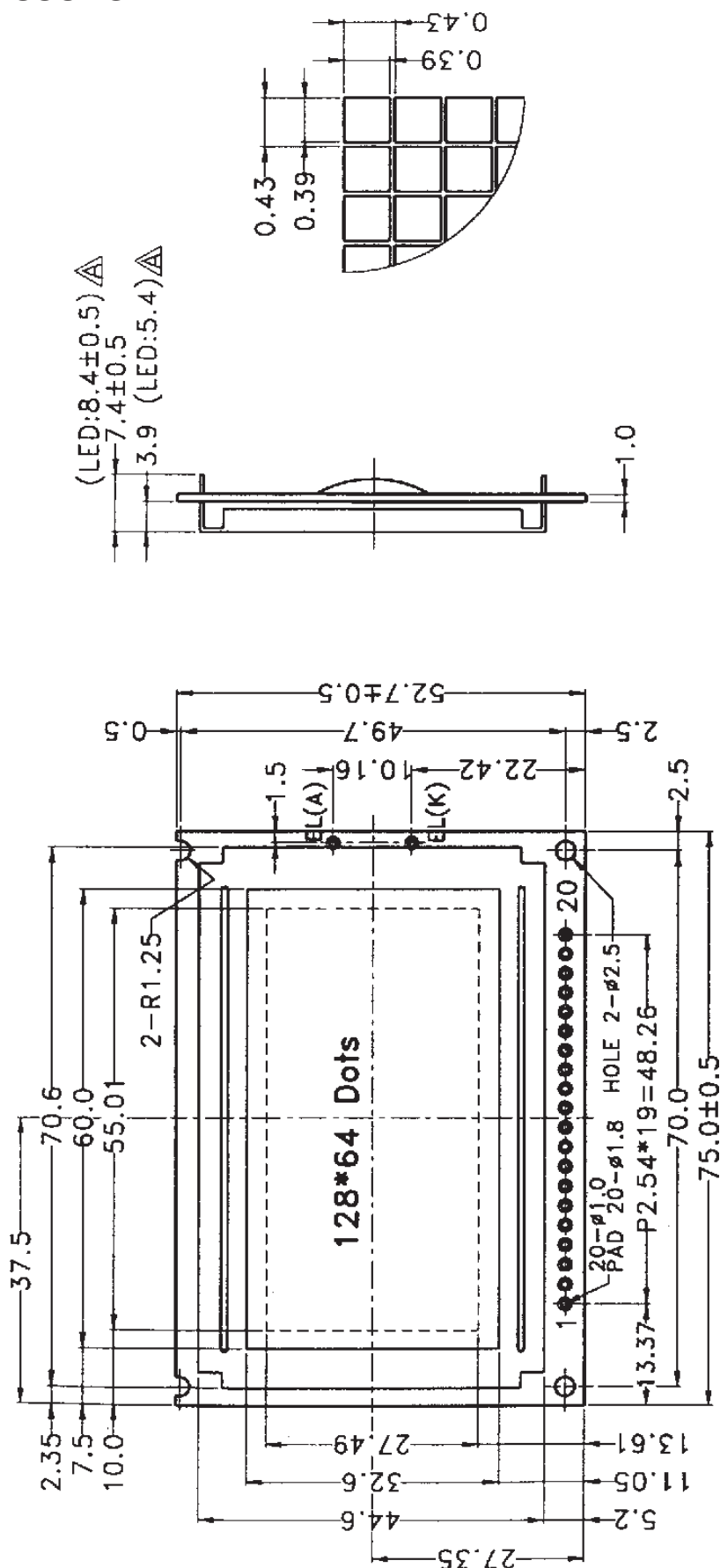
Instructions	Code											
	R/W	D/I	DB7	DB6	DB5	DB4	DB3	DB2	DB1	DB0		
Display ON/OFF	0	0	0	0	1	1	1	1	1	1/0	Controls the ON/OFF of display. RAM data and internal status are not affected. 1:ON, 0:OFF	
Display start line	0	0	1	1	display start line (0 - 63)						Specifies a RAM line displayed at the top of screen	
Set page(X address)	0	0	1	0	1	1	1	Page (0 - 7)			Sets the page (x address) of RAM at the page of (x address) register.	
4. Set address	0	0	0	1	Y address (0 - 63)						Sets the Y address at the Y address counter	
5. Status Read	1	0	B U S Y	0	ON / OFF	R E S E T	0	0	0	0	Read the status. RESET 1:reset 0:normal ON/OFF 1:display OFF 2:display ON BUSY 1:on the internal operation 0:Ready	
Write display data	0	1	Write data									Writes data DB0 (LSB) to DB7 (MSB) on the data bus into display RAM. Can access to the address of the display RAM specified in advance.
Read display data	1	1	Read data									Reads data DB0 (LSB) to DB7 (MSB) from the display RAM to the data bus. After the access, Y address is increased by 1.

Address Configuration of Display Data RAM



EA P128-6N7LED

ABMESSUNGEN



Alle Maße in mm

