

LCD- GRAPHIC MODULE 180x32

04.2011

INCL. CONTROLLER PT6520 FOR 8-BIT BUS

new !



EA DIP180B-5NLW
Dimension 102 x 27 mm

FEATURES

- * HIGH CONTRAST LCD SUPERTWIST DISPLAY
- * BLUE-WHITE WITH BRIGHT BACKLIGHT: EA DIP180B-5NLW
- * CONTROLLER PT6520 OR COMPATIBLE IS BUILT-IN
- * DIRECT INTERFACE TO 8-BIT DATA BUS
- * POWER SUPPLY +5V / -3.3V max. 800µA
- * LED BACKLIGHT WHITE max. 45mA@+25°C
- * MORE MODULES MADE IN SAME TECHNOLOGY:
 - DOTMATRIX 1x8, 2x16, 4x20
 - GRAPHIC 122x32, 128x64 AND 240x128
- * NO MOUNTING REQUIRED: JUST SOLDER INTO PCB
- * DETACHABLE VIA SOCKET EA B200-9 (2 PCS. ARE REQUIRED)
- * OPERATING TEMPERATURE RANGE -20..+70°C WITH
- * BUILT-IN TEMPERATURE COMPENSATION

ORDERING CODE

LCD GRAPHIC MODULE 180x32 WITH LED BACKLIGHT
9-PIN SOCKET 4.3mm, pitch 2.0mm (1 PC.)

EA DIP180B-5NLW
EA B200-9

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PINOUT

| Pin | Symbol | Level | Funktion | Pin | Symbol | Level | Funktion |
|-----|--------|-------|----------------------------|-----|--------|-------|---------------------------|
| 1 | VSS | L | Stromversorgung 0V (GND) | 10 | D3 | H / L | Display Data |
| 2 | VDD | H | Stromversorgung +5V | 11 | D4 | H / L | Display Data |
| 3 | VEE | - | Kontrastspg. (ca. -3,3V) | 12 | D5 | H / L | Display Data |
| 4 | A0 | H / L | Umschaltung Befehl / Daten | 13 | D6 | H / L | Display Data |
| 5 | R/W | H / L | H=Read, L=Write | 14 | D7 | H / L | Display Data, MSB |
| 6 | E1 | H | Enable Spalte 1..60 | 15 | E2 | H | Enable Spalte 61..120 |
| 7 | D0 | H / L | Display Data, LSB | 16 | RES | L | Reset |
| 8 | D1 | H / L | Display Data | 17 | E3 | H | Enable Spalte 121..180 |
| 9 | D2 | H / L | Display Data | 18 | C | - | LED (ext. Vorwiderstand!) |

CONTROLLER PT6520

The display EA DIP180-5 is featuring 3 controller PT65520 or compatible (for the left, middle and right third of display).

The PT6520 is a full graphic controller without text function. Various character set are supplied on the disc EA DISKFONT1520 which is available as an accessory.

A detailed description for the commands and the interface timing you can find in the user manual for PT6520 / SED1520*).



Column address

0-----79

| | |
|---------------|--------|
| D0 } D7 | Page 0 |
| D0 } D7 | Page 1 |
| D0 } D7 | Page 2 |
| D0 } D7 | Page 3 |

| Instructions | Code | | | | | | | | | | | Function | |
|---------------------|------|----|----|------------------|-------------------------|----------------------------|--------------------------------|----|----|------------|-----|--|----------------------------------|
| | A0 | RD | WR | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | | |
| Display ON/OFF | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0/1 | Turns Display on or off. 0=OFF; 1=ON; | |
| Display start line | 0 | 1 | 0 | 1 | 1 | 0 | Display start address (0 - 31) | | | | 0 | Specifies RAM line corresponding to top of display. | |
| Set page address | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | Page (0-3) | | Sets display RAM page. | |
| Set Column address | 0 | 1 | 0 | 0 | Column address (0 - 79) | | | | | | | | Sets display RAM column address. |
| Read Status | 0 | 0 | 1 | B U S Y | A D C | O N / O F F | R E S E T | 0 | 0 | 0 | 0 | Read the following status: BUSY: 1=Busy; 0=Ready; ADC: 1=CW output; 0=CCW output; ON/OFF: 1=Display off; 0=Display on; RESET: 1=Being reset; 0=Normal; | |
| Write display data | 1 | 1 | 0 | Write data | | | | | | | | Writes data into display RAM. | |
| Read display data | 1 | 0 | 1 | Read data | | | | | | | | Reads data from display RAM. | |
| Select ADC | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0/1 | 0=CW output; 1=CCW output; | |
| Static drive ON/OFF | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0/1 | Selects static driving operation. 0=Normal driving; 1=Static drive; | |
| Select duty | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0/1 | Select duty cycle. 0=1/16; 1=1/32; | |
| Read-Modify-Write | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | Read-modify-write ON | |
| End | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | Read-modify-write OFF | |
| Reset | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | Software reset. | |

*) On internet at <http://www.lcd-module.de/eng/pdf/zubehoer/pt6520.pdf>

CONTRAST ADJUSTMENT

Contrast voltage for EA DIP180-5 is ca. -3.3V. That means that with 5V operation the display do need an additional negative voltage.

An automatic temperature compensation is built-in. A manually realign of contrast while operation over various temperatures is no longer required. Furthermore the display is equipped with a Superfast-Liquid, which fast enough even at the very low temperature of -20°C. Response time is typ. 2.5 seconds only.

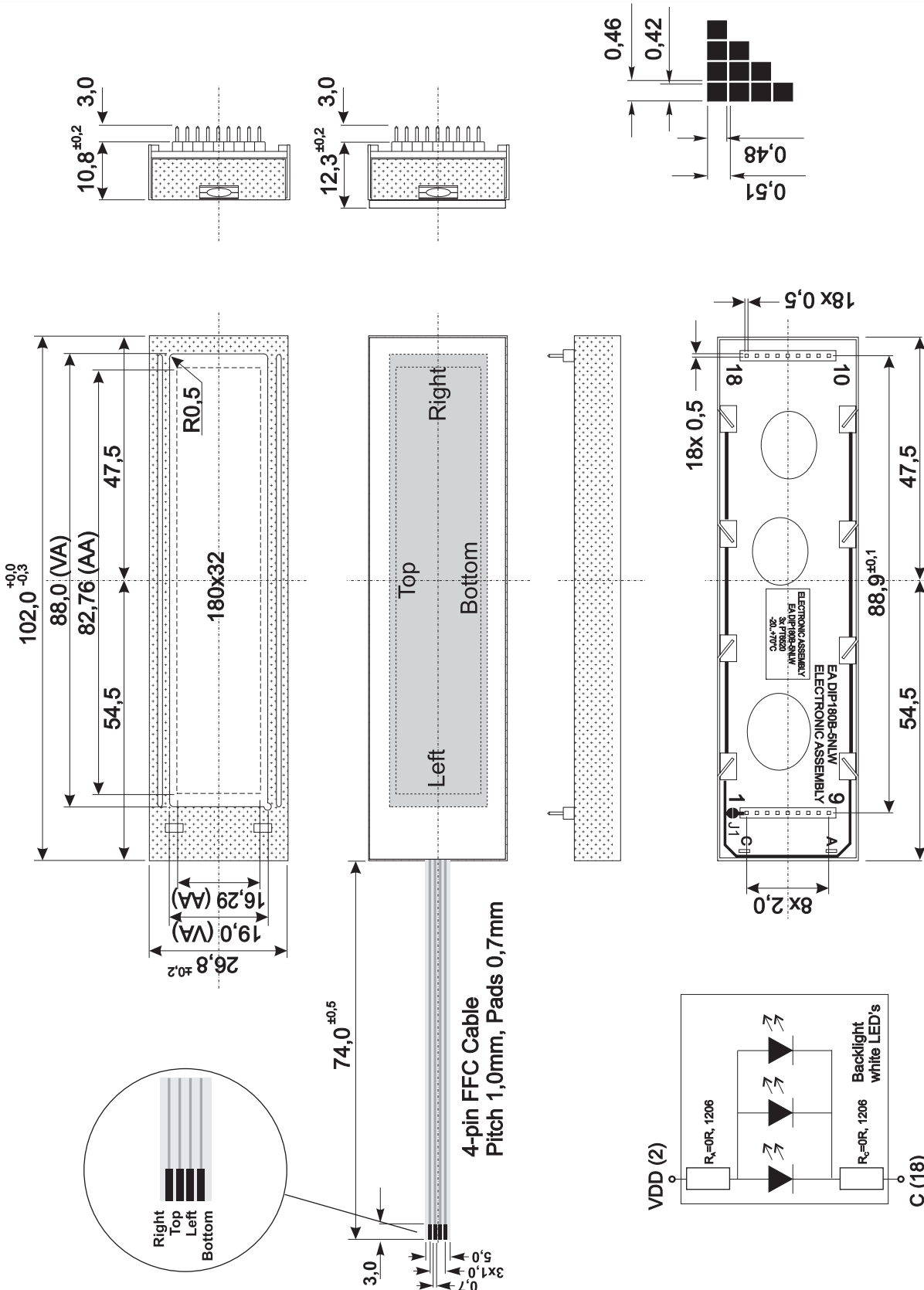
BACKLIGHT

The built-in backlight requires a current source or an external limiting resistor. Forward voltage for backlight is between 3.0V and 3.6V. Please consider that a current derating is necessary for operating und temperatures above +25°C.

Note that display cannot be read without backlight. But even with some single mA reading is possible. When ambient brightness grows, then backlight brightness need to grow also.

Attention: do never connect the backlight direct to 5V. This will damage the display immediately !

DIMENSION



Note:

- LC-displays are not suited for wave soldering or reflow soldering. Temperatures above +80°C may damage lcd-module.
- Surfaces of display is with protection foil protected against scratching. Please remove before use.

all dimensions are in mm

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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