Standard Character Module Specifications

Module Model Number Notation

MDL S - 40466 - HT - HV - G - LED04 -Y - N - 12 Please click on above notations to view detail descriptions!

Notation	Descriptions
MDL	CHARACTER MODULE
S	LCD TYPE • Blank for TN
	S for STN
40466	MODEL NUMBER
НТ	OPERATING TEMPERATURE OPTION**
	See Guide on Typical LCD Characteristics for details
HV	DRIVE VOLTAGE OPTION
	See Guide on Typical LCD Characteristics for details
G	STN MODE
	G: Green/Yellow
	• S: Silver
	• B: Blue (Negative)
	• $F: B/W FSTN^+$
	• D: B/W DSTN ⁺
LED04	BACKLIGHT TYPES*
	• LED-01
	• LED-02
	• LED-03 • LED-04
	• EL • EL
	• CCFL
	See Guides on Backlights for details
Y	BACKLIGHT COLOR
	• Y: Yellow
	• G: Green
	• R: Red
Ν	DISPLAY MODE
	Blank for PositiveN: Negative

12	VIEWING DIRECTION	
	 Blank: 6 o'clock 12: 12 o'clock 	

NOTE:

- * LED color available in green. Other colors available on request with minimum order quantity of 500 pieces.
- * Overall thickness of module is affected by the choice of backlight.
- ** Most controller and drivers are not rated for operating temperature range of -30 to +80°C. Please consult VARITRONIX for detail.
- ⁺ Film compensated STN (FSTN) and Double STN (DSTN) are available for some modules only. Please consult VARITRONIX.

STN OPTION

Five different modes are available, namely:

- 1. GREEN MODE -- Black digit on yellow green background.
- 2. SILVER MODE -- Blue digit on light blue to near white background.
- 3. BLUE MODE -- Clear digit on dark blue background (negative mode).
- 4. FSTN -- Black digit on white background, film compensation version.
- 5. DSTN -- Black digit on white background, double STN version.

CONTROLLER OPTION

- 1. Standard is HD44780 or its equivalent -- with English/Japanese characters.
- 2. Special Controller VL-103 -- with English/European character set.
- 3. Controller with other character sets possible as custom masked option. Please consult VARITRONIX.

ABSOLUTE MAXIMUM RATINGS

ITEM			VALUE	
		MIN	MAX	
Power supply for controller	(VDD - VSS)	0	7.0V	
Power supply for LCD driver	(VDD - V0)	0	13.5V	
Input voltage for data and control signals	i@	Vss	VDD	
Operating temperature	(-LV model) (-HV model) (-HT model)** (-EHT model)**	-10 ^o C -20 ^o C	+50°C +60°C +70°C +80°C	
Storage temperature	(-LV model) (-HV model)	-20°C	+60°C	

	(-HT model)** (-EHT model)**	-20°C -30°C -40°C	+70°C +80°C +80°C	
--	---------------------------------	-------------------------	-------------------------	--

****** Ratings of controller/driver may not cover the full temperature range specified here. Please consult VARITRONIX for detail.

POWER SUPPLY



TYPICAL INTERFACE CONNECTIONS

Refer to individual specification of the modules for the correct connections.

SYMBOL	I/O	FUNCTION
Vss Vdd Vo RS R/W E		Ground +5 Volt Power Supply Negative voltage supply for LCD driver (For non LV models) Register Select: H for data; L for instruction code Read/Write: H-read from module; L-write into module Enable (No connection for MDL-40466)
DB0 DB1 DB2 DB3	I/O	Data bus lines used only in 8 bit transfer
DB4 DB5 DB6	1/0	Data bus line used for both 4 and 8 bit transfer
DB7	I/O	Data bus lines used for both 4 and 8 bit transfer Also serves as Busy Flag for internal operations
E1 E2		Enable for upper two rows Enable for lower two rows
A K	i@	+ve supply input for backlight -ve supply input for backlight

Γ.