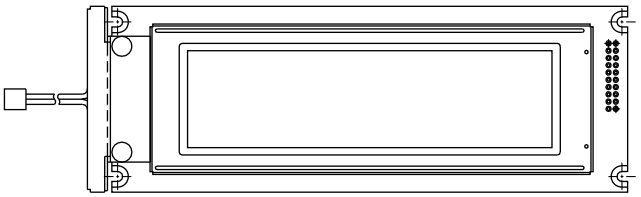
240 x 64 Graphic LCD



FEATURES

- Type: graphic
- Display format: 240 x 64 dots
- Built-in controller: RA6963
- Duty cycle: 1/64
- +5 V power supply
- Built-in N.V.
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

RoHS COMPLIANT

MECHANICAL DATA

ITEM	STANDARD VALUE	UNIT
Module dimension	180.0 x 65.0	mm
Viewing area	133.0 x 39.0	
Dot size	0.49 x 0.49	
Dot pitch	0.53 x 0.53	
Mounting hole	176.0 x 54.0	
Character size	n/a	

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	STANDARD VALUE			UNIT
		MIN.	TYP.	MAX.	
Power supply	V_{DD} to V_{SS}	4.75	5.0	5.25	V
Input voltage	V_I	-0.3	-	V_{DD}	

Note

- V_{SS} = 0 V, V_{DD} = 5.0 V

ELECTRICAL CHARACTERISTICS

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
Input voltage	V_{DD}	L level	0.7 V_{DD}	-	V_{DD}	V
	V_{IO}	H level	0	-	0.3 V_{DD}	
Supply current	I_{DD}	V_{DD} = +5 V	-	23.0	24.0	mA
Recommended LC driving voltage for normal temperature version module	V_{DD} to V_0	-20 °C	13.0	13.5	14.1	V
		0 °C	12.5	13.1	13.7	
		25 °C	12.1	12.7	13.3	
		50 °C	11.1	12.2	13.0	
		70 °C	9.1	11.6	12.8	
LED forward voltage	V_F	25 °C	-	4.2	4.6	V
LED forward current	I_F	25 °C	-	450	900	mA
CCFL forward voltage	V_F	25 °C	-	215	650	V_{RMS}
CCFL forward current	I_F	25 °C	-	-	5.0	mA
EL power supply current	I_{EL}	V_{EL} = 110 V_{AC}, 400 Hz	-	-	5.0	mA

OPTIONS

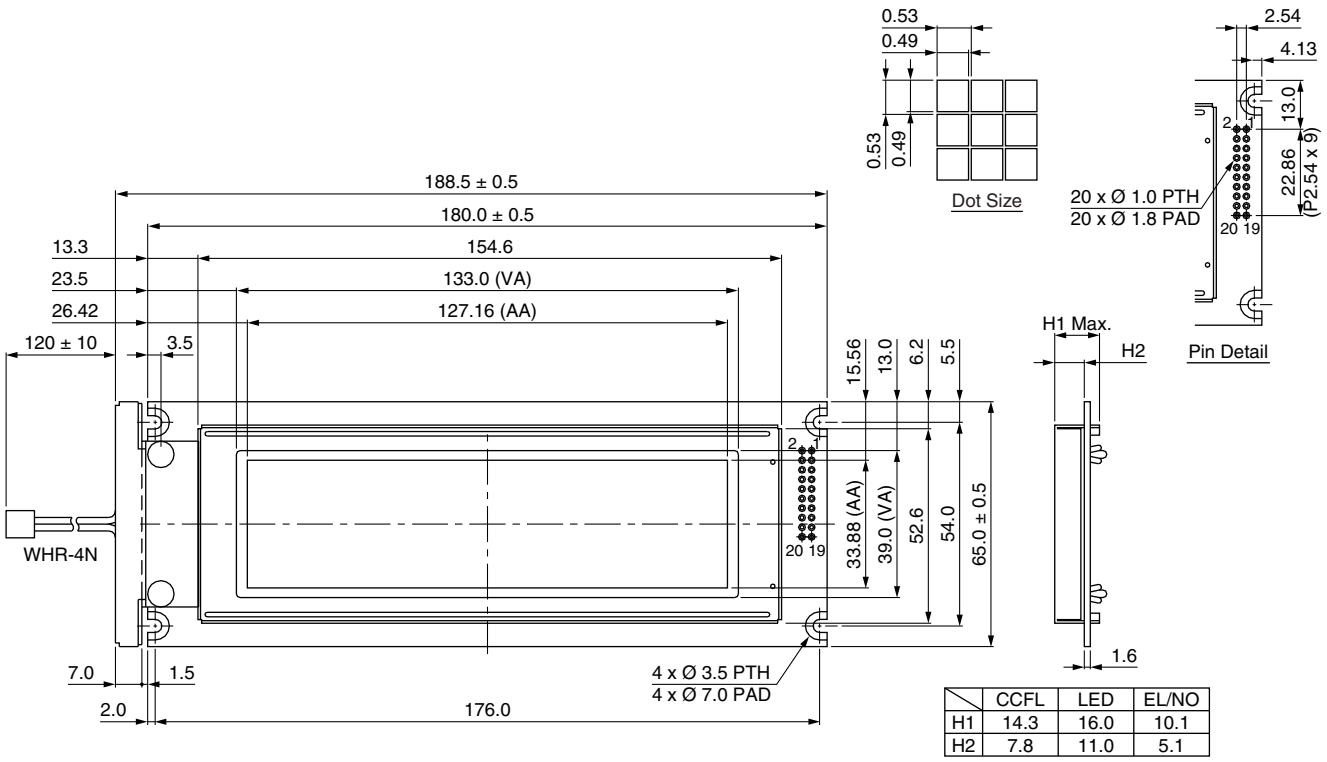
PROCESS COLOR						BACKLIGHT			
TN	STN GRAY	STN YELLOW	STN BLUE	FSTN B&W	STN COLOR	NONE	LED	EL	CCFL
-	x	x	x	x	-	x	x	x	x

For detailed information, please see the “Product Numbering System” document.

INTERFACE PIN FUNCTION

PIN NO.	SYMBOL	FUNCTION
1	FG	Frame ground
2	V_{SS}	Power supply (ground)
3	V_{DD}	Power supply (+5 V)
4	V_0	Contrast adjustment
5	$\overline{WR}$	Data write
6	$\overline{RD}$	Data read
7	$\overline{CE}$	Chip enable
8	C / $\overline{D}$	Command / data read / write
9	V_{EE}	Negative voltage output
10	$\overline{RESET}$	Reset signal
11	DB0	Data bus line
12	DB1	Data bus line
13	DB2	Data bus line
14	DB3	Data bus line
15	DB4	Data bus line
16	DB5	Data bus line
17	DB6	Data bus line
18	DB7	Data bus line
19	FS	Font selection: FS = “H”, 6 x 8 character font, FS = “L”, 8 x 8 character font
20	NC	No connection

DIMENSIONS in millimeters



	CCFL	LED	EL/NO
H1	14.3	16.0	10.1
H2	7.8	11.0	5.1

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