8-Character, 14-Segment Alphanumeric Display

FLB8009X1

Optoelectronic Products

General Description
The FLB8009X1 is a liquid crystal display that is hermetically sealed with glass frit. It interfaces with elastomeric connectors, is available in four polarizer options and operates at the standard temperature range of −20°C to +60°C. The 14-segment alphanumeric format is capable of displaying the alpha set, digits 0 through 9 and many of the special ASCII symbols. This display is suitable for general applications requiring alphanumeric capability.

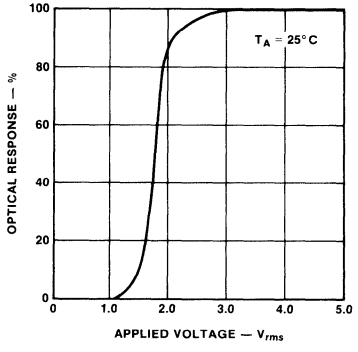
0.35-Inch Characters (9 mm)
Decimal Points
14-Segment Alphanumeric Format
Glass-Frit Seal for High Reliability

Electrical Characteristics Measured at 25°C with drive voltage of 5.0 V, square wave at 32 Hz.

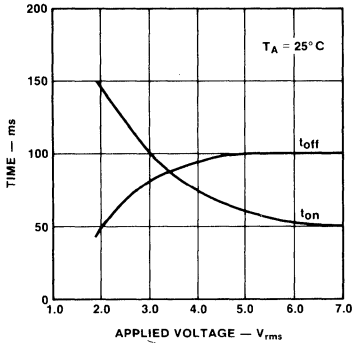
Characteristic	Min	Typ	Max	Units
Operating Voltage	2.8	5.0	12	V
Saturation Voltage	2.0	2.2	2.4	V
Operating Frequency Range	30	32	1000	Hz
Drive Current at 3.0 V, All Segments On			10	μA
Viewing Angle		45		degrees
Contrast Ratio		20:1		
Response Times: t_{on} (Includes Delay Time)		70	150	ms
t_{off} (Includes Delay Time)		100	150	ms
Operating Temperature Range (Note)	−20		60	°C
Storage Temperature Range	−20		80	°C
Humidity	50/60			°C/RH
Life Time		50k		hrs

Note
Higher operating temperature is available. Consult the factory for details.

Voltage Characteristics



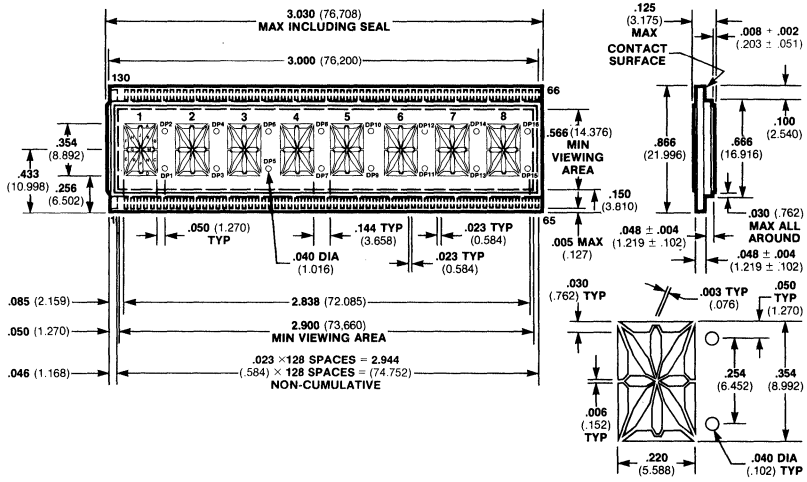
Response Time



Package Outline
Pin Assignments

FLB8009X1

Package Outline



Note
All dimensions in inches **bold** and millimeters (parentheses)

Pin Assignments

1 Backplane	27 Segment R_4	53 Segment D_7	79 Segment H_7	105 Segment G_4
2 Segment E_1	28 Segment P_4	54 Segment N_7	80 Segment F_7	106 Decimal Point 6
3 Segment R_1	29 Segment D_4	55 Segment C_7	81 Segment G_7	107 Segment B_3
4 Segment P_1	30 Segment N_4	56 Segment M_7	82 Decimal Point 12	108 Segment K_3
5 Segment D_1	31 Segment C_4	57 Decimal Point 13	83 Segment B_6	109 Segment J_3
6 Segment N_1	32 Segment M_4	58 Segment E_8	84 Segment K_6	110 Segment A_3
7 Segment C_1	33 Decimal Point 7	59 Segment R_8	85 Segment J_6	111 Segment H_3
8 Segment M_1	34 Segment E_5	60 Segment P_8	86 Segment A_6	112 Segment F_3
9 Decimal Point 1	35 Segment R_5	61 Segment D_8	87 Segment H_6	113 Segment G_3
10 Segment E_2	36 Segment P_5	62 Segment N_8	88 Segment F_6	114 Decimal Point 4
11 Segment R_2	37 Segment D_5	63 Segment C_8	89 Segment G_6	115 Segment B_2
12 Segment P_2	38 Segment N_5	64 Segment M_8	90 Decimal Point 10	116 Segment K_2
13 Segment D_2	39 Segment C_5	65 Decimal Point 15	91 Segment B_5	117 Segment J_2
14 Segment N_2	40 Segment M_5	66 Decimal Point 16	92 Segment K_5	118 Segment A_2
15 Segment C_2	41 Decimal Point 9	67 Segment B_8	93 Segment J_5	119 Segment H_2
16 Segment M_2	42 Segment E_6	68 Segment K_8	94 Segment A_5	120 Segment F_2
17 Decimal Point 3	43 Segment R_6	69 Segment J_8	95 Segment H_5	121 Segment G_2
18 Segment E_3	44 Segment P_6	70 Segment A_8	96 Segment F_5	122 Decimal Point 2
19 Segment R_3	45 Segment D_6	71 Segment H_8	97 Segment G_5	123 Segment B_1
20 Segment P_3	46 Segment N_6	72 Segment F_8	98 Decimal Point 8	124 Segment K_1
21 Segment D_3	47 Segment C_6	73 Segment G_8	99 Segment B_4	125 Segment J_1
22 Segment N_3	48 Segment M_6	74 Decimal Point 14	100 Segment K_4	126 Segment A_1
23 Segment C_3	49 Decimal Point 11	75 Segment B_7	101 Segment J_4	127 Segment H_1
24 Segment M_3	50 Segment E_7	76 Segment K_7	102 Segment A_4	128 Segment F_1
25. Decimal Point 5	51 Segment R_7	77 Segment J_7	103 Segment H_4	129 Segment G_1
26 Segment E_4	52 Segment P_7	78 Segment A_7	104 Segment F_4	130 Backplane

Ordering Information FLB8009X1

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Device Type	Polarizer Option
FLB8009A1	Non-Polarized
FLB8009B1	Transflective
FLB8009C1	Reflective (smooth)
FLB8009D1	Transmissive

Connectors
Display interfaces with elastomeric connectors.
See page 6-42 for elastomeric connector suppliers.

Drivers
See page 6-43 for available drivers.