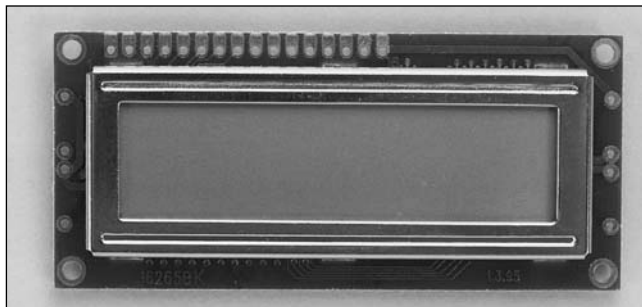




AND491GST

2 lines x 16 Characters

Intelligent Character Display

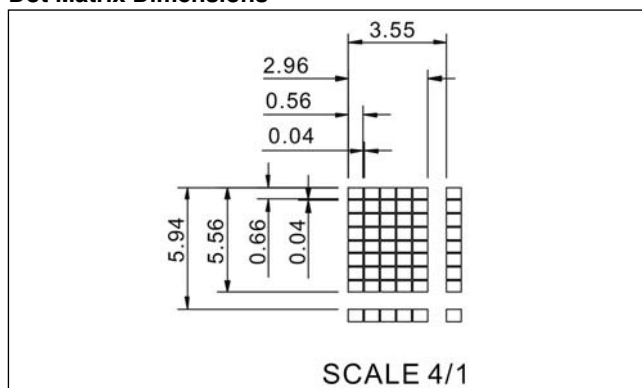
The AND491GST devices are compact, LCD modules that have an on-board LCD controller and driver circuit. These devices can display 160 characters (numerals, letters, symbols and Kana letters), as well as eight custom characters.

Features

- AND491GST: Super Twist Technology
- 5 x 7 Dots with cursor
- Built-in controller (KS0066 or equivalent)
- 5 V Power supply
- RoHS compliant
- 4.2V LED Forward voltage

• RoHS Compliant

Dot Matrix Dimensions



Mechanical Characteristics

Item	Specification	Unit
Outline Dimensions	80 (W) x 36 (H) x 8.8(D) (12.7 LED)	mm
Character size	2.96 (W) x 5.56 (H)	mm
Viewing Area	65 (W) x 16(H)	mm
Character Pitch	3.55 (W) x 5.94(H)	mm
Dot Size	0.55 (W) x 0.66 (H)	mm
Dot Pitch	0.60 (W) x 0.70 (H)	mm

Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Supply Voltage	V_{DD}	7.0	V
Input Voltage	V_{IN}	$0 \leq V_{IN} \leq V_{DD}$	V
Operating Temperature	T_{op}	0 to +50	°C
Storage Temperature	T_{stg}	-20 to +60	°C

Electrical Characteristics (TA = 25°C)

Item	Symbol	Min.	Typ.	Max.	Unit
LCD Operating Voltage (T= 0 °C)	$V_{DD}-V_O$	-	4.8	-	V
LCD Operating Voltage (T= 25 °C)		-	4.5	-	
LCD Operating Voltage (T= 50 °C)		-	4.2	-	
Supply Voltage	$V_{DD}-V_{SS}$	4.7	5	5.3	V
Supply Current	I_{DD}	-	2	4	mA
Input Voltage High Level	V_{IH}	2.2	-	V_{DD}	V
Input Voltage Low Level	V_{IL}	0	-	0.6	
Output Voltage High Level	V_{OH}	2.4	-	-	V
Output Voltage Low Level	V_{OL}	-	-	0.4	

Optical Characteristics (TA = 25°C, $\phi = 0^\circ$, $\theta = 0^\circ$)

Item	Symbol	Min.	Typ.	Max.	Unit
Viewing Angle	ϕ	-	50	-	degree
Contrast	K	-	6.0	-	-
Turn On	T_{on}	-	200	400	ms
Turn Off	T_{off}	-	250	400	ms



AND491GST Intelligent Character Display

Connector Pin Assignment

Pin No.	Signal	Function
1	V _{SS}	0V
2	V _{DD}	5V
3	V _O	Contrast Adj.
4	RS	Register Select
5	R/ $\bar{W}$	Read/Write
6	E	Enable
7	DB0	Data Bit 0
8	DB1	Data Bit 1
9	DB2	Data Bit 2
10	DB3	Data Bit 3
11	DB4	Data Bit 4
12	DB5	Data Bit 5
13	DB6	Data Bit 6
14	DB7	Data Bit 7
15	A	LED Power
16	K	Led Power

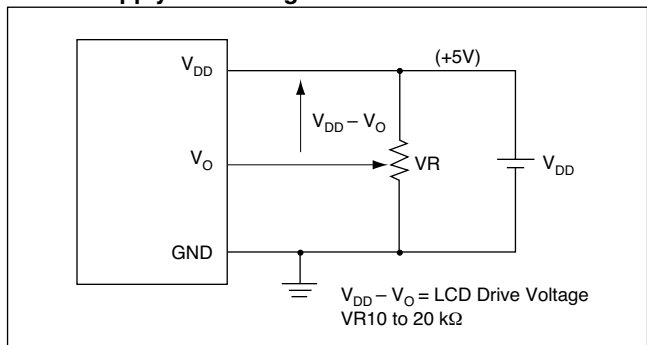
Power Supply

The LCD panel is driven by the voltage $V_{DD}-V_O$, so you need an adjustable V_O for contrast control and temperature compensation.

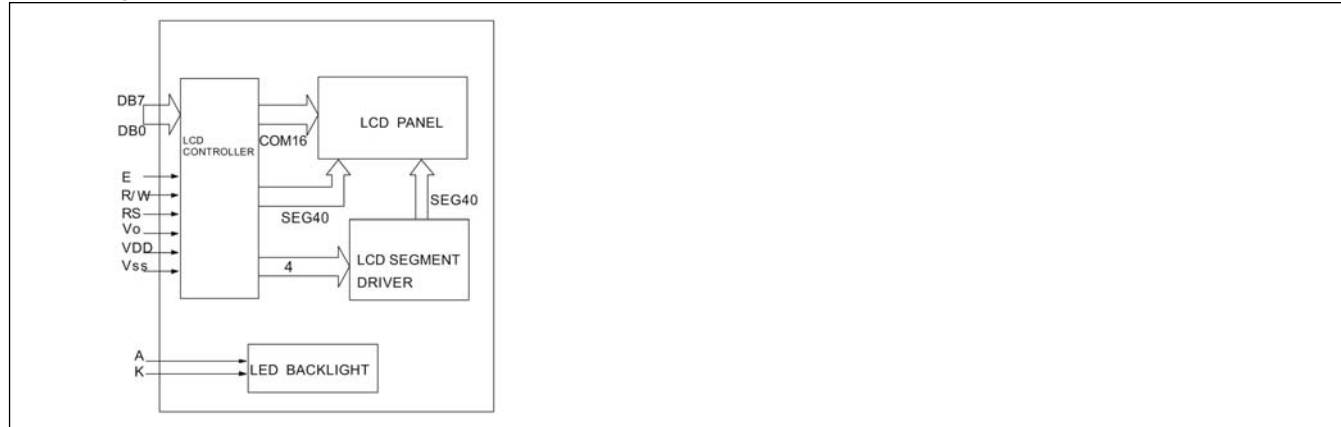
Temperature Variations

Temperature	$V_{DD}-V_O$
0°C	4.80
+25°C	4.50
+50°C	4.20

Power Supply Block Diagram



Block Diagram



Dimensional Outline

