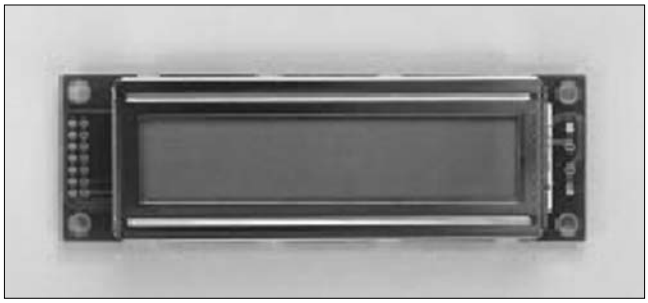
AND Displays



AND501GST/GST-LED

20 Characters x 2 Lines
Intelligent Alphanumeric Displays

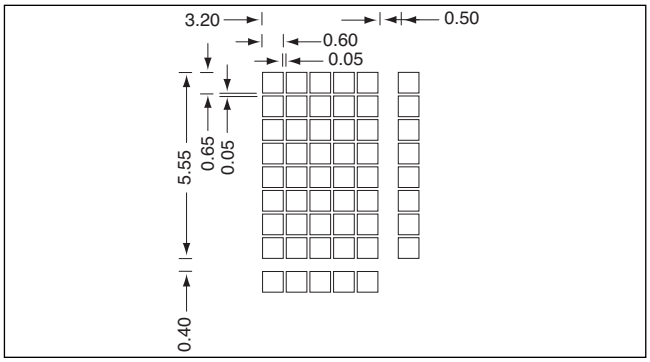
The AND501GST/GST-LED devices are compact, LCD modules that have an on-board LCD controller and driver circuit. These devices can display 160 characters (numerals, letters, symbols and Kana letters), as well as eight custom characters.

Features

• **RoHS Compliant**

- AND501GST: Super Twist Technology
- AND501GST-LED: STNwith LED backlight
- Low voltage, +5V single power supply
- Controller on board (HD44780)
- RoHS compliant
- 11 commands for control

Dot Matrix Dimensions



Mechanical Characteristics

Item	Specification	Unit
Outline Dimensions	116 (H) x 37 (V) x 11 (D)	mm
Character Size	3.20 (H) x 5.55 (V)	mm
Viewing Area	83.0 (H) x 18.6 (V)	mm
Dot Size	0.60 (H) x 0.65 (V)	mm
Dot Pitch	0.65 (H) x 0.70 (V)	mm

Absolute Maximum Ratings

Item	Symbol	Rating	Unit
Supply Voltage	V_{DD}	7.0	V
Input Voltage	V_{IN}	$0 \le V_{IN} \le V_{DD}$	V
LED Forward Current	I_F	275	mA
LED Reverse Voltage	V_R	8	V
LED Power Dissipation	P_D	1270	mW

Absolute Maximum Ratings (Continued)

Item	Symbol	Rating	Unit
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
Supply Voltage		V_{DD}	4.75	5.0	5.25	V
		GND	–	0	–	
LED Forward Voltage (I_F = 200 mA)		V_F	3.8	4.1	4.4	V
LED Reverse Current (V_R = 8 V)		I_R	–	–	2.2	mA
Input Voltage	"High" Level (V_{DD} = 5.0 V)	V_{IH}	2.2	–	–	V
	"Low" Level (I_{OH} = 0.2 mA)	V_{IL}	0	–	0.6	
Output Voltage	"High" Level ($-I_{OH}$ = 0.2 mA)	V_{OH}	2.4	–	–	V
	"Low" Level (I_{OL} = 1.2 mA)	V_{OL}	–	–	0.6	

Optical Characteristics (TA = 25°C, ϕ = 0°, θ = 0°)

Item	Symbol	Min.	Typ.	Max.	Unit
Viewing Angle	ϕ	-10	25	40	degree
Contrast	K	–	3.0	–	–
Turn On	T_{on}	–	200	400	ms
Turn Off	T_{off}	–	250	400	ms

Product specifications contained herein may be changed without prior notice. It is therefore advisable to contact Purdy Electronics before proceeding with the design of equipment incorporating this product.

AND501GST/GST-LED
Intelligent Character Display

Connector Pin Assignment

Pin No.	Signal	Function
1	GND	Ground
2	V_{DD}	+5 Power Supply
3	V_D	LCD Drive Voltage
4	RS	"H" Data Input "L" Command Input
5	R/W	Read/Write
6	E	Enable Signal
7	DB0	Data Bus DB0-DB7 are for 8-bit operation DB4-DB8 are for 4-bit operation
8	DB1	
9	DB2	
10	DB3	
11	DB4	
12	DB5	
13	DB6	
14	DB7	
15	LED	LED Anode
16	LED	LED Cathode

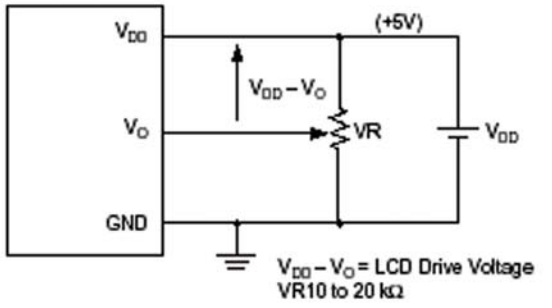
Power Supply

LCD panel is driven by the voltage V_{DD}–V_O, so an adjustable V_O is required for contrast control and temperature compensation.

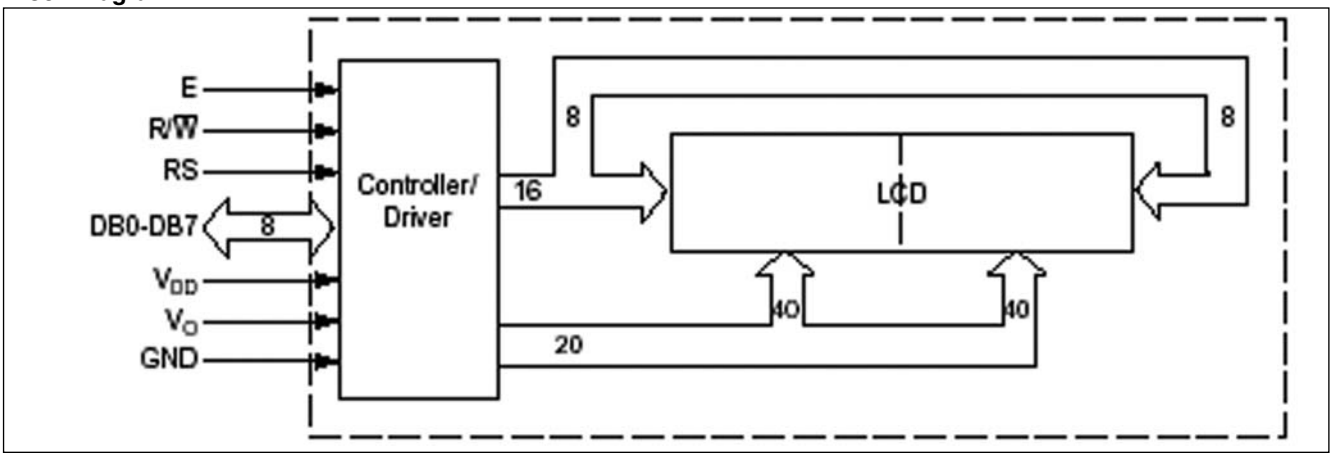
Temperature Variations

Temperature	V_{DD}–V_O
0°C	4.80
+25°C	4.65
+50°C	4.35

Power Supply Block Diagram



Block Diagram



Dimensional Outline