

# AND731GST/GST-LED

## 4 Lines x 16 Characters

### Intelligent Character Display

The AND731GST/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

- AND731GST: Super Twist Technology
- AND731GST-LED: STN with LED backlight
- Low voltage, +5V single power supply
- Built-in Controller
- 5 x 7 Dots with cursor
- 1/16 Duty cycle
- 4.2V LED forward voltage

#### Mechanical Characteristics

Item	Specification	Unit
Outline Dimensions	87 (W) x 60 (H) x 8.8 (D) (12.7 LED)	mm
Character Size	2.95 (W) x 4.75 (H)	mm
Viewing Area	62 (W) x 25.6 (H)	mm
Character Pitch	3.55 (W) x 5.35 (H)	mm
Dot Size	0.55 (W) x 0.55 (H)	mm
Dot Pitch	0.60 (W) x 0.60 (H)	mm

#### Absolute Maximum Ratings

Item	Symbol	Rating	Unit
LED Forward Current	$I_F$	400	mA
LED Reverse Voltage	$V_R$	4	V
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	$V_{DD}-V_O$	T = 0°C	-	4.8	-	V
		T = 25°C	-	4.5	-	
		T = 50°C	-	4.2	-	
Supply Voltage	$V_{DD}-V_{SS}$	4.7	5	5.3	V	
Supply Current	$I_{DD}$	-	3.2	6	mA	
Input Voltage	Hi Level	$V_{IH}$	2.2	-	-	V
	Low Level	$V_{IL}$	0	-	$V_{DD}$	V
Output Voltage	Hi Level	$V_{OH}$	2.4	-	0.6	V
	Low Level	$V_{OL}$	-	-	0.4	V

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

Item	Symbol	Min.	Typ.	Max.	Unit
Viewing Angle	$\phi$	-	50	-	degree
Contrast	K	-	6.0	-	-
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.



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## Connector Pin Assignment

Pin No.	Signal	Function
1	V <sub>SS</sub>	Ground
2	V <sub>DD</sub>	+5 Power Supply
3	V <sub>O</sub>	LCD Drive Voltage
4	RS	"H" Data Input "L" Command Input
5	R/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

## Connector Pin Assignment (Continued)

Pin No.	Signal	Function
13	DB6	Data Bit 6
14	DB7	Data Bit 7
15	A	LED Power
16	K	LED Power

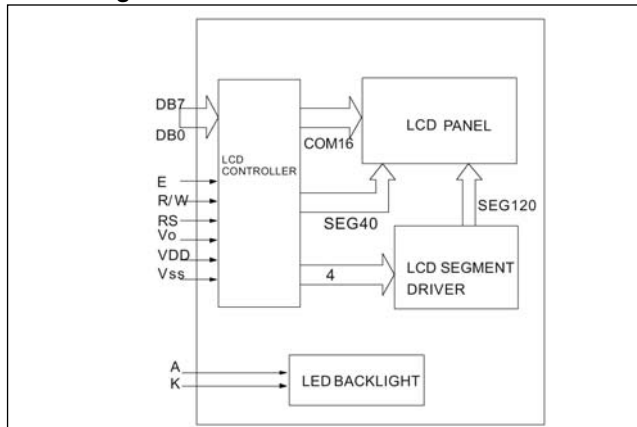
## Power Supply

The LCD panel is driven by the voltage V<sub>DD</sub>-V<sub>O</sub>, so you need an adjustable V<sub>O</sub> for contrast and temperature control.

## Temperature Variations

Temperature	V <sub>DD</sub> -V <sub>O</sub>
0°C	5.00
+25°C	4.75
+50°C	4.50

## Block Diagram



## Dimensional Outline

