



AND082GST/GST-LED

2 Lines x 8 Characters

Intelligent Character Display

The AND082GST/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

- AND082GST: Super Twist Technology (Gray Positive)
- AND082GST-LED: STN with Yellow Green LED backlight
- Transflective Rear Polarizer
- Built-in Controller (KS0066 or equivalent)
- 6 O'clock Viewing Angle
- RoHS compliant
- 8 Characters (W) x 2 Lines (H)
- 5V Driving Voltage
- Black Frame

Mechanical Characteristics

Item	Specification	Unit
Module Size	58.0 (W) x 32.0 (H) x 8.4 (D) (12.8 LED)	mm
Viewing Area	38.0 (W) x 16.0 (H)	mm
Display Format	8 charcters (W) x 2 Lines (H)	-
Duty Ratio	1/16 Duty	-
Dot Size	0.56 (W) x 0.66 (H)	mm
Dot Pitch	0.60 (W) x 0.70 (H)	mm

Absolute Maximum Ratings - Electrical

Item	Symbol	Min.	Max.	Unit
Power Supply for Logic	$V_{DD} - V_{SS}$	-0.3	7.0	V
Power Supply for LCD	$V_{DD} - V_O$	-0.3	12.0	V
Input Voltage	V_I	-0.3	V_{DD}	V
LED Power Dissipation	P_{AD}	-	483	mW
LED Forward Current	I_{AF}	-	105	mA
LED Reverse Voltage	V_R	-	8	V

Electrical Characteristics (TA = 25°C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power Supply for Logic	$V_{DD} - V_{SS}$	-	4.5	5.0	5.5	V
Input Voltage	V_{IL}	L level	0	-	0.6	V
	V_{IH}	H level	2.2	-	V_{DD}	V
LCM Recommend LCD Module Driving Voltage	$V_{DD} - V_O$	Ta=0°C	-	-	-	V
		Ta=25°C	4.2	4.5	4.8	
		Ta=50°C	-	-	-	
Power Supply Current for LCM	I_{DD}	$V_{DD} = 5V$ $V_{DD} - V_O = 4.5V$	-	1.5	2.0	mA
LED Forward Voltage	V_{IF}	If = 70 mA	-	4.1	4.6	V
LED Forward Current	I_F	-	-	70	-	mA
LED Reverse Current	I_R	VR = 8V	-	-	0.2	mA

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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Absolute Maximum Ratings - Environmental

Item	Normal Temperature				Wide Temperature			
	Operating		Storage		Operating		Storage	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Ambient Temperature	0°C	+50°C	-20°C	+70°C	-20°C	+70°C	-30°C	+80°C
Humidity (without condensation)	Note 2,4		Note 3,5		Note 4, 5		Note 4, 6	

Note 2: $T_a \leq 50^\circ\text{C}$: 80% RH max; $T_a > 50^\circ\text{C}$: Absolute humidity must be lower than the humidity of 85% RH at 50°C .

Note 3: T_a at -20°C will be <48 hrs at 70°C will be <120 hrs when humidity is higher than 70%.

Note 4: Background color changes slightly depending on ambient temperature. This phenomenon is reversible.

Note 5: $T_a \leq 70^\circ\text{C}$: 75RH max; $T_a > 70^\circ\text{C}$: absolute humidity must be lower than the humidity of 75% RH at 70°C .

Note 6: T_a at -30°C will be <48 hrs, at 80°C will be <120 hrs when humidity is higher than 70%.

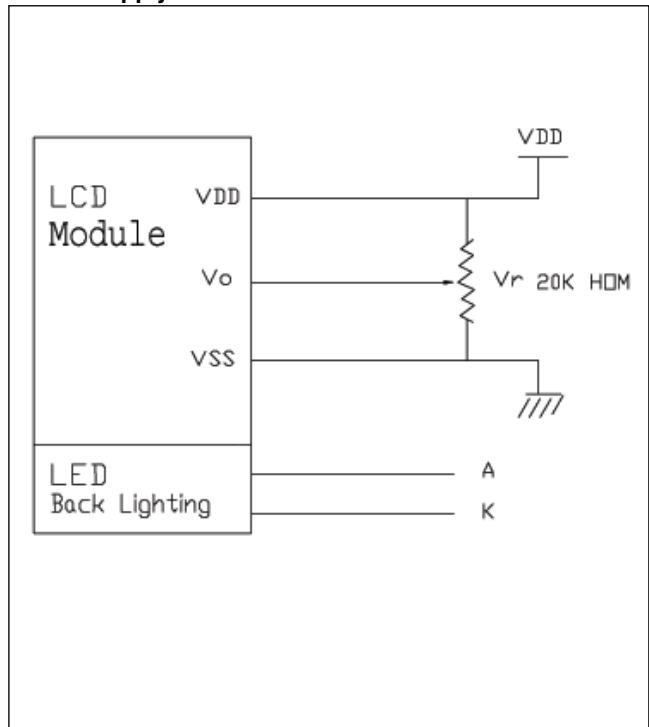
Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Viewing Angle Range	Φf (12 o'clock)	When $CR \geq 1.4$	-	10	-	Degree
	Φb (6 o'clock)		-	30	-	
	Φl (9 o'clock)		-	30	-	
	Φr (3 o'clock)		-	30	-	
Rise Time	T_r	$V_{DD} - V_O = 4.5V$ $T_a = 25^\circ\text{C}$	-	100	200	ms
Fall Time	T_f		-	200	350	
Frame Frequency	Frm		-	64	-	Hz
Contrast	Cr	-	3.0	-	-	-
Brightness of Backlight	L	IF = 70 mA	80	110	-	cs/m ²
Peak Emission Wavelength	λ_P		567	570	577	nm

Connector Pin Assignment

Pin No.	Pin Out	Level	Description
1	VSS	0V	Power Supply Ground
2	VDD	5V	Power Supply Voltage
3	VO	-	Contrast Adj.
4	RS	H/L	Register Select
5	R/W	H/L	Read / Write
6	E	H, H → L	Enable Signal
7	DB ₀	H/L	Data Bit 0
8	DB ₁		Data Bit 1
9	DB ₂		Data Bit 2
10	DB ₃		Data Bit 3
11	DB ₄		Data Bit 4
12	DB ₅		Data Bit 5
13	DB ₆		Data Bit 6
14	DB ₇		Data Bit 7

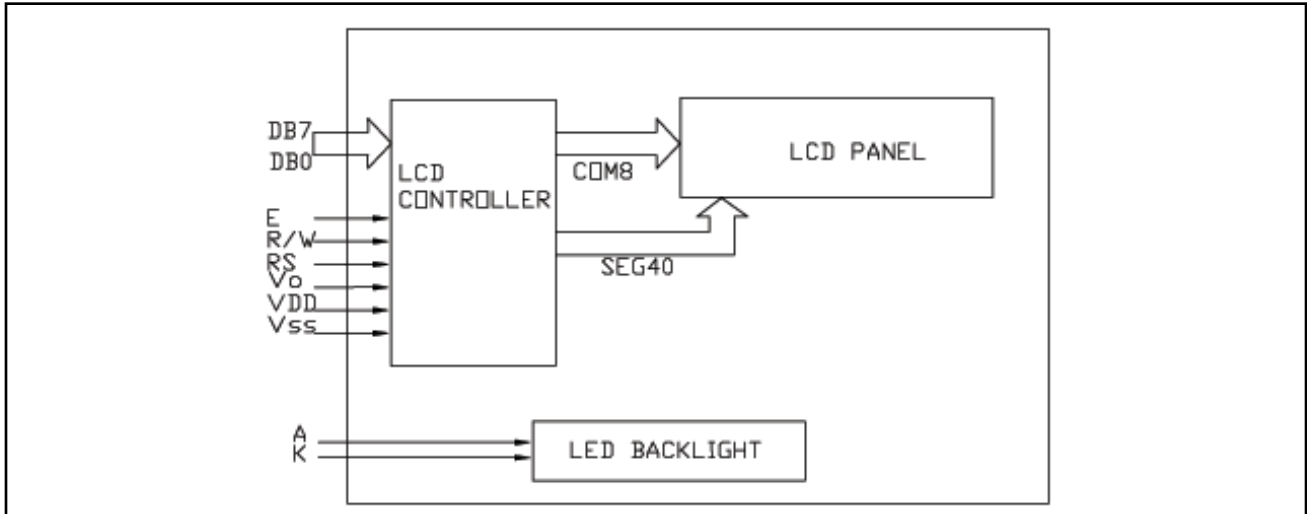
Power Supply





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Dimensional Outline



Dimensional Outline

