AND081GST/GST-LED

1 Lines x 8 Characters
Intelligent Character Display

The AND081GST/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

· AND081GST: Super Twist Technology (Yellow Green Positive)
· AND081GST-LED: STN with Yellow Green LED backlight
· Transflective Rear Voltage
· Built-in Controller (KS0066 or equivalent)
· 6 O'clock Viewing Angle
· RoHS compliant
· 5V Driving Voltage
· 8 Characters (W) x 1 Lines (H)

Mechanical Characteristics

Item	Specification	Unit
Module Size	60.0 (W) x 36.0 (H) x 10.0 (D) (13.0 LED)	mm
Viewing Area	48.0 (W) x 13.0 (H)	mm
Display Format	8 charcters (W) x 1 Lines (H)	–
Duty Ratio	1/16 Duty	–
Dot Size	0.85 (W) x 1.0 (H)	mm
Dot Pitch	0.90 (W) x 1.05 (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}	–	0.5	W
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	VI_F	If = 80 mA	–	4.2	4.6	V
LED Forward Current	I_F	–	–	80	–	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.

Absolte Maximum Ratings - Environmental

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

Note 2: Ta≤50ºC: 80% RH max; Ta> 50ºC: Absolute humidity must be lower than the humidity of 85% RH at 50ºC.
Note 3: Ta at -20ºC will be <48 hrs at 70ºC 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: Ta≤70ºC: 75RH max; Ta > 70ºC: absolute humidity must be lower than the hhumidity of 75% RH at 70ºC.
Note 6: Ta at -30ºC will be <48 hrs, at 80ºC will be <120 hrs when humidity is higher than 70%.
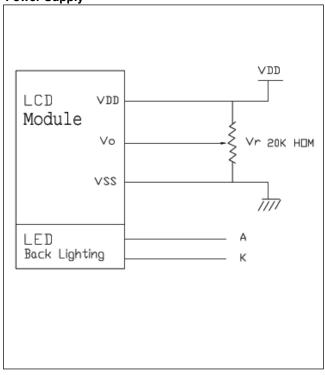
Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Viewing Angle Range	Φ f (12 o'clock)	When CR ≥ 1.4	–	10	–	Degree
	Φ b (6 o'clock)		–	30	–	
	Φ l (9 o'clock)		–	30	–	
	Φ r (3 o'clock)		–	30	–	
Rise Time	Tr	$V_{DD} - V_O = 4.5V$ Ta = 25ºC		100	200	ms
Fall Time	Tf			200	350	
Frame Frequency	Frm		–	64	–	Hz
Contrast	Cr		–	3.0	–	
Brightness of Backlight	L	IF = 80 mA	80	110	–	cs/m^2
Peak Emission Wavelength	λ P		–	570	–	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
15	A	+4.2V	LED (+)
16	K	0V	LED (-)

Power Supply

Dimensional Outline

Dimensional Outline

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