



AND771GST/GST-LED

2 Lines x 24 Characters

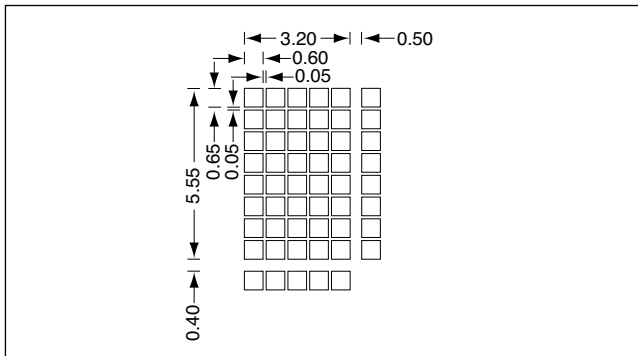
Intelligent Character Display

The AND771GST/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

- AND771GST: Super Twist Technology
- AND771GST-LED: STN with LED backlight
- Low voltage, +5V single power supply
- Controller on board (HD44780)
- Direct interface to 4- or 8-bit CPU
- 11 commands for control
- Wide temperature range option (WGST)

Dot Matrix Dimensions



Mechanical Characteristics

| Item | Specification | Unit |
|--------------------|---------------------------|------|
| Outline Dimensions | 118 (W) x 36 (H) x 11 (D) | mm |
| Character Size | 3.20 (W) x 5.55 (H) | mm |
| Viewing Area | 93.5 (W) x 15.8 (H) | mm |
| Bezel Opening | 93.5 (W) x 15.8 (H) | mm |
| Dot Size | 0.60 (W) x 0.60 (H) | mm |
| Dot Pitch | 0.65 (W) x 0.65 (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 |

Absolute Maximum Ratings (Cont)

| Item | Symbol | Rating | Unit |
|-----------------------|-----------|------------|------|
| LED Forward Current | I_F | 280 | mA |
| LED Reverse Voltage | V_R | 4 | V |
| LED Power Dissipation | P_D | 1150 | mW |
| 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 |
| | $V_{DD}-V_O$ | 3.0 | - | 6.3 | |
| High Level In Voltage ($V_{DD} = 5.0V$) | V_{IH} | 2.2 | - | - | V |
| Low Level In Voltage ($I_{OH} = 0.2 mA$) | V_{IL} | 0 | - | 0.6 | V |
| High Level Output Volt. ($-I_{OH} = 0.2 mA$) | V_{OH} | 2.4 | - | - | V |
| Low Level Output Volt. ($I_{OL} = 1.2 mA$) | V_{OL} | - | - | 0.4 | V |
| LED Forward Voltage ($I_F = 160 mA$) | V_F | 3.8 | 4.1 | 4.4 | V |
| LED Reverse Current ($V_R = 4 V$) | I_R | - | - | 100 | μA |

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 |

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 | GND | Ground |
| 2 | V _{DD} | +5 Power Supply |
| 3 | V _O | LCD Drive Voltage |
| 4 | RS | "H" Data Input "L" Command Input |
| 5 | R/W | Read/Write |
| 6 | E | Enable |
| 7 | DB0 | Data Bus DB0-DB7 are for 8-bit operation DB4-DB7 are for 4-bit operation |
| 8 | DB1 | |
| 9 | DB2 | |
| 10 | DB3 | |
| 11 | DB4 | |
| 12 | DB5 | |
| 13 | DB6 | |
| 14 | DB7 | |
| 15 | NC | No Connection |
| 16 | NC | No Connection |

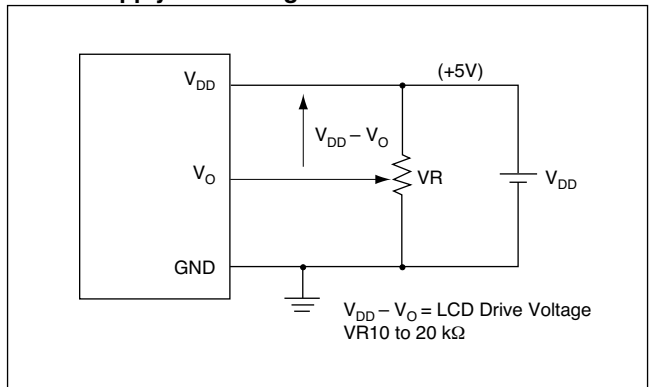
Power Supply

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

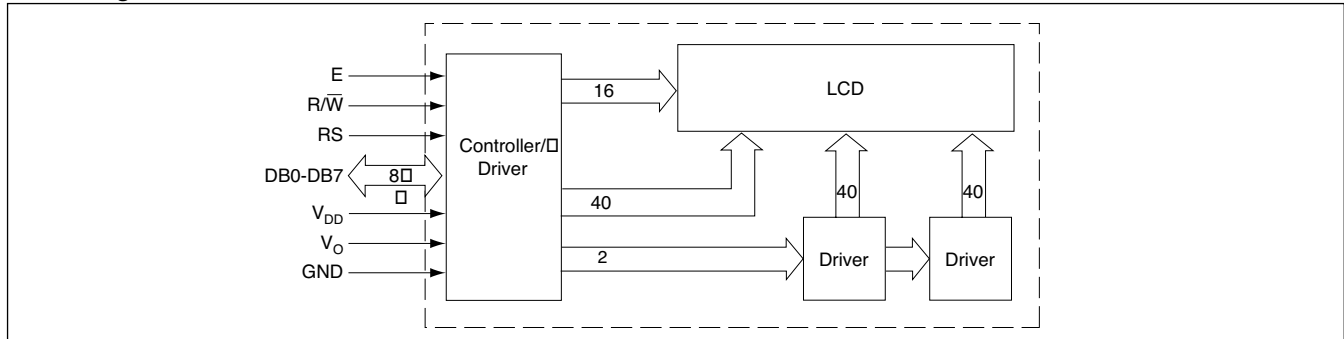
Temperature Variations

| Temperature | V _{DD} -V _O |
|-------------|---------------------------------|
| 0°C | 5.00 |
| +25°C | 4.75 |
| +50°C | 4.50 |

Power Supply Block Diagram



Block Diagram



Dimensional Outline

