

### LD8041A/B Series - 0.80 inch Four Digit 7 Segment LED Display



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



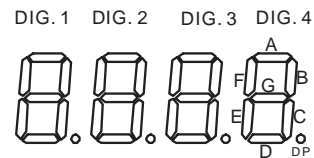
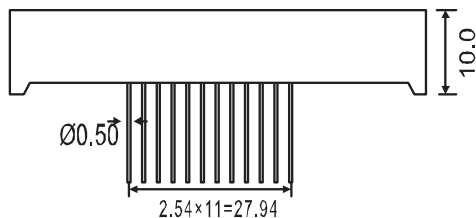
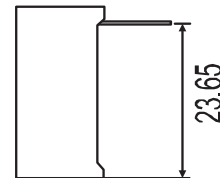
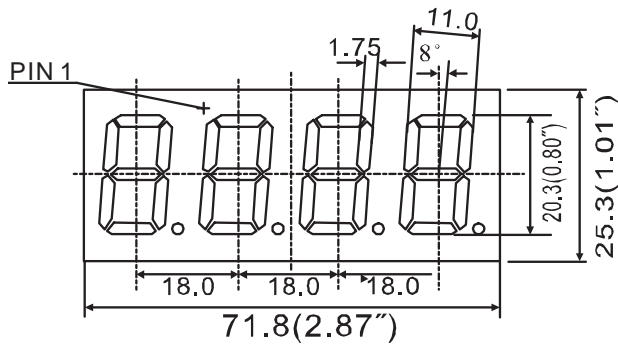
#### Features

- 20.40 mm (0.80 inch) digit high
- Excellent digit appearance
- Wide viewing angle
- Range of emitted colors
- I.C. compatible
- Low power consumption
- White segment, black face
- RoHS compliant

#### Available options

- Alternative emitting luminosity:  
Standard or high brightness version
- Alternative emitted color
- Alternative face and segment color
- Alternative font
- Both CA and CC versions are available
- Cropped terminal pins

#### Package Dimensions

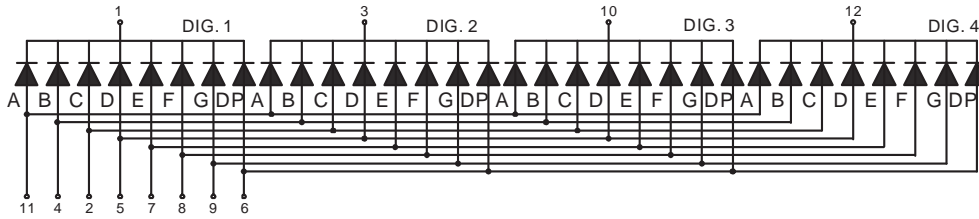


#### Notes:

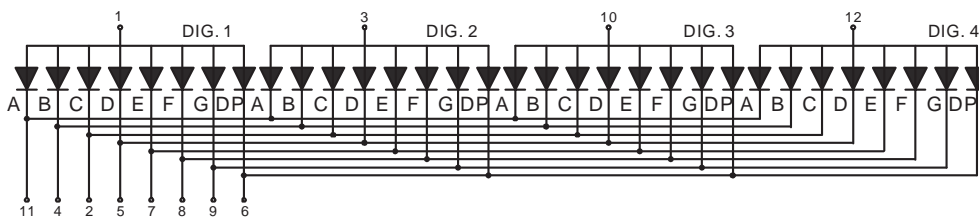
1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25\text{mm}$ (0.01inch) unless otherwise noted.
2. Specifications are subject to change without notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm.

### Internal Circuit Diagram

#### LD8041A (Common Cathode)



#### LD8041B (Common Anode)



### Selection Guide

**Four Digits 7 Segment LED Display, Digit Height: 20.40mm(0.80inch), External Dimensions: 71.6x25.7x8.5mm (L x W x H)**

| Part No.       |              | Chip     |              |     | Iv@IF=20mA |      | Iv@IF=20mA |      |
|----------------|--------------|----------|--------------|-----|------------|------|------------|------|
| Common Cathode | Common Anode | Material | Color        | WLD | One Seg    |      | One DP     |      |
|                |              |          |              |     | Min.       | Typ. | Min.       | Typ. |
| LD8041AR       | LD8041BR     | GaAlAs   | Super Red    | 640 | 8          | 10   | 8          | 10   |
| LD8041AD       | LD8041BD     | GaAlAs   | Hi-Red       | 640 | 18         | 25   | 18         | 25   |
| LD8041AO       | LD8041BO     | GaAsP    | Orange       | 625 | 7          | 9    | 7          | 9    |
| LD8041AY       | LD8041BY     | GaAsP    | Yellow       | 588 | 8          | 10   | 8          | 10   |
| LD8041AG       | LD8041BG     | GaP      | Green        | 568 | 7          | 9    | 7          | 9    |
| LD8041AUR      | LD8041BUR    | AlGaInP  | Ultra Red    | 640 | 30         | 45   | 30         | 45   |
| LD8041AUO      | LD8041BUO    | AlGaInP  | Ultra Orange | 625 | 45         | 60   | 45         | 60   |
| LD8041AUA      | LD8041BUA    | AlGaInP  | Ultra Amber  | 65  | 30         | 45   | 30         | 45   |
| LD8041AUY      | LD8041BUY    | AlGaInP  | Ultra Yellow | 595 | 30         | 45   | 30         | 45   |
| LD8041AUG      | LD8041BUG    | AlGaInP  | Ultra Green  | 573 | 30         | 45   | 30         | 45   |
| LD8041APG      | LD8041BPG    | InGaN    | Pure Green   | 525 | 120        | 300  | 120        | 300  |
| LD8041AUB      | LD8041BUB    | InGaN    | Ultra Blue   | 470 | 30         | 45   | 30         | 45   |
| LD8041AUW      | LD8041BUW    | InGaN    | Ultra White  | \   | 100        | 120  | 100        | 120  |
| Unit:          | \            | \        | \            | nm  | mcd        | mcd  | mcd        | mcd  |

## Electrical Characteristics & Absolute Maximum Ratings

| Parameter     |          | Electrical optical Characteristics <sup>[1]</sup> |      |                       | Absolute Maximum Ratings <sup>[1]</sup> |                    |                                     |
|---------------|----------|---|------|-----------------------|---|--------------------|-------------------------------------|
|               |          | Forward Voltage @ IF=20mA                         |      | Reverse Current VR=5V | Power Dissipation                       | DC Forward Current | Peak Forward Current <sup>[2]</sup> |
| Emitted color |          | Typ.  | Max. |                       |   |                    |                                     |
| Super Red     | Per Seg. | 1.8   | 2.2  | 30                    | 60                                      | 25                 | 100                                 |
|               | Per DP   | 1.8   | 2.2  | 30                    | 60                                      | 25                 | 100                                 |
| Hi-Red        | Per Seg. | 1.8   | 2.2  | 30                    | 60                                      | 25                 | 100                                 |
|               | Per DP   | 1.8   | 2.2  | 30                    | 60                                      | 25                 | 100                                 |
| Orange        | Per Seg. | 2.1   | 2.5  | 30                    | 80                                      | 30                 | 100                                 |
|               | Per DP   | 2.1   | 2.5  | 30                    | 80                                      | 30                 | 100                                 |
| Yellow        | Per Seg. | 2.1   | 2.5  | 30                    | 80                                      | 30                 | 100                                 |
|               | Per DP   | 2.1   | 2.5  | 30                    | 80                                      | 30                 | 100                                 |
| Green         | Per Seg. | 2.2   | 2.5  | 30                    | 80                                      | 30                 | 100                                 |
|               | Per DP   | 2.2   | 2.5  | 30                    | 80                                      | 30                 | 100                                 |
| Ultra Red     | Per Seg. | 1.9   | 2.6  | 30                    | 60                                      | 30                 | 100                                 |
|               | Per DP   | 1.9   | 2.6  | 30                    | 60                                      | 30                 | 100                                 |
| Ultra Orange  | Per Seg. | 2   | 2.6  | 30                    | 65                                      | 30                 | 100                                 |
|               | Per DP   | 2   | 2.6  | 30                    | 65                                      | 30                 | 100                                 |
| Ultra Amber   | Per Seg. | 2   | 2.6  | 30                    | 65                                      | 30                 | 100                                 |
|               | Per DP   | 2   | 2.6  | 30                    | 65                                      | 30                 | 100                                 |
| Ultra Yellow  | Per Seg. | 2   | 2.6  | 30                    | 65                                      | 30                 | 100                                 |
|               | Per DP   | 2   | 2.6  | 30                    | 65                                      | 30                 | 100                                 |
| Ultra Green   | Per Seg. | 2.1   | 2.6  | 30                    | 75                                      | 30                 | 100                                 |
|               | Per DP   | 2.1   | 2.6  | 30                    | 75                                      | 30                 | 100                                 |
| Pure Green    | Per Seg. | 3.5   | 4    | 30                    | 110                                     | 30                 | 100                                 |
|               | Per DP   | 3.5   | 4    | 30                    | 110                                     | 30                 | 100                                 |
| Ultra Blue    | Per Seg. | 3.5   | 4    | 30                    | 120                                     | 30                 | 100                                 |
|               | Per DP   | 3.5   | 4    | 30                    | 120                                     | 30                 | 100                                 |
| Ultra White   | Per Seg. | 3.5   | 4    | 30                    | 120                                     | 30                 | 100                                 |
|               | Per DP   | 3.5   | 4    | 30                    | 120                                     | 30                 | 100                                 |
| Unit:         | \        | V   | V    | uA                    | mW                                      | mA                 | mA                                  |

Notes:

1. At Ta = 25 °C.

2. Peak forward current at 1/10 Duty Cycle, 0.1ms Pulse.