

### LD30012I/J Series – 3.00 inch Single Digit 7 Segment LED Display



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



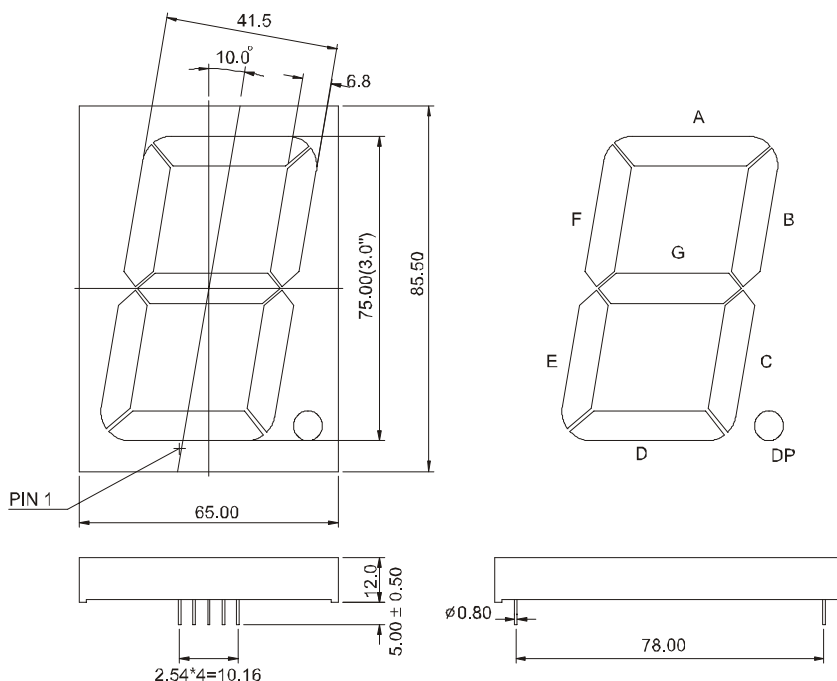
#### Features

- 75.00 mm (3.00 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

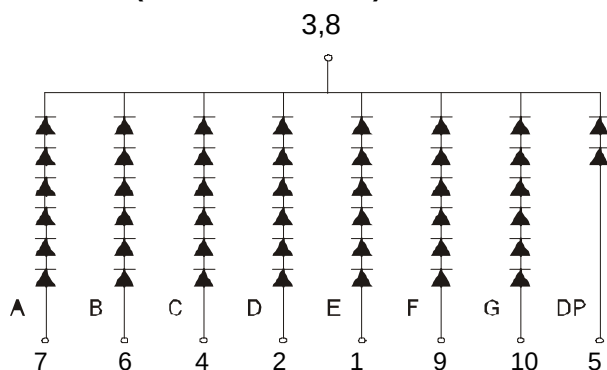


#### Notes:

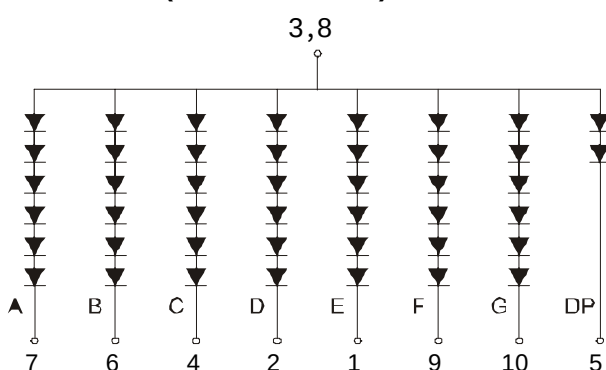
1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25\text{mm}$  ( $0.01\text{inch}$ ) unless otherwise noted.
2. Specifications are subject to change without notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm.

### Internal Circuit Diagram

LD30012I (Common Cathode)



LD30012J (Common Anode)



### Selection Guide

Single Digit 7 Segment LED Display, Digit Height: 75.00mm(3.00inch), External Dimensions: 65.00x85.50x12.00mm (L x W x H )

| Part No.   |            | Chip     |              |     | Iv@IF=20mA |       | Iv@IF=20mA |      |
|------------|------------|----------|--------------|-----|------------|-------|------------|------|
| CC         | CA         | Material | Color        | WLD | One Seg    |       | One DP     |      |
|            |            |          |              |     | Min.       | Typ.  | Min.       | Typ. |
| LD30012IR  | LD30012JR  | GaAlAs   | Super Red    | 640 | 36         | 45    | 12         | 15   |
| LD30012ID  | LD30012JD  | GaAlAs   | Hi-Red       | 640 | 81         | 112.5 | 27         | 37.5 |
| LD30012IO  | LD30012JO  | GaAsP    | Orange       | 625 | 31.5       | 40.5  | 10.5       | 13.5 |
| LD30012IY  | LD30012JY  | GaAsP    | Yellow       | 588 | 36         | 45    | 12         | 15   |
| LD30012IG  | LD30012JG  | GaP      | Green        | 568 | 31.5       | 40.5  | 10.5       | 13.5 |
| LD30012IUR | LD30012JUR | AlGaInP  | Ultra Red    | 640 | 135        | 202.5 | 45         | 67.5 |
| LD30012IUO | LD30012JUO | AlGaInP  | Ultra Orange | 625 | 202.5      | 270   | 67.5       | 90   |
| LD30012IUA | LD30012JUA | AlGaInP  | Ultra Amber  | 605 | 135        | 202.5 | 45         | 67.5 |
| LD30012IUY | LD30012JUY | AlGaInP  | Ultra Yellow | 595 | 135        | 202.5 | 45         | 67.5 |
| LD30012IUG | LD30012JUG | AlGaInP  | Ultra Green  | 573 | 135        | 202.5 | 45         | 67.5 |
| LD30012IPG | LD30012JPG | InGaN    | Pure Green   | 525 | 540        | 1350  | 180        | 450  |
| LD30012IUB | LD30012JUB | InGaN    | Ultra Blue   | 470 | 135        | 202.5 | 45         | 67.5 |
| LD30012IUW | LD30012JUW | SMD      | Ultra White  | \   | 450        | 540   | 150        | 180  |
| Unit:      | \          | \        | \            | nm  | mcd        | mcd   | mcd        | mcd  |

### Electrical Characteristics & Absolute Maximum Ratings

| Parameter     |          | Electrical optical Characteristics <sup>[1]</sup> |      |                       | Absolute Maximum Ratings <sup>[1]</sup> |                    |                                     |
|---------------|----------|---------------------------------------------------|------|-----------------------|-----------------------------------------|--------------------|-------------------------------------|
| Emitted color |          | Forward Voltage @ IF=20mA                         |      | Reverse Current VR=5V | Power Dissipation                       | DC Forward Current | Peak Forward Current <sup>[2]</sup> |
|               |          | 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.