

### LM40057A/BRG Series – 3.00 inch 5x7 Dual Color Dot Matrix LED Display



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



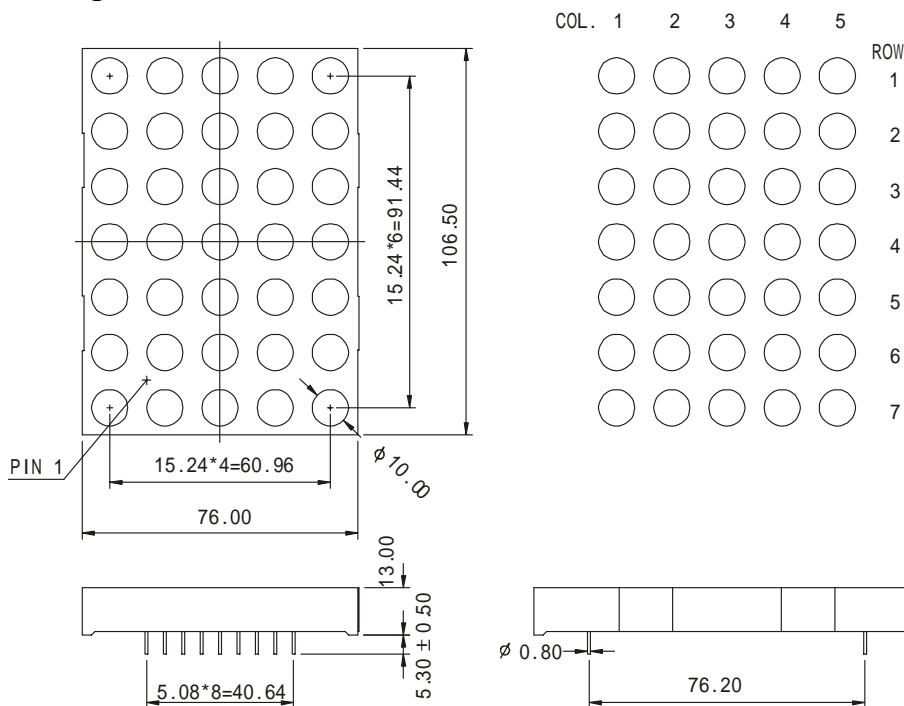
#### Features

- 106.50mm (4.00 inch) digit high
- Dot size: Diameter 10.00 mm
- Pitch: 15.24 mm
- Wide viewing angle
- Range of emitted colors
- I.C. compatible
- Low power consumption
- White dot, grey or black face
- RoHS compliant

#### Available options

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

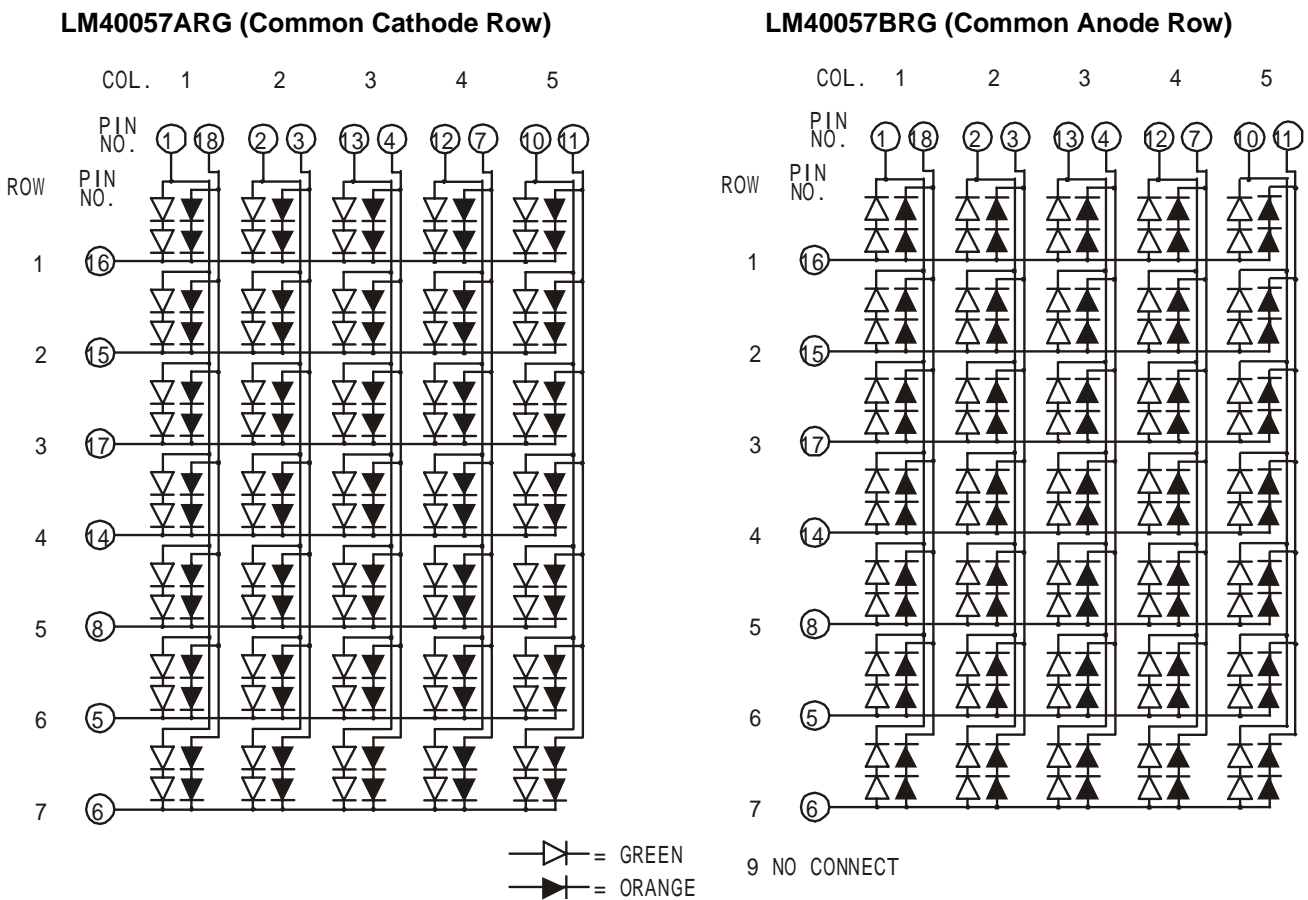
#### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25\text{mm}$  (0.01inch) unless other wise 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



### Selection Guide

**4.00 inch 5x7 Red-Green LED dot matrix module, Matrix Height: 106.50mm(4.00 inch), External Dimensions: 76.000x106.50x13.00mm (L x W x H)**

Description	Part No.		Chip			Iv(mcd)@20mA	
	Cathode Row	Anode Row	Material	Color	W LD (nm)	One Dot	
						Min.	Typ.
Standard Brightness	LM40057ARG	LM40057BRG	GaAlAs	Super Red	640	12	15
			GaP	Green	568	10.5	13.5
Ultra-High Brightness	LM40057AURUG	LM40057BURUG	AlGaInP	Ultra Red	640	45	67.5
			AlGaInP	Ultra Green	573	45	67.5

## Electrical Characteristics & Absolute Maximum Ratings

Color	Electrical optical Characteristics <sup>[1]</sup>			Absolute Maximum Ratings <sup>[1]</sup>			
	V <sub>F</sub> (V) @ I <sub>F</sub> =20mA <sup>[2]</sup>		Reverse Current V <sub>R</sub> =5V(μA)	Power Dissipation (mW)	DC Forward Current (mA)	Peak Forward Current <sup>[3]</sup> (mA)	Reverse Voltage (V)
	Typ.	Max.					
Super Red	1.8	2.2	50	120	25	100	5
Green	2.2	2.5	50	160	30	100	5
Ultra Red	1.9	2.6	50	120	30	100	5
Ultra Green	2.1	2.6	50	150	30	100	5

**Operating/ Storage Temp.:** -40 to +80 deg.;

**Lead Solder Temp.:** 260 deg. for 3-5 Sec. 2mm below package base

Notes:

1. At T<sub>a</sub> = 25 °C.
2. Forward voltage at forward current = 20mA.
3. Peak forward current at 1/10 Duty Cycle, 0.1ms Pulse.