

### LM12057C/DRG Series -1.20 inch 5x7 Dual Color Dot Matrix LED Display



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



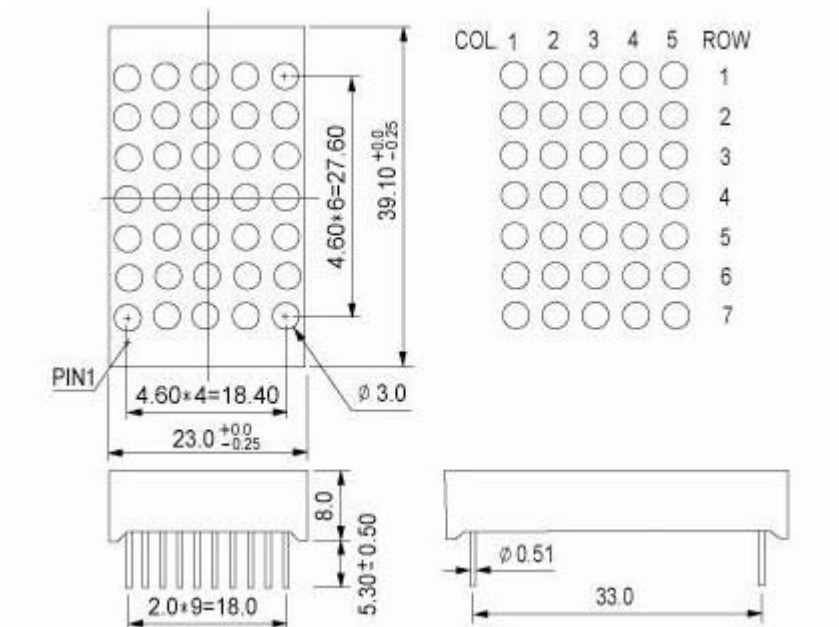
#### Features

- 39.10mm (1.20inch) digit high
- Dot size: Diameter 3.00mm
- Pitch: 4.60mm
- Wide viewing angle
- Range of emitted colors
- I.C. compatible
- Low power consumption
- White segment
- RoHS compliant

#### Available options

- Alternative emitting luminosity:  
Standard or high brightness version
- Alternative emitted color
- Alternative segment color
- Alternative font
- Common Cathode is available
- Cropped terminal pins

#### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25$ 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.

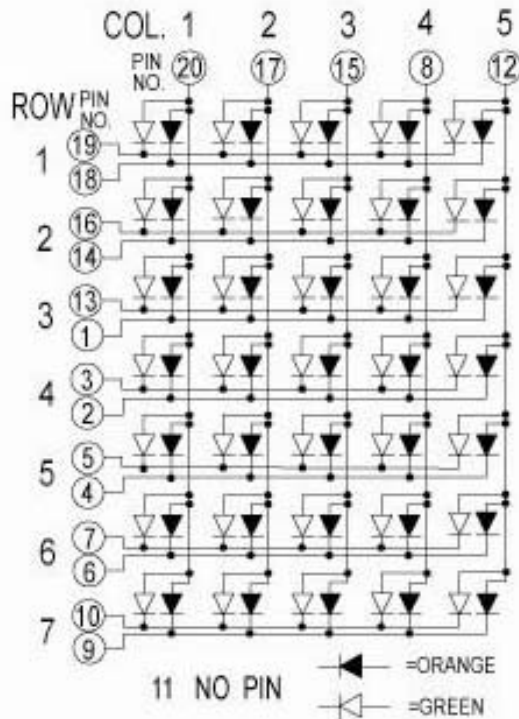
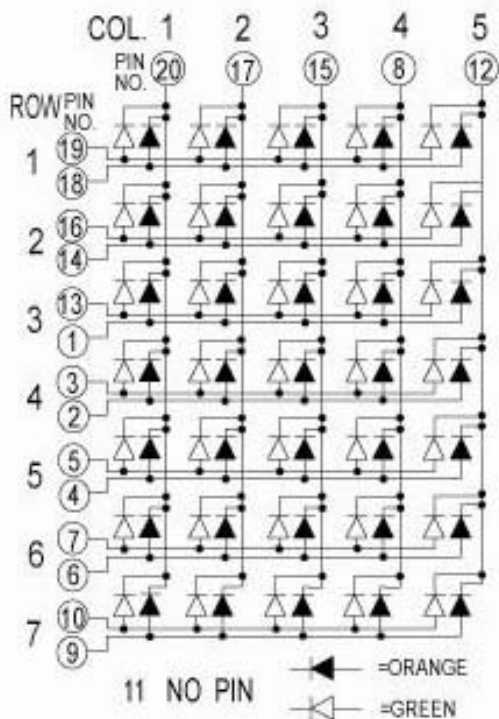
## Internal Circuit Diagram

Common Cathode Row

Common Anode Row

LM12057ERG

LM12057FRG



## Selection Guide

1.2 inch 8x8 Red-Green LED dot matrix module, Matrix Height: 32mm(1.2inch), External Dimensions: 32x32x8mm (L x W x H)

Description	Part No.		Chip			Iv(mcd)@20mA	
	Common Cathode Row	Common Anode Row	Material	Color	W LD (nm)	One Dot	
						Min.	Typ.
Standard Brightness	LM12057ERG	LM12057FRG	GaAlAs	Super Red	640	8	10
			GaP	Green	568	7	9
Ultra-High Brightness	LM12057EURUG	LM12057FURUG	AlGaInP	Ultra Red	640	30	45
			AlGaInP	Ultra Green	573	30	45

## Electrical Characteristics & Absolute Maximum Ratings

LM12057FURPGUB	Electrical Characteristics <sup>[1]</sup>			Absolute Maximum Ratings <sup>[3]</sup>			
Color	VF(V) @ IF=20mA <sup>[2]</sup>		Reverse Current VR=5V (uA)	Power Dissipation (mW)	DC Forward Current (mA)	Peak Forward Current <sup>[2]</sup> (mA)	Reverse Voltage (V)
	Typ.	Max.					
Super Red	1.8	2.2	30	60	25	100	5
Green	2.2	2.5	30	80	30	100	5
Ultra Red	1.9	2.6	30	60	30	100	
Ultra Green	2.1	2.6	300	75	30	100	5
<b>Operating/ Storage Temp.:</b> -40 to +80 deg.; <b>Lead Solder Temp.:</b> 260 deg. for 3-5 Sec. 2mm below package base							

Notes:

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