
SPECIFICATIONS FOR DOT MATRIX DISPLAYS

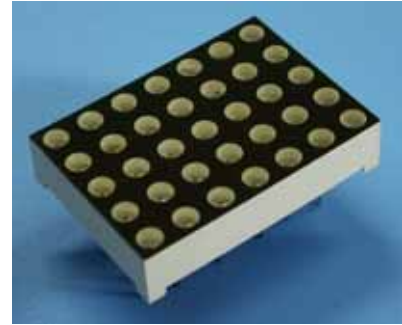
1.0" 5*7 Dot Matrix

[LMD10057 -15 Series](#)

WENRUN OPTOELECTRONIC

Features:

- Emitting dot 3.0mm diameter.
- High efficiency, low power consumption.
- Extremely low current.
- Low development cost.
- Big viewing angle vertically and horizontally.

**LMD10057A/B -15****Descriptions:**

- The LMD10057 is a 27.94mm (1.0") matrix height 5×7 dot matrix display.
- These devices are made with white dots and black surface.

Application

- Instrument panels.
- Digital read out display.

Selection Guide:

Part No.		Chip		Lens Color
Anode	Cathode	Material	Emitting Color	
LMD10057BSR-15	LMD10057ASR-15	GaAlAs	Super Red	Water Clean
LMD10057BG-15	LMD10057AG-15	GaP	Green	
LMD10057BY-15	LMD10057AY-15	GaAsP/GaP	Yellow	
LMD10057BE-15	LMD10057AE-15	GaAsP/GaP	Orange	

Absolute Maximum Rating (Ta=25)

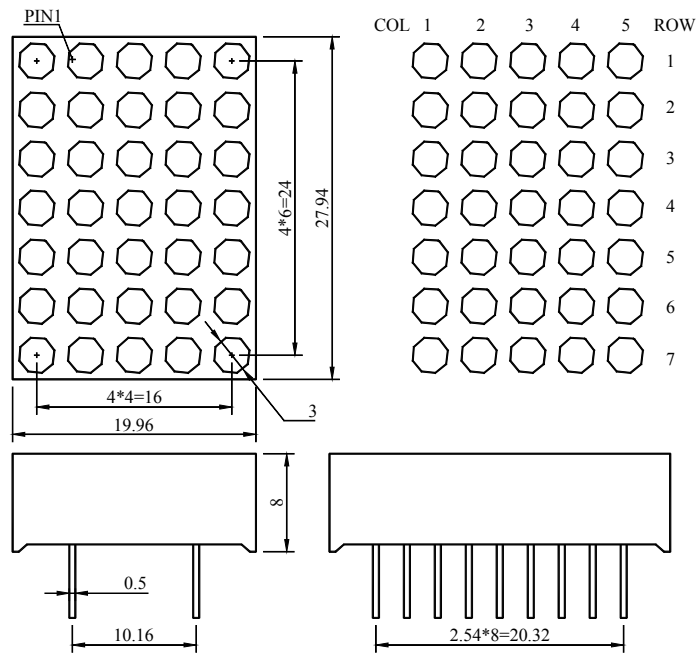
Parameter	Symbol	Super Red	Green	Yellow	Orange	Unit
Power Dissipation/ Dot	P _d	50	60	60	60	mW
Peak Forward Current / Dot (Duty 1/10@ 1KHz)	I _{FP}	70	70	70	70	mA
Continuous Forward Current / Dot	I _F	20	20	20	20	mA
Recommend use current / Dot	I _F	5~10	5~10	5~10	5~10	mA
Reverse Voltage / Dot	V _R	5	5	5	5	V
Operating Temperature Range	Topr	-25~ +75				
Storage Temperature Range	Tstg	-30 ~ +85				
Solder Temperature	Tsol	260 ± 5				

- Notes :** 1、 This is the limit current . It is not allowed to use when the product work continuously.
 2、 It is recommended that the product is driven by TTL,CMOS.
 3、 Soldering time 5 seconds.

Electrical Optical Characteristics (Ta=25)

Parameter	Symbol	Super Red		Green		Yellow		Orange		Unit	Test Condition
		Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.		
Luminous Intensity / Dot	I _V	9.1	--	4.5	--	4.5	--	4.5	--	mcd	I _F =10mA
Forward Voltage / Dot	V _F	1.85	2.3	2.2	2.5	2.0	2.5	2.0	2.5	V	I _F =20mA
Reverse Current / Dot	I _R	--	50	--	50	--	50	--	50	uA	V _R =5V
Dominant Wavelength	d	645	--	565	--	585	--	630	--	nm	I _F =20mA
Spectral Line Half Width		30	--	30	--	30	--	30	--	nm	I _F =20mA

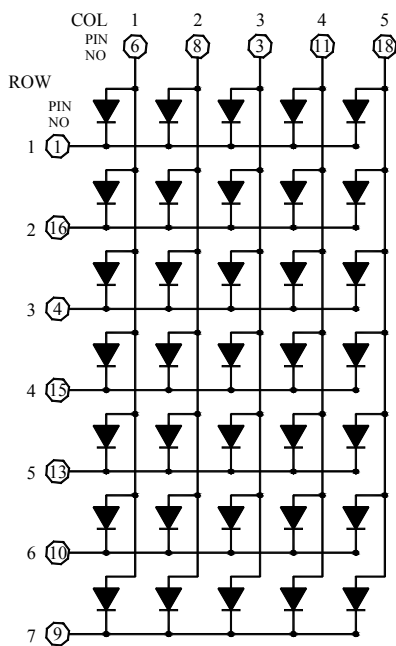
Package Dimensions:



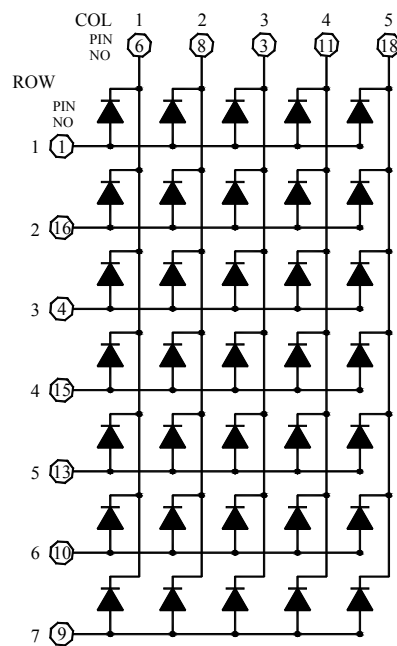
NOTES :

- All dimensions are in millimetres (mm), Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.
- Specifications are subject to change without notice.

Internal Circuit:



LMD10057A



LMD10057B

Reliability Test Items and Conditions

NO	Test Item	Test Conditions	Duration	Sample	Ac/Re
1	Temperature Cycle	-30 ~ 25 ~ 85 ~ 25 30min 5min 30min 5min	50cycles	100	0/1
2	High Temp. Storage	Ta=85	1000hours	100	0/1
3	Temp.& Humidity Test	Ta=85 RH=85%	1000hours	100	0/1
4	Low Temp. Storage	Ta=-30	1000hours	100	0/1
5	Operating Life Test	Ta=25 ± 5 DC IF=15mA	1000hours	100	0/1
6	Solder Heat	Tsol=260 ± 5 , 5s	1times	20	0/1

Typical Electro-Optical Characteristics Curves

