

SPECIFICATIONS FOR DOT MATRIX DISPLAYS

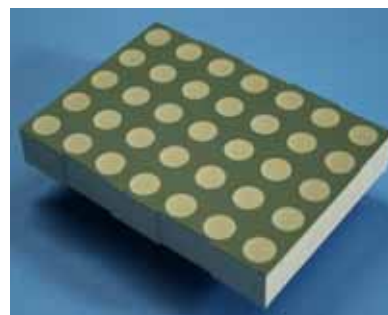
2.0" 5*7 Dot Matrix

LMD20057□□-20 Series

WENRUN OPTOELECTRONIC

◆ Features:

- Emitting dot 5.0mm diameter.
- High efficiency, low power consumption.
- Extremely low current.
- Low development cost.
- Big viewing angle vertically and horizontally.



LMD20057A/B□-20

◆ Descriptions:

- The LMD20057 is a 53.1mm (2.0") matrix height 5×7 dot matrix display.
- These devices are made with white dots and gray surface.

◆ Application

- Instrument panels.
- Digital read out display.

◆ Selection Guide:

Part No.		Chip		Lens Color
Anode	Cathode	Material	Emitting Color	
LMD20057BSR-20	LMD20057ASR-20	GaAlAs	Super Red	White Diffused
LMD20057BG-20	LMD20057AG-20	GaP	Green	
LMD20057BY-20	LMD20057AY-20	GaAsP/GaP	Yellow	
LMD20057BE-20	LMD20057AE-20	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 /Dot①	I _F	20	20	20	20	mA
Recommend use current /Dot ②	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 Temperature③	Tsol	260 ± 5				℃

Notes: 1、 This is the limit current . It is not allowed to use when the product work continuously.

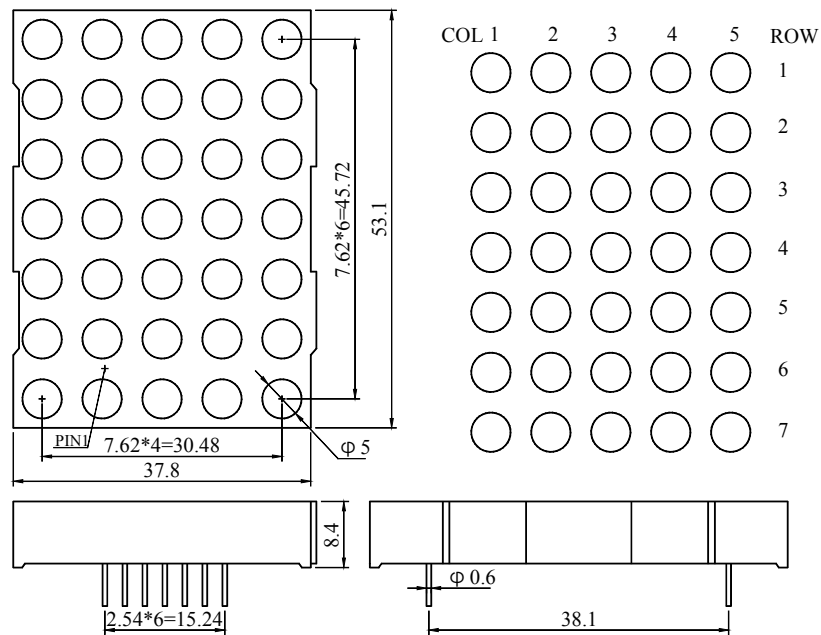
2、 It is recommended that the product is driven by TTL,CMOS.

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	8.0	--	4.0	--	4.0	--	4.0	--	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	λ _d	645	--	565	--	585	--	630	--	nm	I _F =20mA
Spectral Line Half Width	Δλ	30	--	30	--	30	--	30	--	nm	I _F =20mA

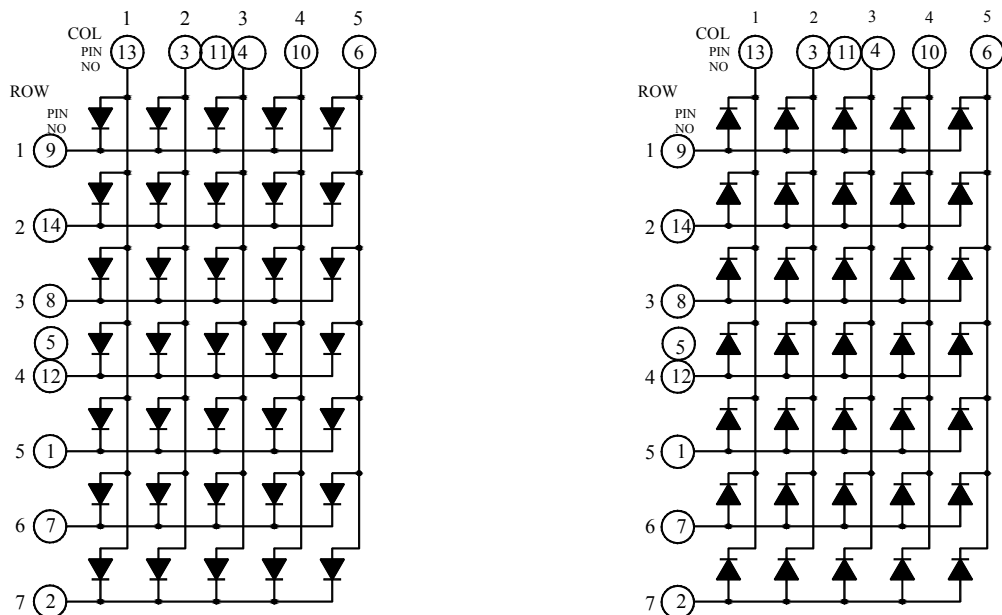
◆ Package Dimensions:



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:



LMD20057A□

LMD20057B□

◆ 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℃, 10s	1times	20	0/1

◆ Typical Electro-Optical Characteristics Curves

