16 x 16 matrix displays

LM-2256 Series

The LM-2256 series are 16 x 16 matrix displays which can be used in a wide variety of applications, including alphabet, numeric, symbol, and graphic displays. Red is available, as well as a dual-color red / green type.

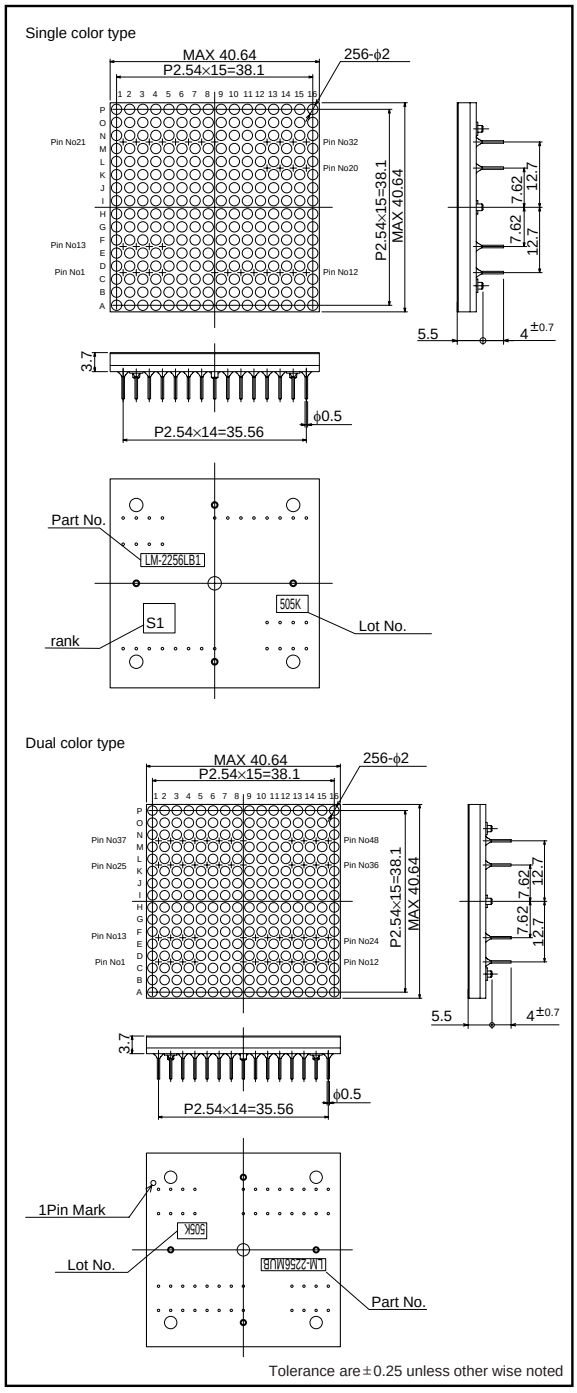
●Application

Light sources for displays

●**Features**

1) 16 x 16 dot matrix
   Circular emitters.
2) External dimensions : 4.064 x40.64 x 5.5mm
3) Emitters : Circular, 2.0mm diameter
4) Black package.

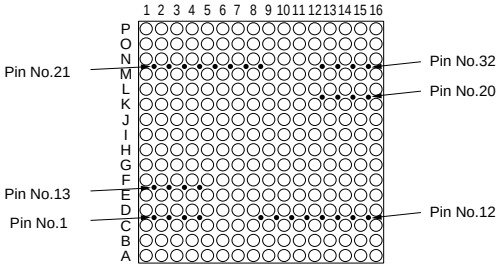
●**Dimensions** (Unit: mm)



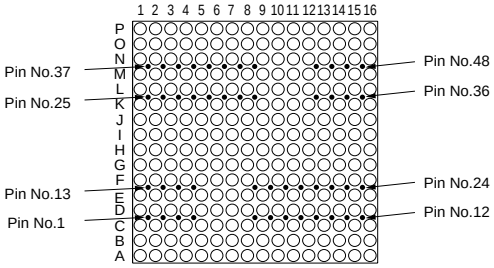
●Selection guide

Emitting color / Common	Red	Red / Green
Anode	–	LM-2256MUB
Cathode	LM-2256LB1	–

●Pin assignments (Top view)

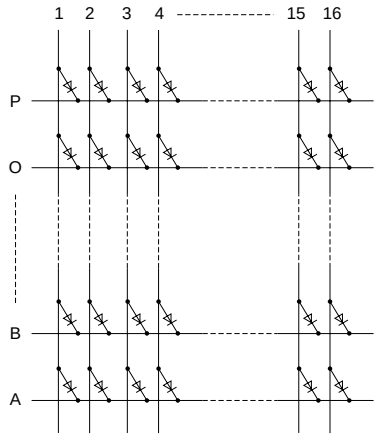


Single color type

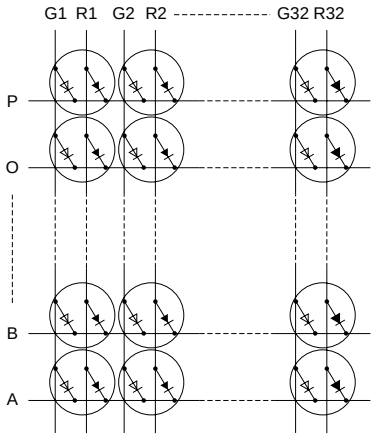


Dual color type

●Internal circuit schematic



Single color type



GREEN
RED

Dual color type

●**Pin assignment table**

Single-color type

Pin No.	Function	Pin No.	Function
1	A Cathode	17	J Cathode
2	C Cathode	18	L Cathode
3	D Cathode	19	K Cathode
4	B Cathode	20	I Cathode
5	9 Anode	21	1 Anode
6	10 Anode	22	2 Anode
7	11 Anode	23	3 Anode
8	12 Anode	24	4 Anode
9	13 Anode	25	5 Anode
10	14 Anode	26	6 Anode
11	15 Anode	27	7 Anode
12	16 Anode	28	8 Anode
13	H Cathode	29	O Cathode
14	F Cathode	30	M Cathode
15	E Cathode	31	N Cathode
16	G Cathode	32	P Cathode

Dual – color type

Pin No.	Function	Pin No.	Function
1	A Cathode	25	R1 Anode
2	C Cathode	26	R2 Anode
3	D Cathode	27	R3 Anode
4	B Cathode	28	R4 Anode
5	G9 Anode	29	R5 Anode
6	G10 Anode	30	R6 Anode
7	G11 Anode	31	R7 Anode
8	G12 Anode	32	R8 Anode
9	G13 Anode	33	J Cathode
10	G14 Anode	34	L Cathode
11	G15 Anode	35	K Cathode
12	G16 Anode	36	I Cathode
13	H Cathode	37	G1 Anode
14	F Cathode	38	G2 Anode
15	E Cathode	39	G3 Anode
16	G Cathode	40	G4 Anode
17	R9 Anode	41	G5 Anode
18	R10 Anode	42	G6 Anode
19	R11 Anode	43	G7 Anode
20	R12 Anode	44	G8 Anode
21	R13 Anode	45	O Cathode
22	R14 Anode	46	M Cathode
23	R15 Anode	47	N Cathode
24	R16 Anode	48	P Cathode

●**Absolute maximum ratings** (Ta=25°C)

Single – color type

Parameter	Symbol	LB1	Unit
		Red	
Power dissipation	P_D	50	mW/dot
Forward current	I_F	20	mA/dot
Peak forward current	I_{FP}	60*	mA/dot
Reverse voltage	V_R	3	V
Operating temperature	Topr	–20 to +60	℃
Storage temperature	Tstg	–25 to +85	℃

* Pulse width 1msec duty 1 / 16

Dual – color type

Parameter	Symbol	MUB		Unit
		Red	Green	
Power dissipation	P_D	42	42	mW/dot
Forward current	I_F	15	15	mA/dot
Peak forward current	I_{FP}	60*	60*	mA/dot
Reverse voltage	V_R	4	4	V
Operating temperature	Topr	–20 to +50		℃
Storage temperature	Tstg	–30 to +75		℃

*Pulse width 1msec duty 1 / 16

●**Electrical and optical characteristics** (Ta=25°C)

Single – color type

Parameter	Symbol	Conditions	LB1 Red			Unit
			Min.	Typ.	Max.	
Forward voltage	V_F	I_F=20mA	–	1.75	2.5	V
Forward current	I_R	V_R=3V	–	–	100	μA
Peak wavelength	λ_P	I_F=20mA	–	660	–	nm
Spectral half-power bandwidth	$\Delta\lambda$	I_F=20mA	–	25	–	nm

◎Not designed for radiation resistance.

Parameter	Symbol	Conditions	MB Green			Unit
			Min.	Typ.	Max.	
Forward voltage	V_F	I_F=10mA	–	2.1	2.8	V
Forward current	I_R	V_R=3V	–	–	100	μA
Peak wavelength	λ_P	I_F=10mA	–	563	–	nm
Spectral half-power bandwidth	$\Delta\lambda$	I_F=10mA	–	40	–	nm

◎Not designed for radiation resistance.

Dual – color type

Parameter	Symbol	Conditions	MUB Red			MUB Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V_F	I_F=10mA	–	2	2.8	–	2.1	2.8	V
Reverse current	I_R	V_R=3V	–	–	100	–	–	100	μA
Peak wavelength	λ_P	I_F=10mA	–	635	–	–	563	–	nm
Spectral half-power bandwidth	$\Delta\lambda$	I_F=10mA	–	40	–	–	40	–	nm

◎Not designed for radiation resistance.

●**Luminous intensity**

Color	Type	Min.	Typ.	Max.	Unit
Red	LB1	36	72	–	mcd
Red	MUB	0.22	0.63	–	mcd
Green		0.56	1.6	–	mcd

Note : Measured at I_F = 10mA (LB1 : IF=20mA)

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