

8 × 8 matrix displays

LM-2064 Series

The LM-2064 series are 8 × 8 matrix displays which can be used in a wide variety of applications, including alpha-bet, numeric, symbol, and graphic displays. Bright red and green are available, as well as a dual-color red/green type.

● Applications

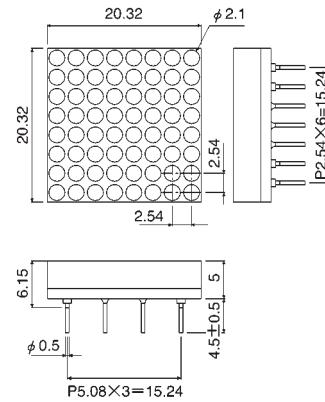
Light sources for displays

● Features

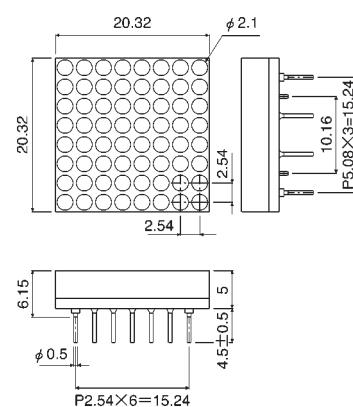
- 1) 8 × 8 dot matrix
Circular emitters.
- 2) External dimensions: 20.32 × 20.32 × 6.15 mm
- 3) Emitters: Circular, 2.1 mm diameter
- 4) Black package.

● External dimensions (Units: mm)

Single color type



Dual color type



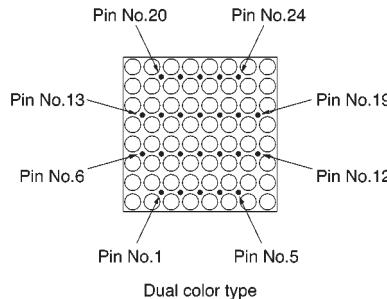
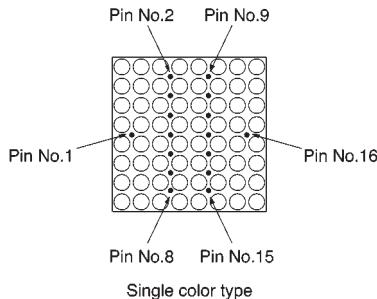
Tolerances are ±0.2 unless otherwise noted

● Selection guide

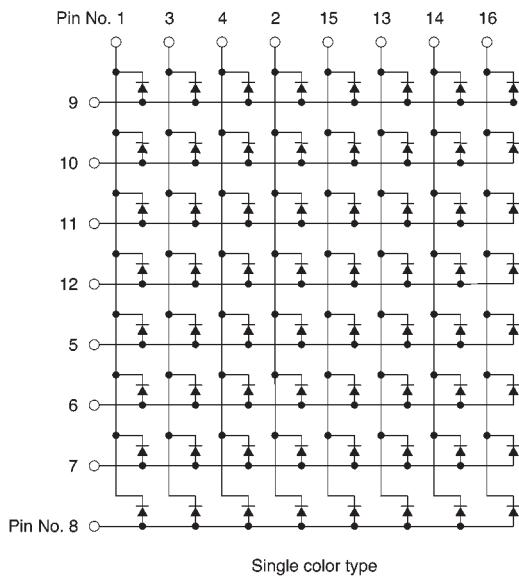
Emitting color Common	Red*	Green	Red / Green
Anode	LM-2064LB	LM-2064MB	—
Cathode	—	—	LM-2064MUM

* Bright red

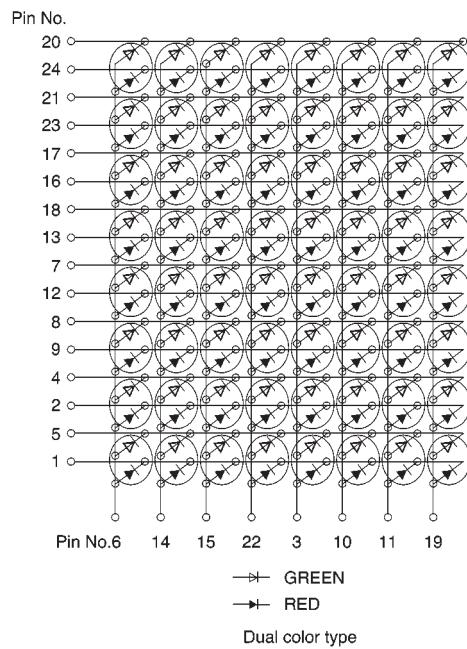
● Pin assignments



● Internal circuit schematic



Single color type



→ GREEN
→ RED

Dual color type

● Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Single-color type

Parameter	Symbol	LB	MB	Unit
		Red*2	Green	
Power dissipation	P_D	1.6	1.4	W
Forward current	I_F	30	15	mA
Peak forward current	I_{FP}	80*1	60*1	mA
Reverse voltage	V_R	4	3	V
Operating temperature	T_{opr}	$-20 \sim +60$		
Storage temperature	T_{stg}	$-30 \sim +85$		

*1 Pulse width 1msec duty 1 / 8

*2 Bright red

Dual-color type

Parameter	Symbol	MUM			Unit
		Red	Green		
Power dissipation	P_D	35	35	mW/dot	
Forward current	I_F	15	15	mA	
Peak forward current	I_{FP}	60*	60*	mA	
Reverse voltage	V_R	4	4	V	
Operating temperature	T_{opr}	-20~+50			°C
Storage temperature	T_{stg}	-25~+75			°C

* Pulse width 1msec duty 1 / 8

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

Single-color type

Parameter	Symbol	Conditions	LB		MB		Unit		
			Red*1			Green			
			Min.	Typ.	Max.	Min.	Typ.		
Forward voltage	V_F	$I_F=10\text{mA}$	—	1.75	2.5	—	2.1	2.8	V
Reverse current	I_R	$V_R=3\text{V}$	—	—	100	—	—	100	μA
Peak wavelength	λ_P	$I_F=10\text{mA}$	—	660	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	$I_F=10\text{mA}$	—	25	—	—	40	—	nm

◎Not designed for radiation resistance.

*1 $I_F = 20\text{mA}$

Dual-color type

Parameter	Symbol	Conditions	MUM				Unit		
			Red			Green			
			Min.	Typ.	Max.	Min.	Typ.		
Forward voltage	V_F	$I_F=10\text{mA}$	—	2.0	2.8	—	2.1	2.8	V
Reverse current	I_R	$V_R=3\text{V}$	—	—	100	—	—	100	μA
Peak wavelength	λ_P	$I_F=10\text{mA}$	—	635	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	$I_F=10\text{mA}$	—	40	—	—	40	—	nm

◎Not designed for radiation resistance.

● Luminous intensity

Color	Type	Min.	Typ.	Max.	Unit
Red*1	LB	1.7	5.0	—	mcd
Green	MB	0.56	1.6	—	mcd
Red	MUM	0.56	1.6	—	mcd
Green		0.9	2.5	—	mcd

Note: Measured at $I_F = 10\text{mA}$ *1 $I_F = 20\text{mA}$

Appendix

Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document use silicon as a basic material.

Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.