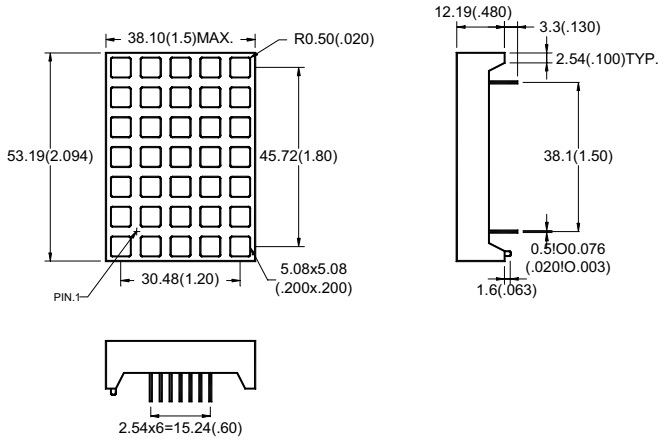
Features :

1. 2.094 inch (53.19mm) matrix height.
2. Square size 6.1×6.1mm.
3. Low power requirement.
4. Excellent characters appearance.
5. Solid state reliability.
6. Multiplex drive , column anode com. and row cathode com.
7. Single color available.
8. Categorized for luminous intensity.
9. Stackable vertically and horizontally.

Description :

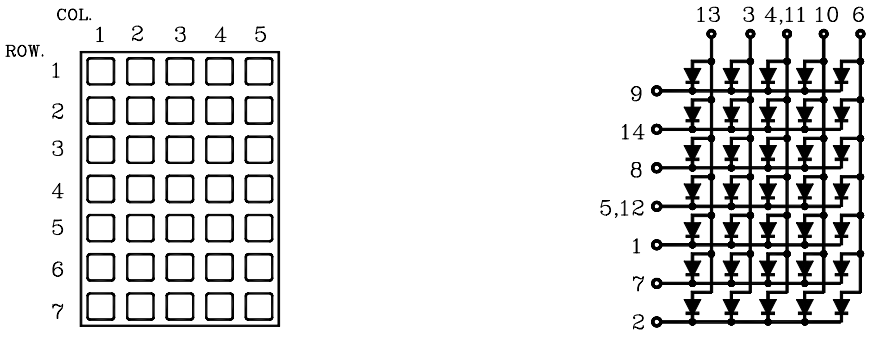
1. The BM-21657MA is a 53.19mm (2.094") matrix height 5×7 square matrix display.
2. This product use super red chips, which are made from AlGaAs on GaAs substrate.
3. This product have a black face and water clear squares.

Package Dimensions :



Notes:
1. All dimensions are in millimeters(inches).
2. Tolerance is ±0.25mm(.01")unless otherwise specified.
3. Specifications are subject to change without notice.

Internal Circuit Diagram :



● Absolute Maximum Ratings(Ta=25℃)

Parameter	Symbol	Rating	Unit
Power Dissipation Per Square	Pd	80	mW
Forward Current Per Square	I_F	30	mA
Peak Forward Current Per Square	I_{FP} (Duty 1/10, 1KHZ)	150	mA
Reverse Voltage Per Square	V_R	5	V
Operating Temperature	Topr	-40℃~80℃	-
Storage Temperature	Tstg	-40℃~85℃	-
Soldering Temperature (1/16" From Body)	Tsol	260℃ For 5 Seconds	-

● Electrical And Optical Characteristics(Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage Per Square	V_F	I_F=10mA	-	1.7	2.5	V
Luminous Intensity Per Square	Iv	I_F=10mA	-	24.0	-	mcd
Reverse Current Per Square	I_R	V_R=5V	-	-	100	μA
Peak Wave Length	λp	I_F=10mA	-	660	-	nm
Dominant Wave Length	λd	I_F=10mA	-	643	-	nm
Spectral Line Half-width	Δλ	I_F=10mA	-	20	-	nm

● Typical Electro-Optical Characteristics Curves

(25℃ Ambient Temperature Unless Otherwise Noted)

Fig.1 Relative Radiant Intensity VS. Wavelength

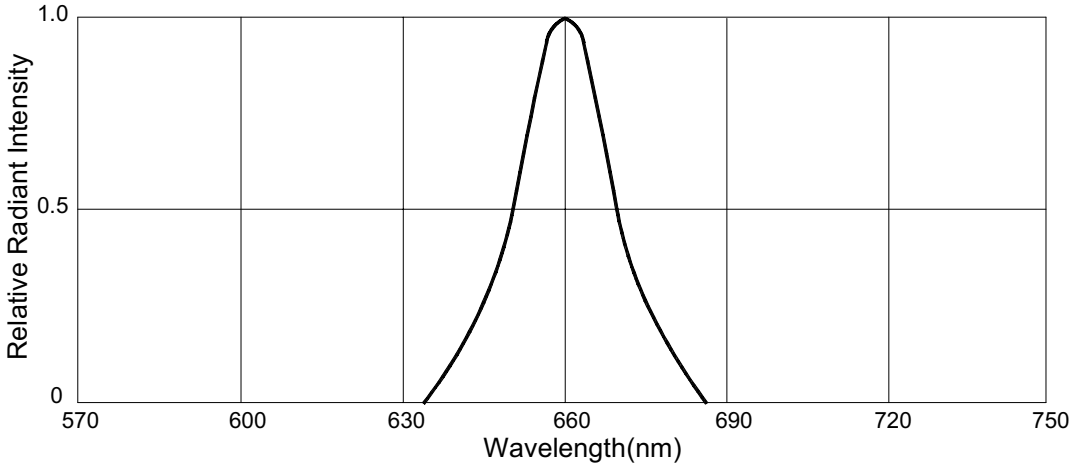


Fig.2 Forward Current VS. Forward Voltage

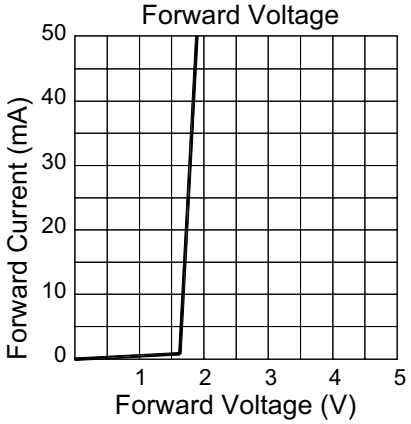


Fig.3 Relative Luminous Intensity VS. Ambient Temperature

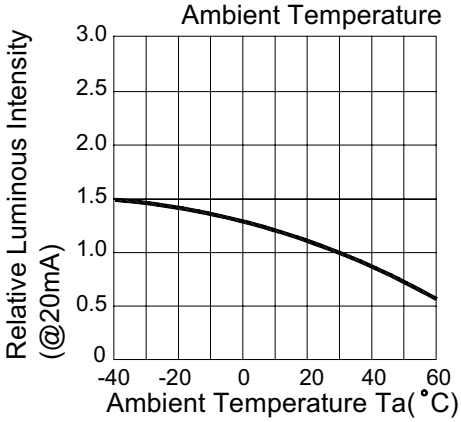


Fig.4 Relative Luminous Intensity VS. Forward Current

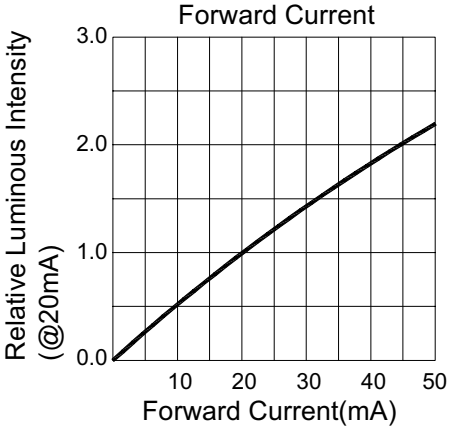


Fig.5 Forward Current Derating Curve VS. Ambient Temperature