百流光电
BetLux Electronics

**LED DOT MATRIX**

BL-M12X882XX

■ **Features:**

- 39.10mm (1.2") F 3.0 dot matrix LED display. BI-COLOR
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C. Boards or sockets.
- I.C. Compatible.
- ROHS Compliance.







**Electrical-optical characteristics: (Ta=25℃)** (Test Condition: IF=20mA)

| Part No | | Chip | | | VF Unit:V | | Iv |
|---|---|---|---|---|---|---|---|
| Row Cathode Column Anode | Row Anode Column Cathode | Emitted Color | Material | $\lambda_P$ (nm) | Typ | Max | TYP.(mcd) |
| BL-M12C882SG-XX | BL-M12D882SG-XX | Super Red | AlGaInP | 660 | 2.10 | 2.50 | 200 |
| | | Green | GaP/GaP | 570 | 2.20 | 2.50 | 195 |
| BL-M12C882EG-XX | BL-M12D882EG-XX | Orange | GaAsP/GaP | 635 | 2.10 | 2.50 | 190 |
| | | Green | GaP/GaP | 570 | 2.20 | 2.50 | 195 |
| BL-M12C882DUG-XX | BL-M12D882DUG-XX | Ultra Red | AlGaInP | 660 | 2.10 | 2.50 | 320 |
| | | Ultra Green | AlGaInP | 574 | 2.20 | 2.50 | 250 |
| BL-M12C882UEUG-XX | BL-M12D882UEUG-XX | Ultra Orange | AlGaInP | 630 | 2.10 | 2.50 | 235 |
| | | Ultra Green | AlGaInP | 574 | 2.20 | 2.50 | 250 |

■ -XX: Surface / Lens color：

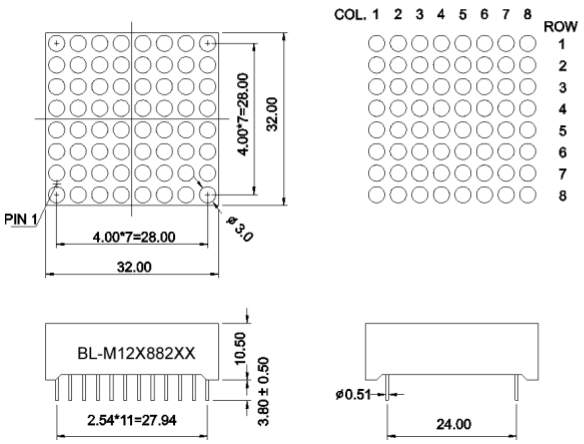
| **Number** | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| **Ref Surface Color** | White | Black | Gray | Red | Green | |
| **Epoxy Color** | Water clear | White diffused | Red Diffused | Green Diffused | Yellow Diffused | |

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

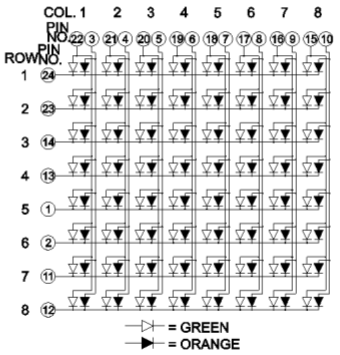
| Parameter | S | G | E | D | UG | UE | | | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Forward Current $I_F$ | 30 | 30 | 30 | 30 | 30 | 30 | | | mA |
| Power Dissipation $P_d$ | 75 | 80 | 80 | 75 | 75 | 65 | | | mW |
| Reverse Voltage $V_R$ | 5 | 5 | 5 | 5 | 5 | 5 | | | V |
| Peak Forward Current $I_{PF}$ (Duty 1/10 @1KHZ) | 150 | 150 | 150 | 150 | 150 | 150 | | | mA |
| Operation Temperature $T_{OPR}$ | -40 to +80 | | | | | | | | ℃ |
| Storage Temperature $T_{STG}$ | -40 to +85 | | | | | | | | ℃ |
| Lead Soldering Temperature $T_{SOL}$ | Max.260±5℃ for 3 sec Max. (1.6mm from the base of the epoxy bulb) | | | | | | | | ℃ |

## ■ Package configuration & Internal circuit diagram

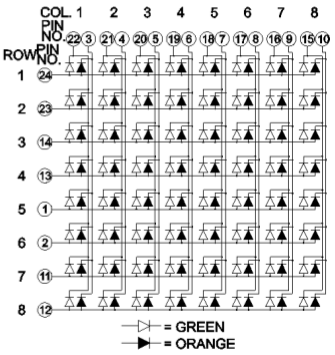
BL-M12X882XX Series




BL-M12C882XX




BL-M12D882XX



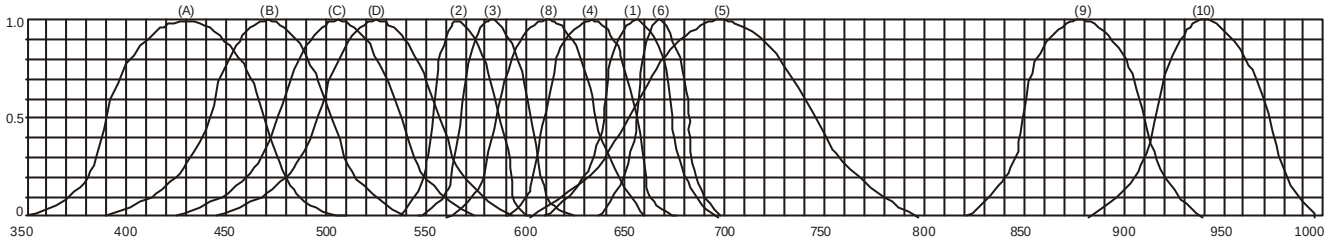

Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is ± 0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

## LED DOT MATRIX

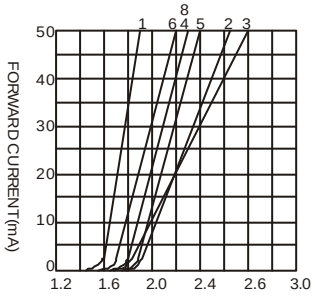
BL-M12X882XX

### ■ Typical electrical-optical characteristics curves:

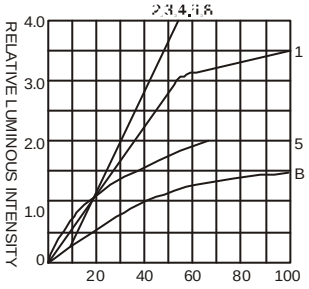



RELATIVE INTENSITY Vs WAVELENGTH(λ p)

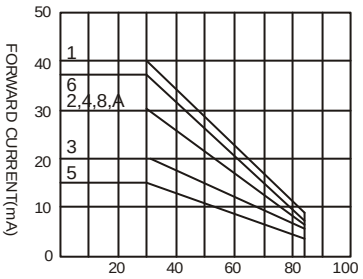
(1) - GaAsP/GaAs 655nm/Red
(2) - GaP 570nm/Yellow Green
(3) - GaAsP/GaP 585nm/Yellow
(4) - GaAsp/GaP 635nm/Orange & Hi-Eff Red
(5) - GaP 700nm/Bright Red
(6) - GaAlAs/GaAs 660nm/Super Red
(8) - GaAsP/GaP 610nm/Super Red
(9) - GaAlAs 880nm
(10) - GaAs/GaAs & GaAlAs/GaAs 940nm
(A) - GaN/SiC 430nm/Blue
(B) - InGaN/SiC 470nm/Blue
(C) - InGaN/SiC 505nm/Ultra Green
(D) - InGaAl/SiC 525nm/Ultra Green



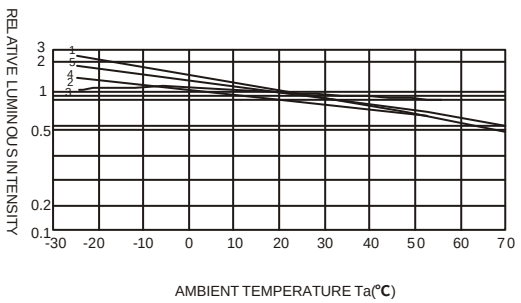

FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



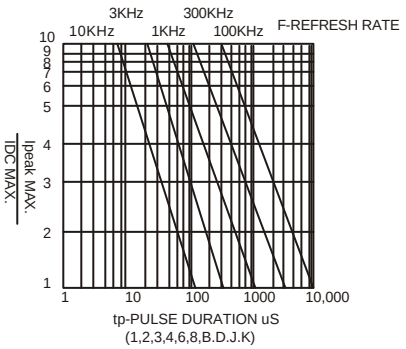

FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



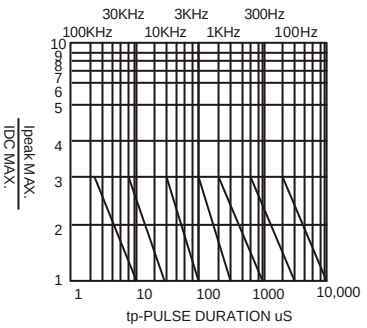

AMBIENT TEMPERATURE Ta(℃)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE




AMBIENT TEMPERATURE Ta(℃)




tp-PULSE DURATION uS
(1,2,3,4,6,8,B.D.J.K)




tp-PULSE DURATION uS
(5)

NOTE:25℃ free air temperature unless otherwise specified