

LED DOT MATRIX
BL-M20X881XX
Features:

- Ø 49.45mm (2.0") 1/5.0 dot matrix LED display, BI-COLOR
- Ø Low current operation.
- Ø Excellent character appearance.
- Ø Easy mounting on P.C. Boards or sockets.
- Ø I.C. Compatible.
- Ø ROHS Compliance.


Electrical-optical characteristics: (Ta=25 °C) (Test Condition: IF=20mA)

| Part No | | Chip | | | VF Unit:V | | Iv TYP.(mcd) |
|-----------------------------|-----------------------------|---------------|-----------|---------|-----------|------|--------------|
| Row Cathode Column Anode | Row Anode Column Cathode | Emitted Color | Material | λp (nm) | Typ | Max | |
| BL-M20A881SG-XX | BL-M20B881SG-XX | Super Red | AlGaInP | 660 | 2.10 | 2.50 | 270 |
| | | Green | GaP/GaP | 570 | 2.20 | 2.50 | 240 |
| BL-M20A881EG-XX | BL-M20B881EG-XX | Orange | GaAsP/GaP | 635 | 2.10 | 2.50 | 220 |
| | | Green | GaP/GaP | 570 | 2.20 | 2.50 | 240 |
| BL-M20A881DUG-XX | BL-M20B881DUG-XX | Ultra Red | AlGaInP | 660 | 2.10 | 2.50 | 310 |
| | | Ultra Green | AlGaInP | 574 | 2.20 | 2.50 | 380 |
| BL-M20A881UEUG-X X | BL-M20B881UEUG-X X | Ultra Orange | AlGaInP | 630 | 2.10 | 2.50 | 255 |
| | | Ultra Green | AlGaInP | 574 | 2.20 | 2.50 | 380 |

-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)

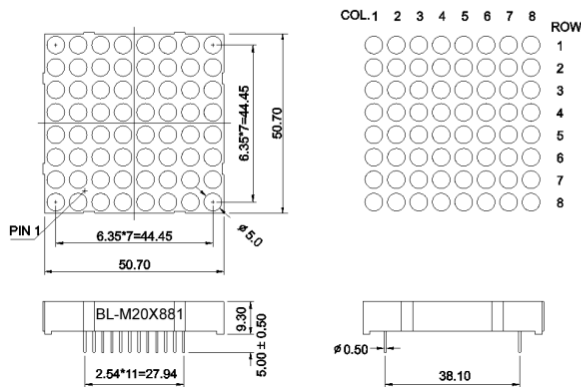
| Parameter | S | G | E | D | UG | UE | | Unit |
|---|--|-----|-----|-----|-----|-----|--|------|
| Forward Current I _F | 30 | 30 | 30 | 30 | 30 | 30 | | mA |
| Power Dissipation P _d | 75 | 80 | 80 | 75 | 75 | 65 | | mW |
| Reverse Voltage V _R | 5 | 5 | 5 | 5 | 5 | 5 | | V |
| Peak Forward Current I _{PF} (Duty 1/10 @1KHZ) | 150 | 150 | 150 | 150 | 150 | 150 | | mA |
| Operation Temperature T _{OPR} | -40 to +80 | | | | | | | °C |
| Storage Temperature T _{STG} | -40 to +85 | | | | | | | °C |
| Lead Soldering Temperature T _{SOL} | Max.260±5 Cfor 3 sec Max. (1.6mm from the base of the epoxy bulb) | | | | | | | °C |

LED DOT MATRIX

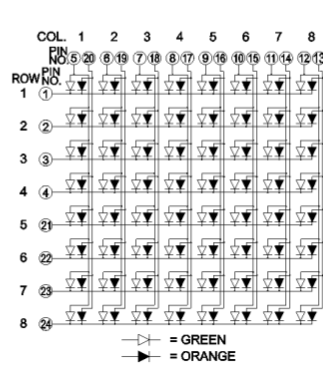
BL-M20X881XX

Package configuration & Internal circuit diagram

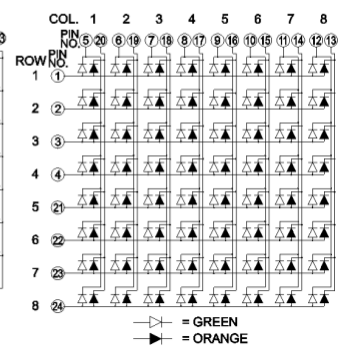
BL-M20X881 Series



BL-M20A881XX



BL-M20B881XX



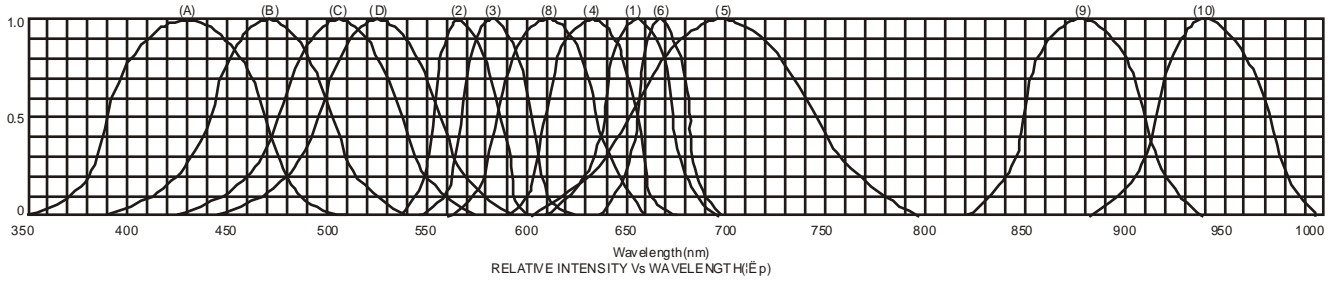
Notes:

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

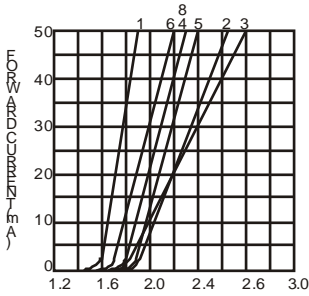
LED DOT MATRIX

BL-M20X881 XX

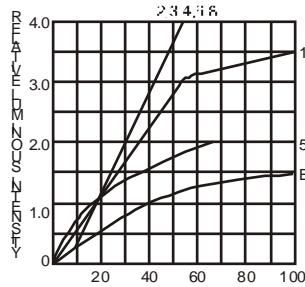
Typical electrical-optical characteristics curves:



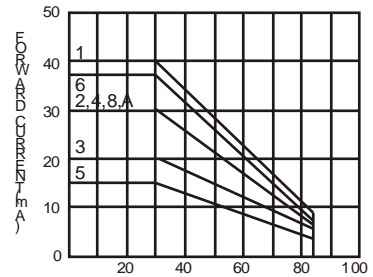
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



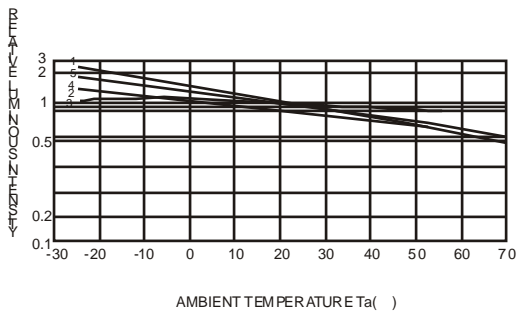
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



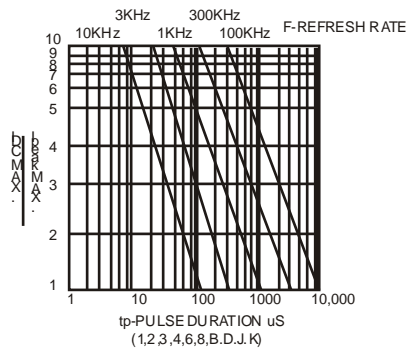
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



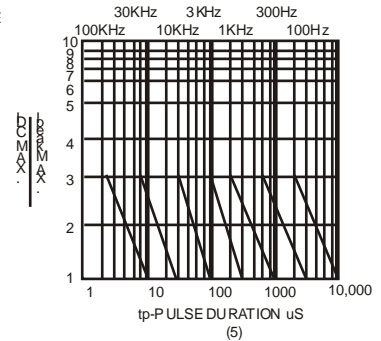
AMBIENT TEMPERATURE Ta()
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE Ta()



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



tp-PULSE DURATION µs
(5)

NOTE:25 free air temperature unless otherwise specified