

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 | λ_p (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)

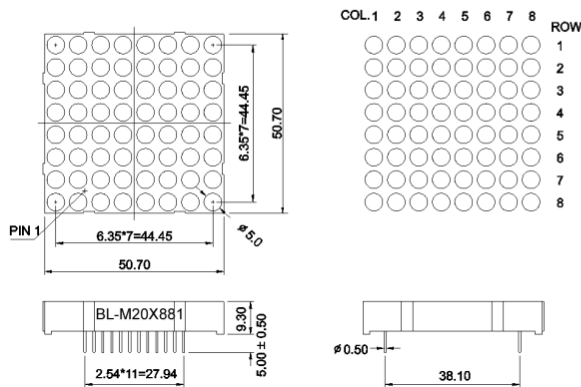
| Parameter | S | G | E | D | UG | UE | | Unit |
|--|--|-----|-----|-----|-----|-----|--|------|
| Forward Current I_F | 30 | 30 | 30 | 30 | 30 | 30 | | mA |
| Power Dissipation P_d | 75 | 80 | 80 | 75 | 75 | 65 | | mW |
| Reverse Voltage V_R | 5 | 5 | 5 | 5 | 5 | 5 | | V |
| Peak Forward Current I_{PF} (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 °C for 3 sec Max. (1.6mm from the base of the epoxy bulb) | | | | | | | °C |

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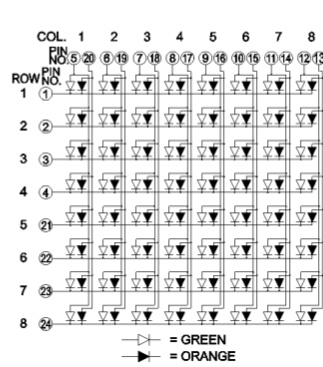
BL-M20X881XX

Package configuration & Internal circuit diagram

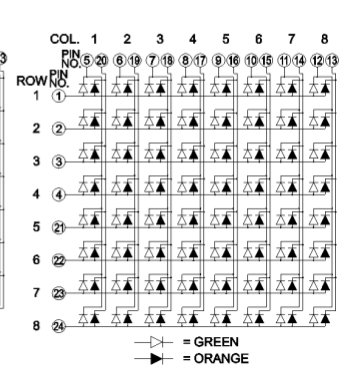
BL-M20X881 Series



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.

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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



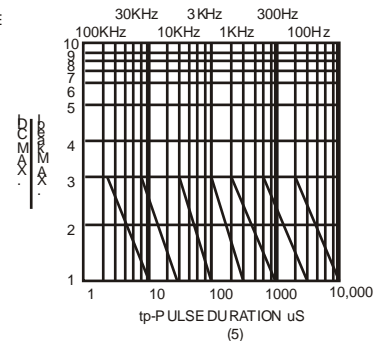
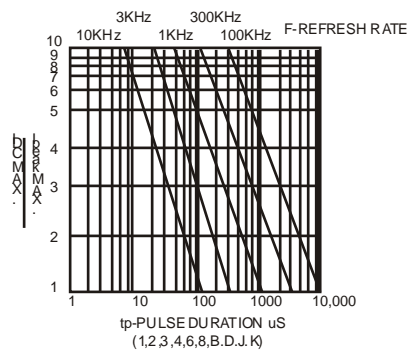
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



AMBIENT TEMPERATURE Ta (°C)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



AMBIENT TEMPERATURE Ta (°C)



NOTE: 25 free air temperature unless otherwise specified

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Packing and weighting

