

## LED DOT MATRIX

BL-M15X882XX

### Features:

- Ø 38.00mm (1.5") 1/3.7 dot matrix LED display
- 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<br>TYP.(mcd) |
|-----------------------------|-----------------------------|---------------|-----------|------------------|-----------|------|-----------------|
| Row Cathode<br>Column Anode | Row Anode<br>Column Cathode | Emitted Color | Material  | $\lambda_p$ (nm) | Typ       | Max  |                 |
| BL-M15C882SG-XX             | BL-M15D882SG-XX             | Super Red     | AlGaInP   | 660              | 2.10      | 2.50 | 250             |
|                             |                             | Green         | GaP/GaP   | 570              | 2.20      | 2.50 | 195             |
| BL-M15C882EG-XX             | BL-M15D882EG-XX             | Orange        | GaAsP/GaP | 635              | 2.10      | 2.50 | 190             |
|                             |                             | Green         | GaP/GaP   | 570              | 2.20      | 2.50 | 195             |
| BL-M15C882DUG-XX            | BL-M15D882DUG-XX            | Ultra Red     | AlGaInP   | 660              | 2.10      | 2.50 | 320             |
|                             |                             | Ultra Green   | AlGaInP   | 574              | 2.20      | 2.50 | 250             |
| BL-M15C882UEUG-XX           | BL-M15D882UEUG-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)

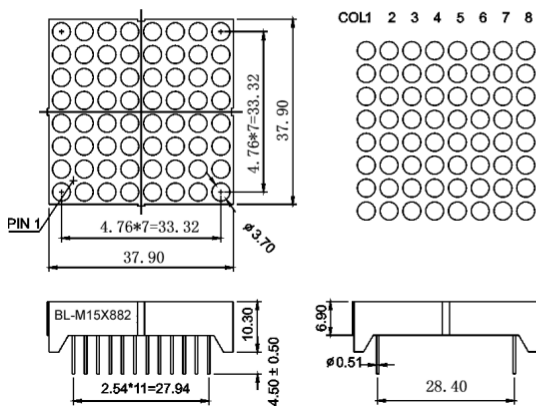
| Parameter  | S  | G   | E   | D   | UG  | UE  |  | Unit |
|--|--|-----|-----|-----|-----|-----|--|------|
| Forward Current $I_F$                              | 30   | 30  | 30  | 30  | 30  | 30  |  | mA   |
| Power Dissipation $P_d$                            | 75   | 80  | 80  | 75  | 75  | 65  |  | mW   |
| Reverse Voltage $V_R$                              | 5  | 5   | 5   | 5   | 5   | 5   |  | V    |
| Peak Forward Current $I_{PF}$<br>(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<br>$T_{SOL}$            | Max.260±5 °C for 3 sec Max.<br>(1.6mm from the base of the epoxy bulb) |     |     |     |     |     |  | °C   |

# LED DOT MATRIX

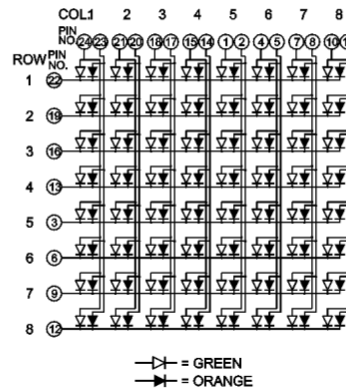
## BL-M15X882XX

### Package configuration & Internal circuit diagram

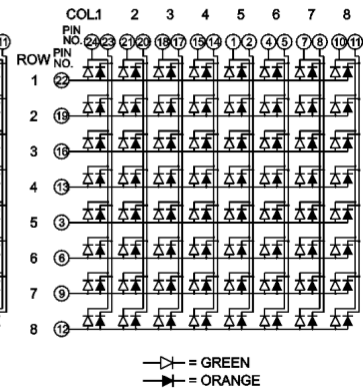
#### BL-M15X882 Series



#### BL-M15C882xx



#### BL-M15D882XX



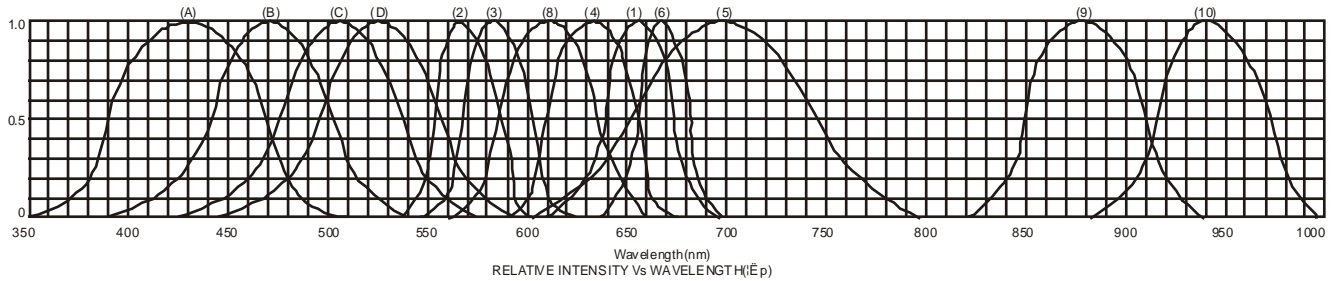
#### Notes:

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.

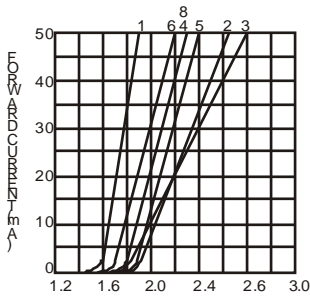
# LED DOT MATRIX

**BL-M15X882XX**

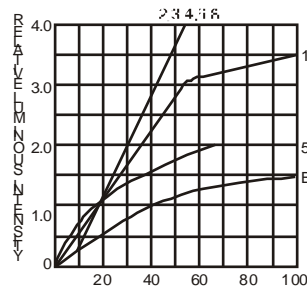
## Typical electrical-optical characteristics curves:



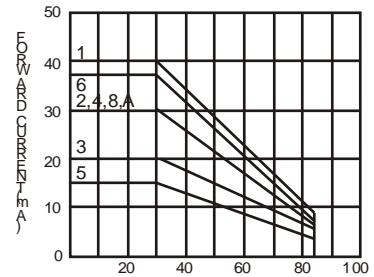
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) - 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



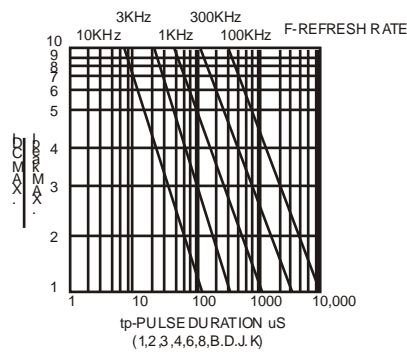
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



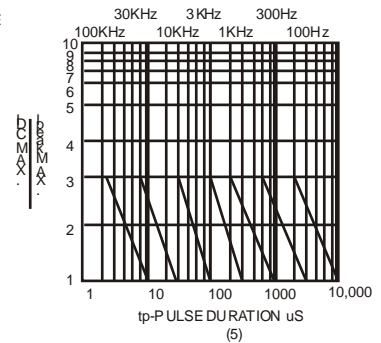
AMBIENT TEMPERATURE Ta ( °C )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta ( °C )



tp-PULSE DURATION  $\mu$ S  
(1,2,3,4,6,8,B,D,J,K)



tp-PULSE DURATION  $\mu$ S  
(5)

NOTE: 25 free air temperature unless otherwise specified

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**Packing and weighting**

