



## 1.20" (32.00mm) $\Phi$ 3.00mm 8\*8 Bi-Color Dot Matrix Displays

### Features:

- \*High dot intensity
- \*Wide viewing angle
- \*Bi- colors
- \*Black face White dot
- \*RoHS compliant

### Available option:

- \*Alternative face and dot color
- \*Cropped terminal pins
- \*Available emitting color
- \*Low current version

### Electro/Optical Characteristics If=20mA Ta=25°C

| Part Number<br>Row Cathode Column Anode | Part Number<br>Row Anode Column Cathode | Emitting Color            | Peak<br>Wavelength | Forward Voltage V <sub>F</sub> /Dot |      | Luminous Intensity I <sub>v</sub> /Dot |      |
|---|---|---------------------------|--------------------|-------------------------------------|------|--|------|
|   |   |                           |                    | Typ.                                | Max. | Min.                                   | Typ. |
| NFM-12881ASG-11                         | NFM-12881BSG-11                         | GaAlAs/GaAs Hi-Red        | 660                | 1.80                                | 2.20 | 8.0                                    | 12.0 |
|   |   | GaP/GaP Green             | 570                | 2.20                                | 2.50 | 7.0                                    | 11.0 |
| NFM-12881AEG-11                         | NFM-12881BEG-11                         | GaAsP/GaP Orange          | 632                | 2.10                                | 2.50 | 8.0                                    | 12.0 |
|   |   | GaP/GaP Green             | 570                | 2.20                                | 2.50 | 7.0                                    | 11.0 |
| NFM-12881AUEUG-11                       | NFM-12881BUEUG-11                       | AlGaInP/GaAs Ultra Orange | 632                | 2.00                                | 2.50 | 40.0                                   | 60.0 |
|   |   | AlGaInP/GaAs Ultra Green  | 574                | 2.10                                | 2.50 | 25.0                                   | 40.0 |
| Units                                   |   |                           | nm                 | V                                   |      | mcd                                    |      |

### Maximum Ratings Ta=25°C (Derate above 25°C)

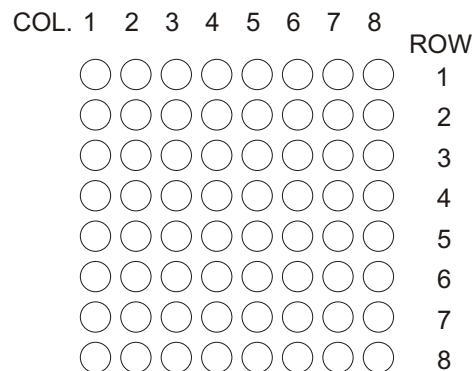
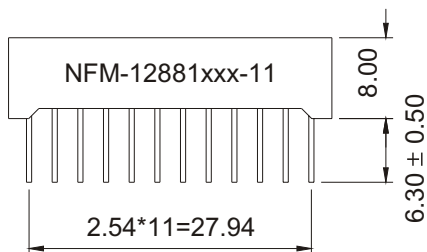
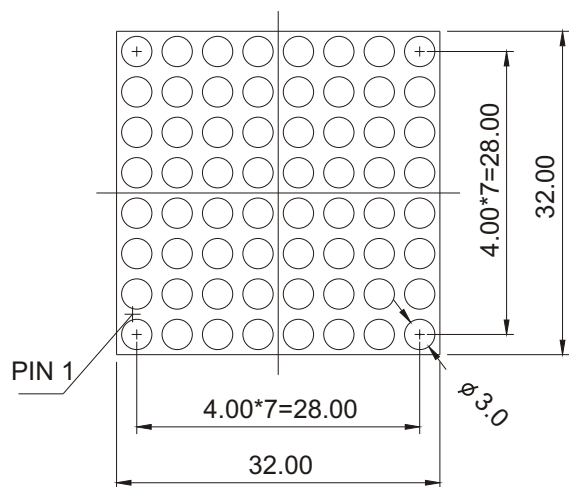
| Characteristic                | Test Condition                     | Symbol           | S          | G     | E     | UE    | UG    | Units |
|-------------------------------|------------------------------------|------------------|------------|-------|-------|-------|-------|-------|
| Pulse Forward Current Per Dot | 1/10duty cycle 0.1ms Pulse width   | I <sub>FP</sub>  | 100        | 100   | 100   | 100   | 100   | mA    |
| DC Forward Current Per Dot    |                                    | I <sub>F</sub>   | 25         | 30    | 30    | 30    | 30    | mA    |
| Reverse Current Per Dot       | V <sub>R</sub> =5V                 | I <sub>R</sub>   | 10         | 10    | 10    | 10    | 10    | μA    |
| Power Dissipation             |                                    | P <sub>D</sub>   | 60*64      | 80*64 | 80*64 | 65*64 | 75*64 | mW    |
| Operating Temperature         |                                    | T <sub>OPR</sub> | -40 to +80 |       |       |       |       | °C    |
| Storage Temperature           |                                    | T <sub>TSG</sub> | -40 to +85 |       |       |       |       | °C    |
| Lead soldering temperature    | 1.60mm from body maximum 3 seconds |                  | 260        |       |       |       |       | °C    |

|         |           |          |            |      |             |            |
|---------|-----------|----------|------------|------|-------------|------------|
| Checked | Chen N.H. | Approved | Jason Chen | Date | Mar/08/2007 | PAGE 1 / 2 |
|---------|-----------|----------|------------|------|-------------|------------|



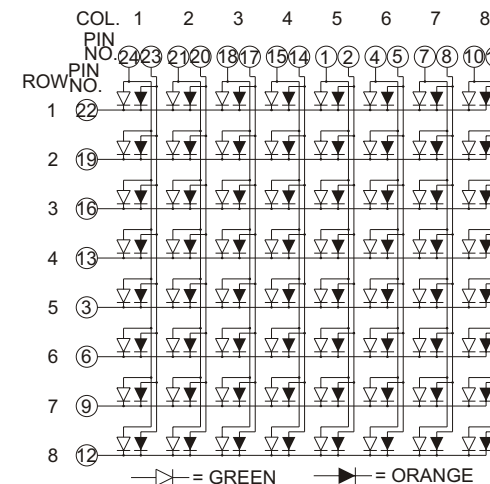
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## PACKAGE DIMENSION

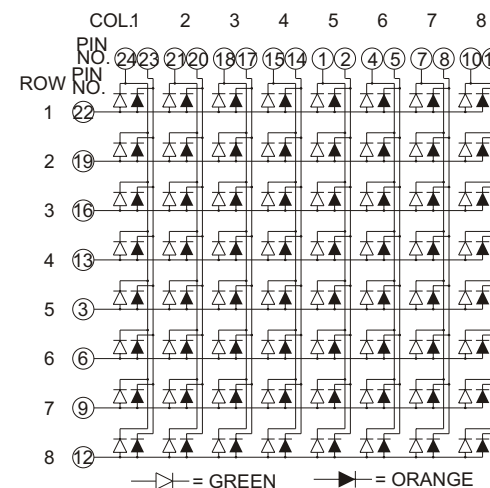


## INTERNAL CIRCUIT DIAGRAM

Row Cathode  
Column Anode  
NFM-12881Axx



Row Anode  
Column Cathode  
NFM-12881Bxx



Tolerance  $\pm 0.25$ mm unless stated