

**LED NUMERIC DISPLAY, 1 DIGIT**
**BL-S230X-11XX**
**Features:**

- 56.80mm (2.3") single digit numeric display series, BI-COLOR TYPE
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C. Boards or sockets.
- I.C. Compatible.
- ROHS Compliance.


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

| Part No                |                        | Chip          |           |                  | VF Unit:V |      | Iv<br>TYP.(mcd) |
|------------------------|------------------------|---------------|-----------|------------------|-----------|------|-----------------|
| Common Cathode         | Common Anode           | Emitted Color | Material  | $\lambda_p$ (nm) | Typ       | Max  |                 |
| BL-S230C-11SG-XX       | BL-S230D-11SG-XX       | Super Red     | AlGaInP   | 660              | 2.10      | 2.50 | 150             |
|                        |                        | Green         | GaP/GaP   | 570              | 2.20      | 2.50 | 165             |
| BL-S230C-11EG-XX       | BL-S230D-11EG-XX       | Orange        | GaAsP/GaP | 635              | 2.10      | 2.50 | 165             |
|                        |                        | Green         | GaP/GaP   | 570              | 2.20      | 2.50 | 165             |
| BL-S230C-11DUG-X<br>X  | BL-S230D-11DUG-X<br>X  | Ultra Red     | AlGaInP   | 660              | 2.10      | 2.50 | 220             |
|                        |                        | Ultra Green   | AlGaInP   | 574              | 2.20      | 2.50 | 220             |
| BL-S230C-11UEUG-<br>XX | BL-S230D-11UEUG-<br>XX | Ultra Orange  | AlGaInP   | 630              | 2.10      | 2.50 | 170             |
|                        |                        | Ultra Green   | AlGaInP   | 574              | 2.20      | 2.50 | 220             |

**-XX: Surface / Lens color:**

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

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

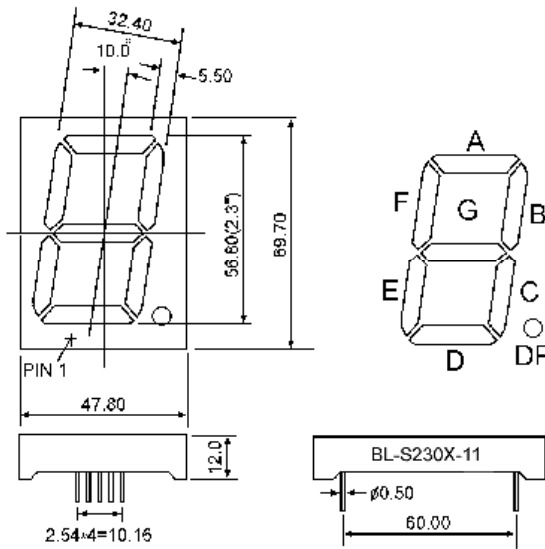
| Parameter  | S   | G   | E   | D   | UG  | UE  |  | U<br>nit |
|--|---|-----|-----|-----|-----|-----|--|----------|
| Forward Current $I_F$                              | 30  | 30  | 30  | 30  | 30  | 30  |  | mA       |
| Power Dissipation $P_d$                            | 75  | 80  | 80  | 75  | 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       |

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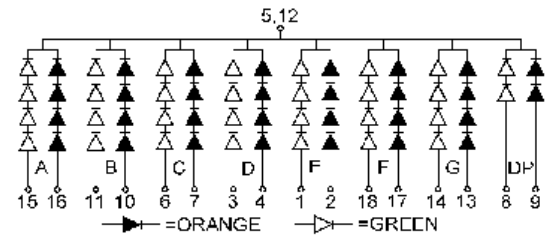
BL-S230X-11XX

■ Package configuration & Internal circuit diagram

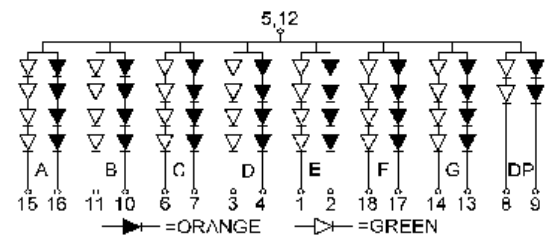
BL-S230X-11 Series



BL-S230C-11xx



BL-S230D-11xx



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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.

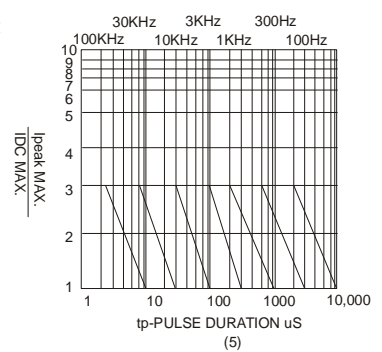
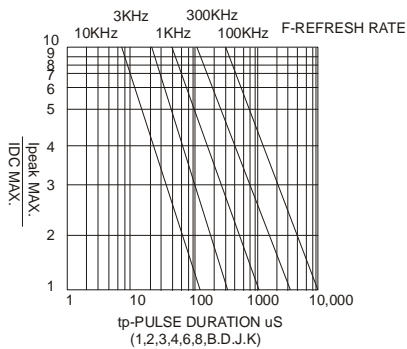
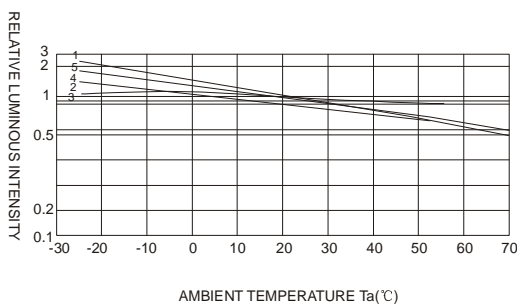
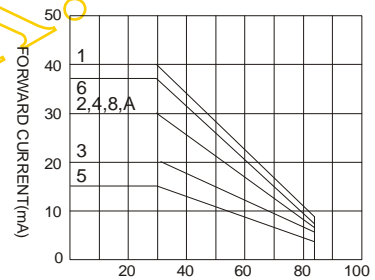
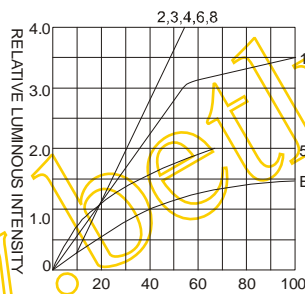
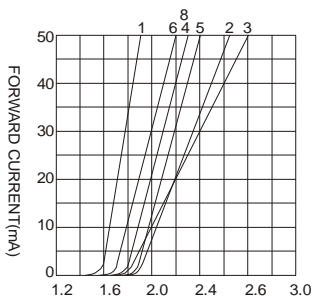
## LED NUMERIC DISPLAY, 1 DIGIT

BL-S230X-11XX

### Typical electrical-optical characteristics curves:



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



NOTE:25°C free air temperature unless otherwise specified