

**STANLEY**

T-41-23

**STANLEY  
SUPER BRIGHT  
LED LAMP**

2x4mm TYPE

4868K

SERIES

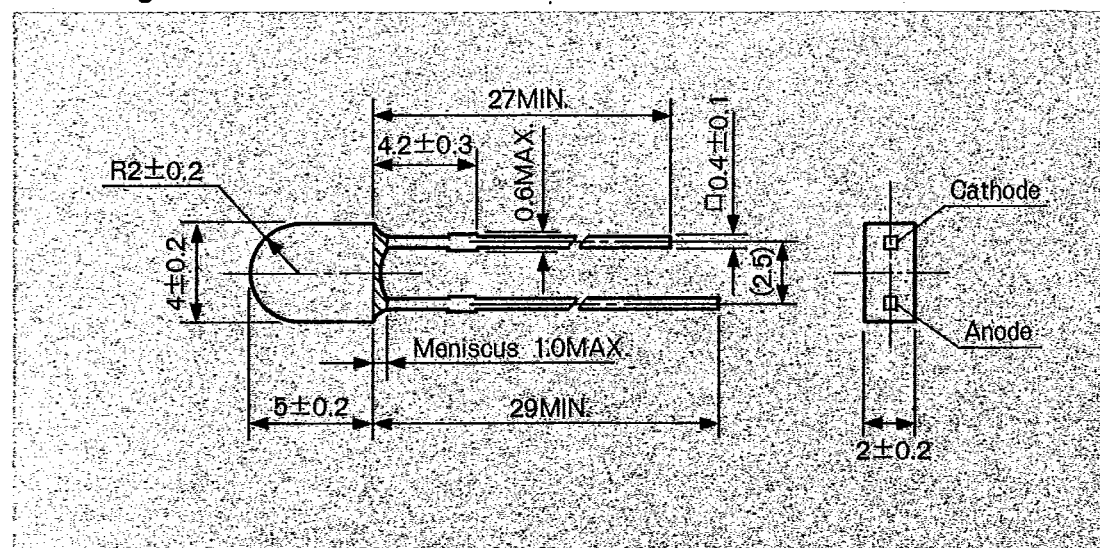
**SELECTION GUIDE**

| COLOR  | MATERIAL  | PART NUMBER |
|--------|-----------|-------------|
| Red    | GaAlAs    | BR 4868K    |
|        | GaAsP/GaP | MVR 4868K   |
|        | GaP       | MPR 4868K   |
| Green  | GaP       | MBG 4868K   |
|        |           | MPG 4868K   |
| Yellow | GaP       | MPY 4868K   |
|        | GaAsP/GaP | MAY 4868K   |
| Orange | GaAsP/GaP | MAA 4868K   |

**DESCRIPTION**

This series was developed for use in back-lighting of illuminated switches. It is housed in the molded packages with 2 x 4mm lenses and features both slim-line design and high intensity.

This series employs low current type LED dies. Ideal for illuminated switches and car audio use

**Package Dimensions—Unit in mm**

## ■ Absolute Maximum Ratings (Ta=25°C)

| Parameter                  | Symbol           | Red                                   |    |    | Green      |    | Yellow     |    | Orange     | Units |
|----------------------------|------------------|---------------------------------------|----|----|------------|----|------------|----|------------|-------|
|                            |                  | BR                                    | PR | VR | BG         | PG | PY         | AY | AA         |       |
| Forward Current            | I <sub>F</sub>   | 50                                    | 30 | 30 | 25         | 25 | 30         | 30 | 25         | mA    |
| Peak Forward Current       | I <sub>FM</sub>  | 300                                   | 75 | 75 | 60         | 60 | 75         | 75 | 60         | mA    |
| Reverse Voltage            | V <sub>R</sub>   | 4                                     |    |    | 4          |    | 4          |    | 4          | V     |
| Power Dissipation          | P <sub>d</sub>   | 100                                   | 75 | 75 | 70         | 70 | 85         | 85 | 70         | mW    |
| Operating Temperature      | T <sub>opr</sub> | -30 ~ + 85                            |    |    | -30 ~ + 85 |    | -30 ~ + 85 |    | -30 ~ +85  | °C    |
| Storage Temperature        | T <sub>stg</sub> | -30 ~ +100                            |    |    | -30 ~ +100 |    | -30 ~ +100 |    | -30 ~ +100 | °C    |
| Lead Soldering Temperature |                  | 260°C for 5 seconds (3.0mm from body) |    |    |            |    |            |    |            |       |

## ■ Electro-Optical Characteristics (Ta=25°C)

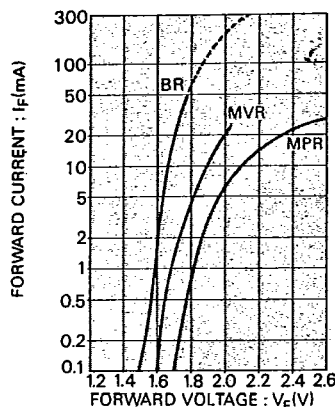
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| Type No. | Chip      |               | Lens | I <sub>v</sub> (mcd) |      | at I <sub>F</sub><br>(mA) | Peak Wave Length<br>λ <sub>p</sub> (nm) | Spectral Line Half Width<br>Δλ(nm) | V <sub>F</sub> (V) |      | at I <sub>F</sub><br>(mA) | at V <sub>R</sub> 4V<br>I <sub>s</sub> (μA) | Capacitance<br>Col(pF) |
|----------|-----------|---------------|------|----------------------|------|---------------------------|-----------------------------------------|------------------------------------|--------------------|------|---------------------------|---------------------------------------------|------------------------|
|          | Material  | Emitted Color |      | Min.                 | Typ. |                           |                                         |                                    | Typ.               | Max. |                           |                                             |                        |
| BR4868K  | GaAlAs    | Red           | P.C  | 5                    | 10   | 20                        | 660                                     | 30                                 | 1.7                | 2.0  | 20                        | 20                                          | 50                     |
| MPR4868K | GaP       | Red           | P.C  | 1                    | 1.5  | 10                        | 700                                     | 100                                | 2.1                | 2.8  | 10                        | 20                                          | 40                     |
| MVR4868K | GaAsP/GaP | Red           | P.C  | 4                    | 8    | 20                        | 630                                     | 30                                 | 2.0                | 2.8  | 20                        | 20                                          | 10                     |
| MBG4868K | GaP       | Green         | P.C  | 2                    | 4    | 20                        | 555                                     | 30                                 | 2.1                | 2.8  | 20                        | 20                                          | 25                     |
| MPG4868K | GaP       | Green         | P.C  | 4                    | 8    | 20                        | 560                                     | 30                                 | 2.1                | 2.8  | 20                        | 20                                          | 25                     |
| MPY4868K | GaP       | Yellow        | P.C  | 6                    | 12   | 20                        | 570                                     | 30                                 | 2.1                | 2.8  | 20                        | 20                                          | 20                     |
| MAY4868K | GaAsP/GaP | Yellow        | P.C  | 5                    | 10   | 20                        | 580                                     | 30                                 | 2.2                | 2.8  | 20                        | 20                                          | 10                     |
| MAA4868K | GaAsP/GaP | Orange        | P.C  | 5                    | 10   | 20                        | 605                                     | 30                                 | 2.2                | 2.8  | 20                        | 20                                          | 10                     |

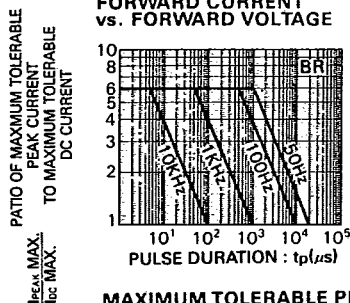


RED

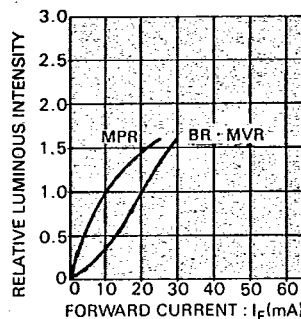
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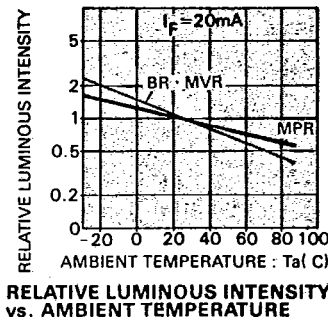
FORWARD CURRENT vs. FORWARD VOLTAGE



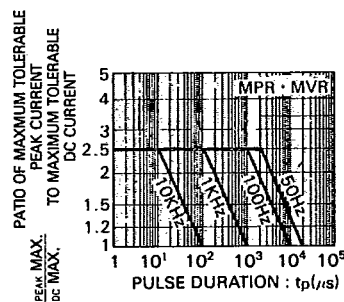
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



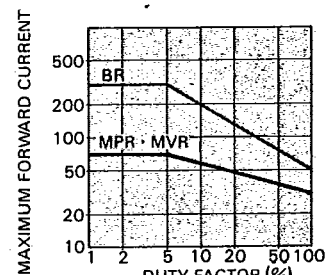
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



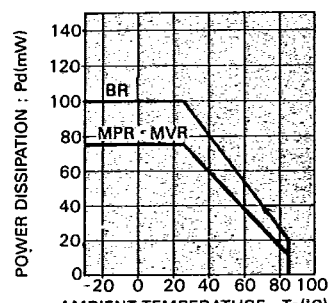
RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



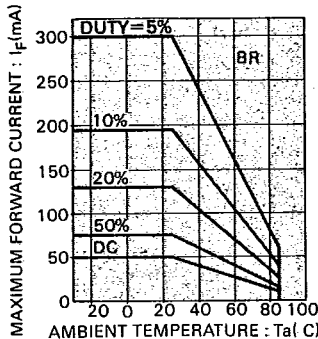
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



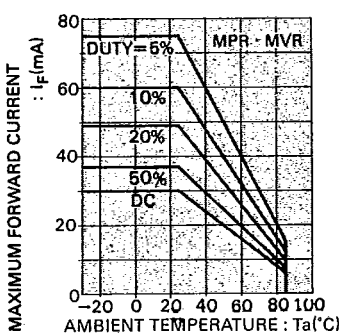
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



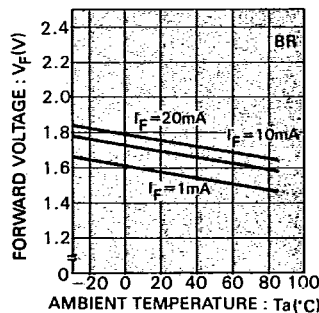
POWER DISSIPATION vs. AMBIENT TEMPERATURE



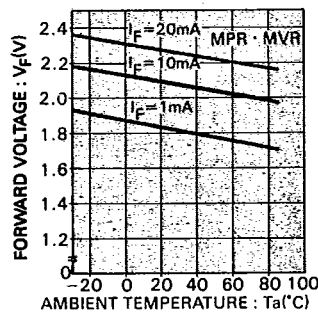
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE

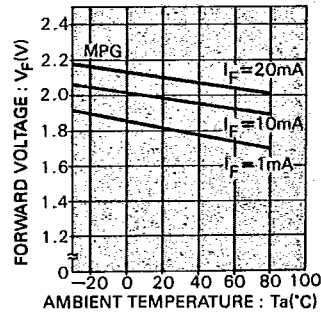
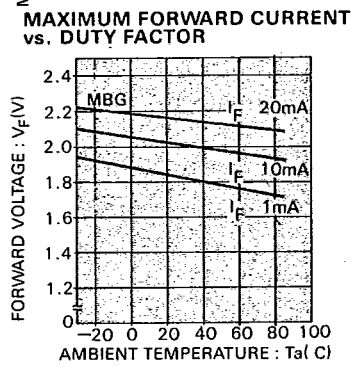
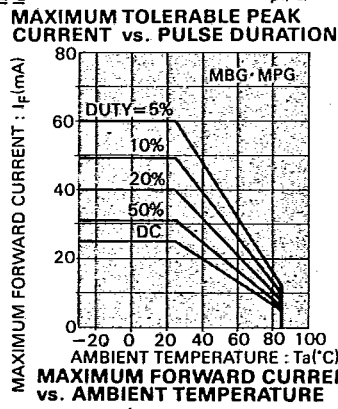
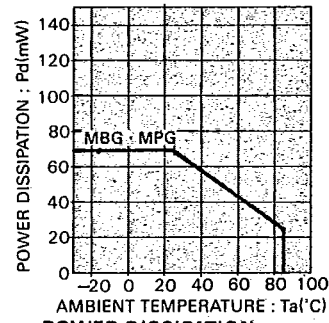
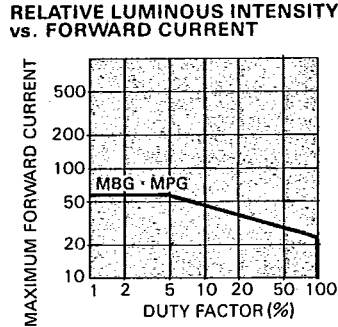
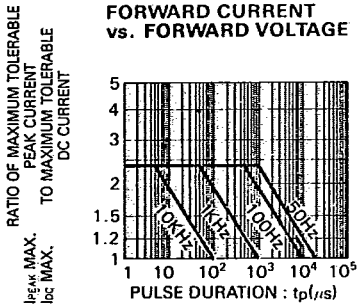
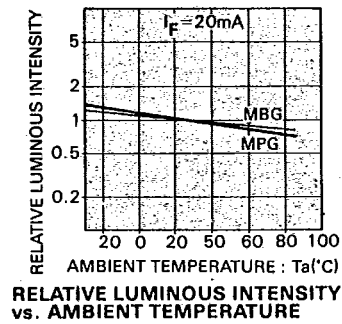
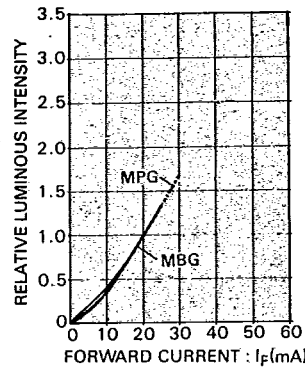
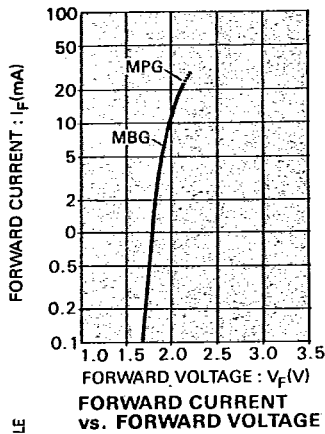


FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



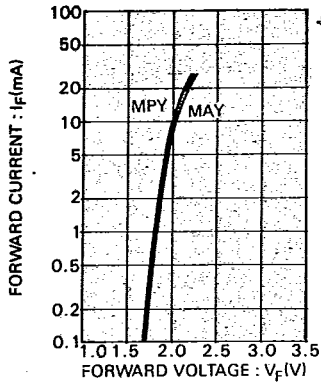
GREEN

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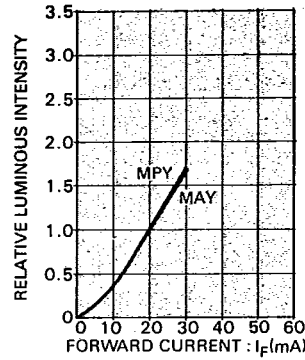


# YELLOW

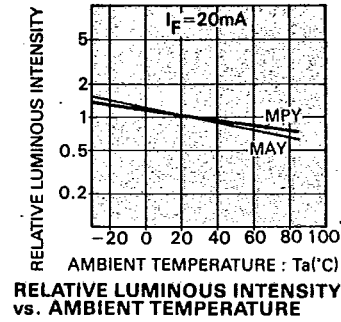
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FORWARD CURRENT vs. FORWARD VOLTAGE

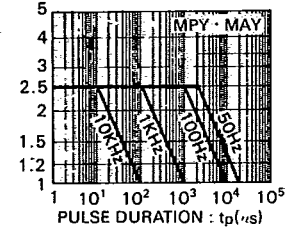


RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

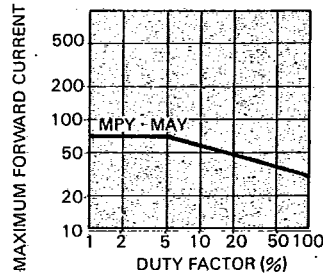


RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE

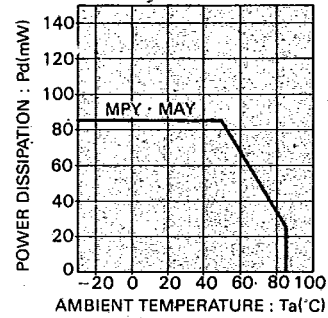
RATIO OF MAXIMUM TOLERABLE  
PEAK CURRENT  
TO MAXIMUM TOLERABLE  
DC CURRENT



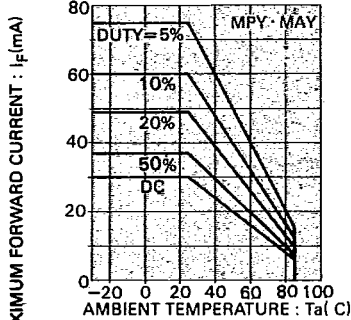
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



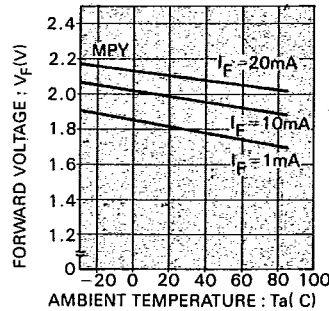
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



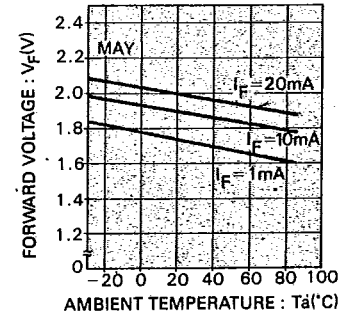
POWER DISSIPATION vs. AMBIENT TEMPERATURE



MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



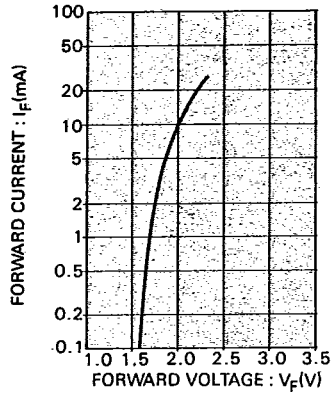
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



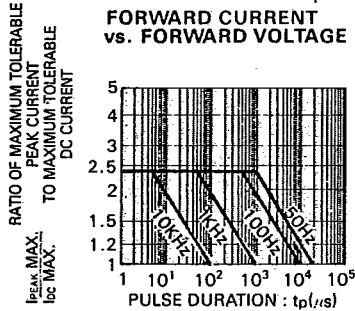
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE

# ORANGE

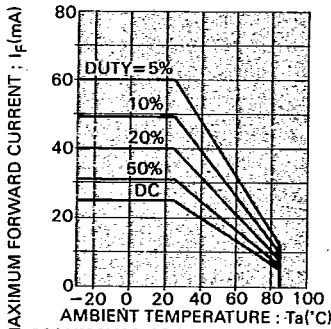
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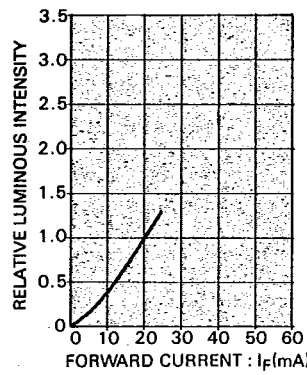
FORWARD CURRENT vs. FORWARD VOLTAGE



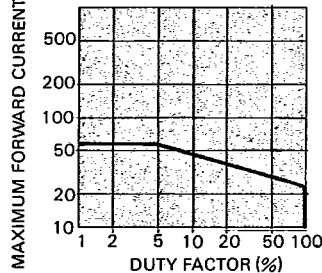
MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



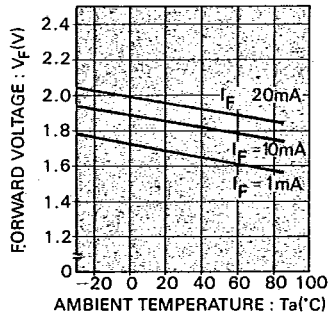
MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



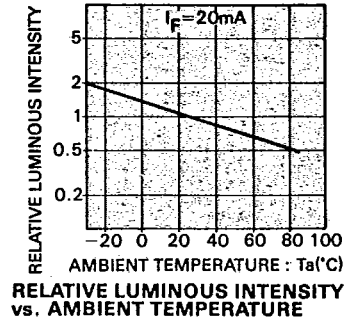
RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT



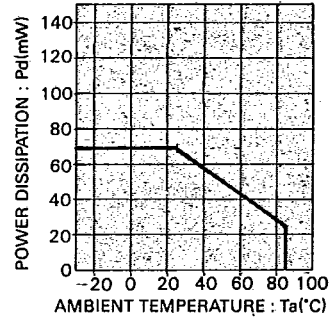
MAXIMUM FORWARD CURRENT vs. DUTY FACTOR



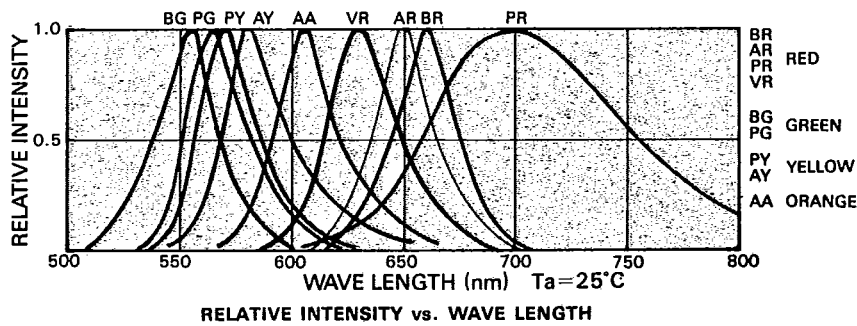
FORWARD VOLTAGE vs. AMBIENT TEMPERATURE



RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



POWER DISSIPATION vs. AMBIENT TEMPERATURE



RELATIVE INTENSITY vs. WAVE LENGTH

