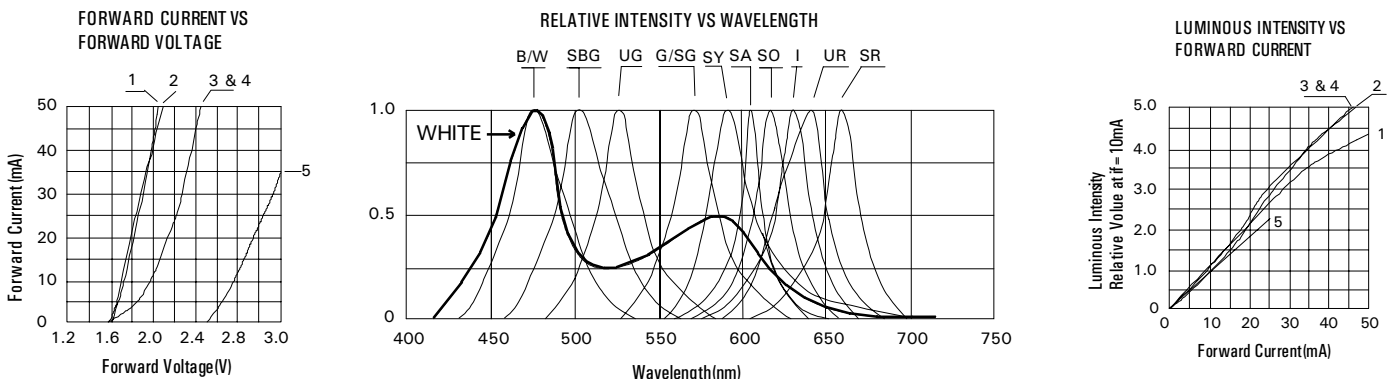


| | | | | |
|--|--------------------|-----|---|---|
| Face Length | MM | 2.8 | | |
| Face Width | MM | 3.2 | | |
| Height | MM | 1.9 | | |
| Pin Spacing | MM | 2.2 | | |
| Row Spacing | MM | 3.2 | | |
| No. of pins | Pins | 4 | | |
| Viewing Angle | 2 θ /2 Deg. | 120 | | |
| Recommended Combination KLSL3228 SR-SG KLSL3228 SO-SG KLSL3228 UR-UG KLSL3228 SO-SY or as per order Note : All Dimensions are in mm (inches) Tolerance \pm 0.2 mm | | | A=ANODE C=CATHODE 46.1a 4 Pads | 46.1b Common Anode-3 Active Pads |

| PART NO. | | | KLSL3228 | | | | KLSL 3228 | KLSL 3228 | KLSL 3228 | KLSL 3228 | KLSL 3228 | KLSL 3228 | KLSL 3228 | KLSL 3228 | KLSL 3228 | |
|--|--|--|------------------------|------------------|--------|--------------|-------------|----------------|-----------------|----------------|--------------|-----------------|-------------|---------------|----------------|---------|
| OPERATING CHARACTERISTICS AT 25°C <small>(Bigger Display may have more than one LED chip per segment)</small> | | | UNITS | SYMBOL | RED I | SUPER RED SR | GREEN G | SUPER GREEN SG | SUPER YELLOW SY | SUPER AMBER SA | ULTRA RED UR | SUPER ORANGE SO | BLUE B/UB | BLUE GREEN BG | ULTRA GREEN UG | WHITE W |
| Semiconductor Composition | | | | | AlGaAs | | GaP/AlInGaP | | AlInGaP | | | | SiC / GaInN | | | |
| Forward Voltage - Typical @ 10mA | | | V | V _F | 2.10 | 1.90 | 2.20 | 2.20 | 2.10 | 2.10 | 1.90 | 1.90 | 3.50 | 3.50 | 3.50 | 3.50 |
| Forward Voltage - Maximum @ 70 mA | | | V | V _{FM} | 2.40 | 2.10 | 2.60 | 2.40 | 2.40 | 2.40 | 2.10 | 2.40 | 4.50 | 4.50 | 4.50 | 4.50 |
| Reverse Current @ V _R = 5V | | | mA | I _R | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Peak Emission Wavelength | | | nm | λ_p | 630 | 660 | 568 | 568 | 590 | 610 | 645 | 620 | 470 | 502 | 525 | --- |
| Emission Wavelength Half Width | | | nm | D _{1/2} | 35 | 20 | 30 | 15 | 15 | 15 | 20 | 20 | 25 | 30 | 35 | --- |
| Luminous Intensity per Segment @ 70mA | | | mcd | I _v | 3500 | 6000 | 4000 | 6000 | 7000 | 7500 | 13000 | 13000 | 6000 | 7000 | 17000 | --- |
| Lumens Flux @70mA | | | mlm | Φ_v | - | - | - | - | - | - | - | - | - | - | - | 4000 |
| ABSOLUTE MAXIMUM RATINGS AT 25°C | | | V | V _R | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Reverse Voltage | | | mA | I _F | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Forward Current (avg) *(NOTE 1) | | | mA | I _{FS} | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| Peak Forward Current (T<1ms) | | | | | | | | | | | | | | | | |
| Operating / Storage Temperature Range | | | -10° C to + 85° C | | | | | | | | | | | | | |
| Lead Soldering Temperature | | | < 200° C for 5 Seconds | | | | | | | | | | | | | |
| Series Resistor to be used per segment : 300 Ohms @ 5V Supply (OR) 50 to 100 Ohms @ 3V Supply | | | | | | | | | | | | | | | | |

*NOTE 1. Use Adequate heatsink (250mm² plus) for current above 20mA

ELECTRICAL CHARACTERISTIC CURVES



1. AlGaAs : I, SR 2. GaP : G 3 & 4. AlInGaP : SG, SY, SA, UR, SO 5. GaInN : B, BG, UG, W

KPC/KLSL3228XX-XX Rev. 00 1-01-04

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