

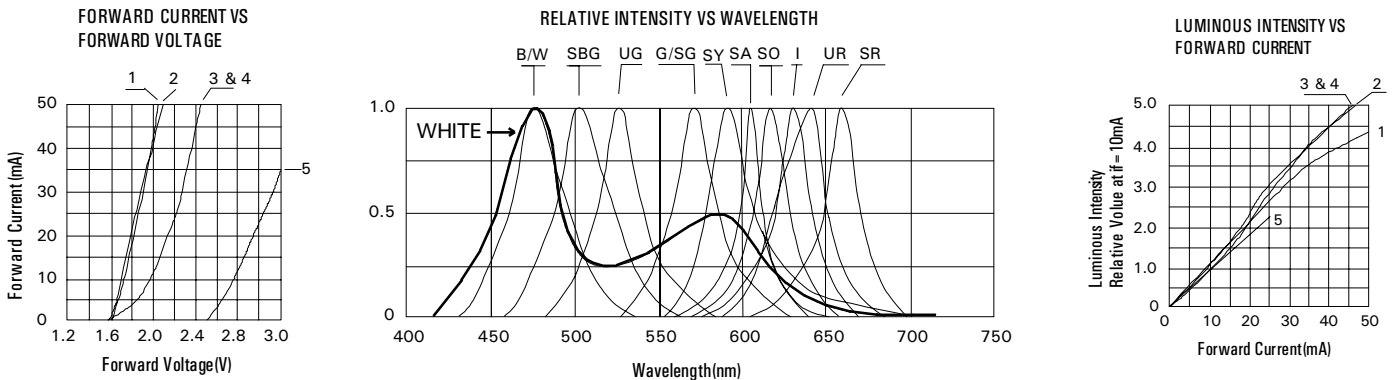
Face Length	MM	3.2
Face Width	MM	2.8
Height	MM	1.8
Pin Spacing	MM	1.5
Row Spacing	MM	3.2
No. of pins	Pins	4
Viewing Angle	2 ϕ /2 Deg.	120

Note : All Dimensions are in mm Tolerance ± 0.2 mm

PART NO.														
	KLSL 3228 I	KLSL 3228 SR	KLSL 3228 G	KLSL 3228 SG	KLSL 3228 SY	KLSL 3228 SA	KLSL 3228 UR	KLSL 3228 SO	KLSL 3228 B/UB	KLSL 3228 BG	KLSL 3228 UG	KLSL 3228 W		
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	μA	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	Δλ	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	mIm	∅ _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<1μs)														
Operating / Storage Temperature Range	-10° C to + 85° C													
Lead Soldering Temperature	< 260° 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/KLSL3228 Rev. 00 1-1-04

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