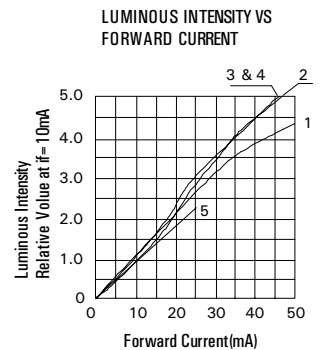
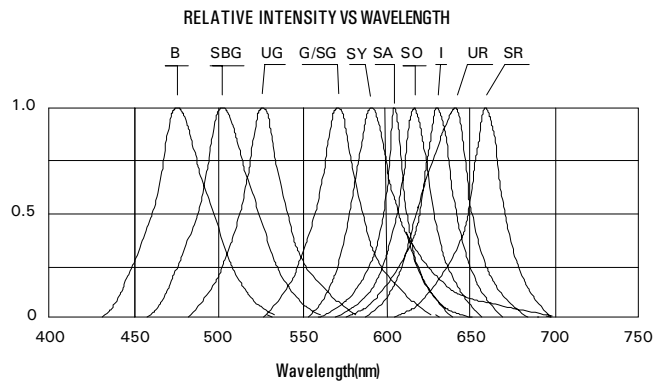
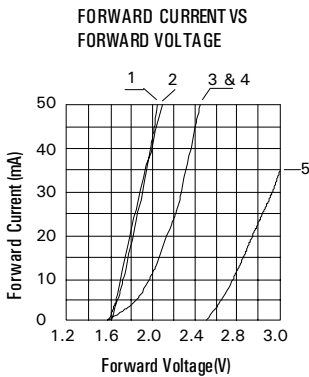


PART NO.																	
	KLARW51 I	KLARW51 SR	KLARW51 G	KLARW51 SG	KLARW51 SY	KLARW51 SA	KLARW51 UR	KLARW51 SO	KLARW51 B	KLARW51 SBG	KLARW51 UG	KLARW51 W					
OPERATING CHARACTERISTICS AT 25°C <small>(Bigger Display may have more than one LED chip per segment)</small>	UNITS	SYMBOL	IRED I	SUPER RED SR	GREEN G	SUPER GREEN SG	SUPER YELLOW SY	SUPER AMBER SA	ULTRA RED UR	SUPER ORANGE SO	BLUE B	BLUE GREEN SBG	ULTRA GREEN UG	WHITE W			
Semiconductor Composition			AlGaAs		GaP/AlInGaP		AlInGaP			SiC / AlGaN							
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 @ 20 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	μcd	I _v	3500	6000	4000	6000	7000	7500	13000	13000	6000	7000	17000	---			
ABSOLUTE MAXIMUM RATINGS AT 25°C																	
Reverse Voltage	V	V _R	5	5	5	5	5	5	5	5	5	5	5	5			
Forward Current (avg)	mA	I _F	20	20	20	20	20	20	20	20	20	20	20	20			
Peak Forward Current (T<1μs)	mA	I _{FS}	80	80	80	80	80	80	80	80	80	80	80	80			
Operating / Storage Temperature Range	-40° 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																	

ELECTRICAL CHARACTERISTIC CURVES

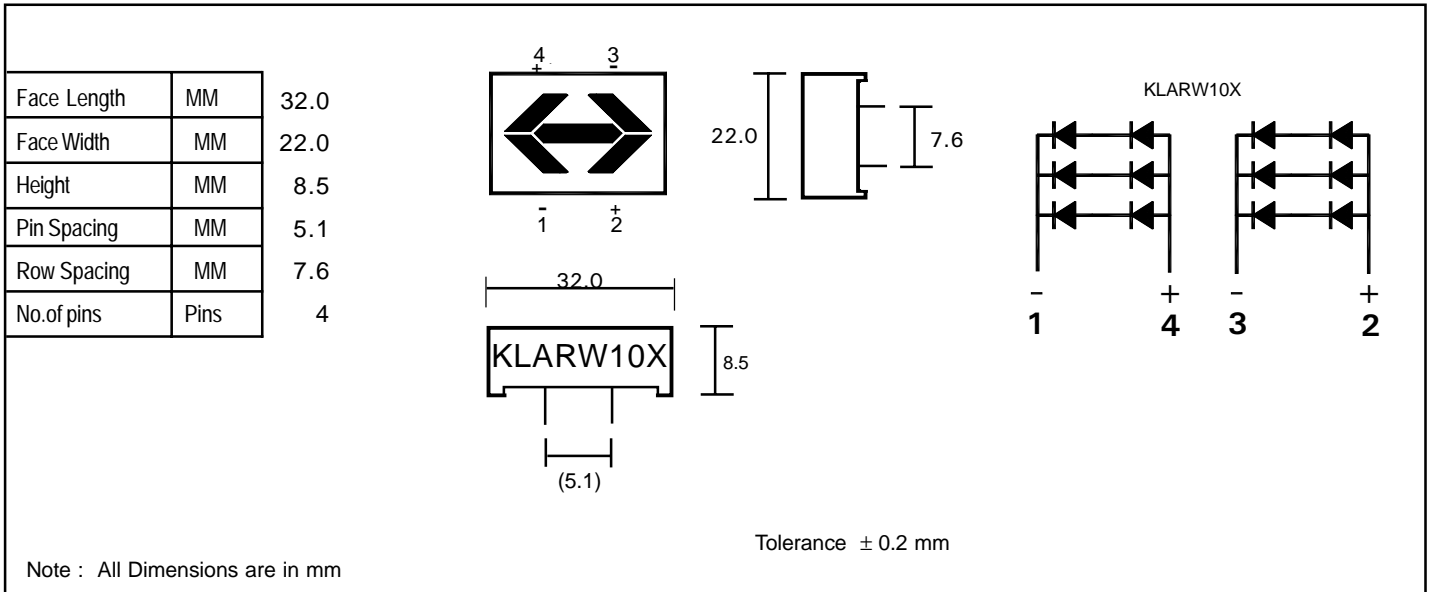


1. AlGaAs : I, SR

2. GaP : G

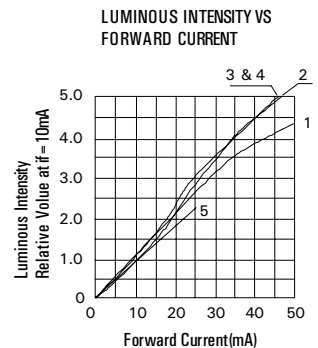
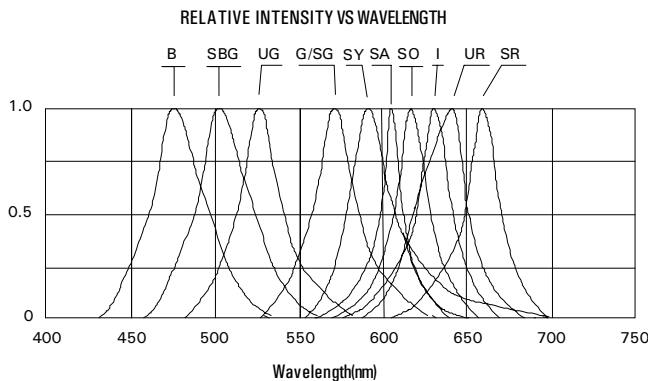
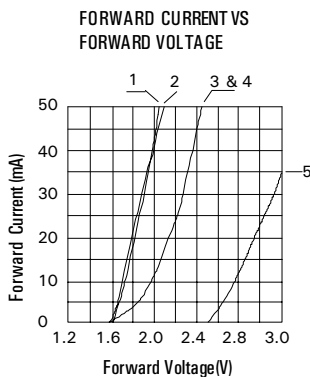
3 & 4. AlInGaP : SG, SY, SA, UR, SO

5. GaN : B, SBG, UG, W



PART NO.			KLARW10 I	KLARW10 SR	KLARW10 G	KLARW10 SG	KLARW10 SY	KLARW10 SA	KLARW10 UR	KLARW10 SO	KLARW10 B/UB	KLARW10 BG	KLARW10 UG	KLARW10 W	
OPERATING CHARACTERISTICS AT 25°C (Bigger Display may have more than one LED chip per segment)		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 @ 20 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	Δ_λ	35	20	30	15	15	15	20	20	25	30	35	---
Luminous Intensity per Segment		μcd	I_V	3500	6000	4000	6000	7000	7500	13000	13000	6000	7000	17000	---
ABSOLUTE MAXIMUM RATINGS AT 25°C															
Reverse Voltage		V	V_R	5	5	5	5	5	5	5	5	5	5	5	5
Forward Current (avg)		mA	I_F	20	20	20	20	20	20	20	20	20	20	20	20
Peak Forward Current ($T < 1\mu s$)		mA	I_{FS}	80	80	80	80	80	80	80	80	80	80	80	80
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													

ELECTRICAL CHARACTERISTIC CURVES



1. AlGaAs : I, SR

2. GaP : G

3 & 4. AlInGaP : SG, SY, SA, UR, SO

5. GaInN : B, BG, UG, W