



3L×1.5W×1.5H
(1101W/1102W)
3L×2.5W×1.5H
(1201W/1202W/1204W)
3L×2W×1.5H
(1203W)

SUPER BRIGHT CHIP LED SURFACE MOUNT

1101W/1102W/1201W/1202W/1203W/1204W SERIES

■ FEATURES

- ULTRA COMPACT (SINGLE COLOR 1.5mm × 3mm, BICOLOR 2.5mm × 3.0mm)
- AUTOMATIC LOADING ENABLED USING 8mm WIDTH TAPE
- HIGH DENSITY MOUNTING
- SERIALIZED SINGLE AND BICOLORS
- WIDE RANGE OF TYPES

■ APPLICATION

- TELEPHONES
- AV EQUIPMENT
- OA EQUIPMENT

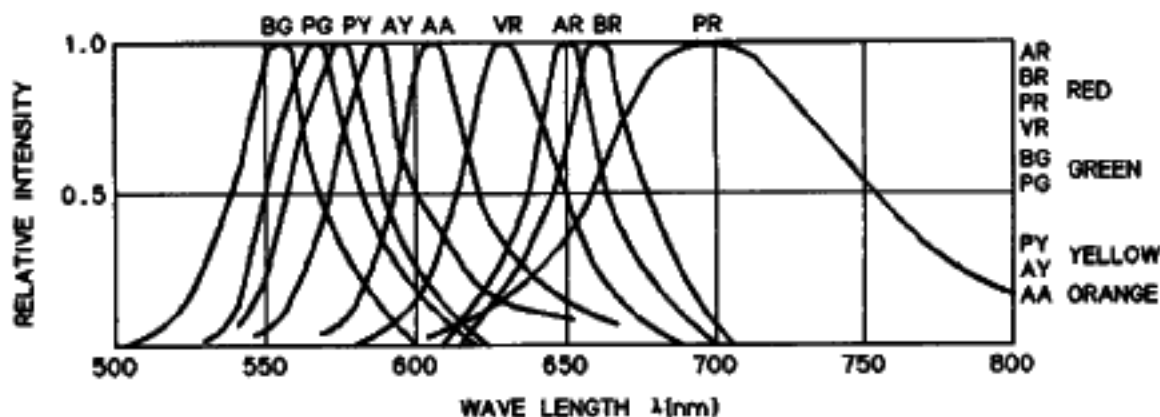
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Absolute Maximum Ratings

Parameter	Symbol	Red		Green	Yellow	Orange	Units	
		BR	VR, PR	PG, BG	AY, PY	AA		
Forward Current	I _F	30						mA
Peak Forward Current	I _{FM}	70						mA
Reverse Voltage	V _R	4						V
Power Dissipation	P _d	60	75					mW
Operating Temperature	T _{opr}	-30 ~ +85						°C
Storage Temperature	T _{stg}	-30 ~ +90						°C

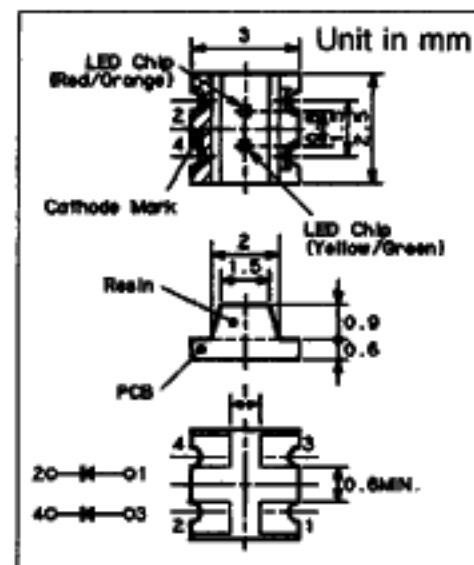
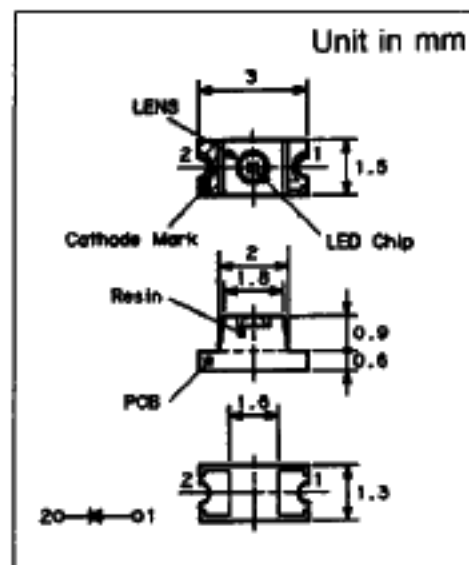
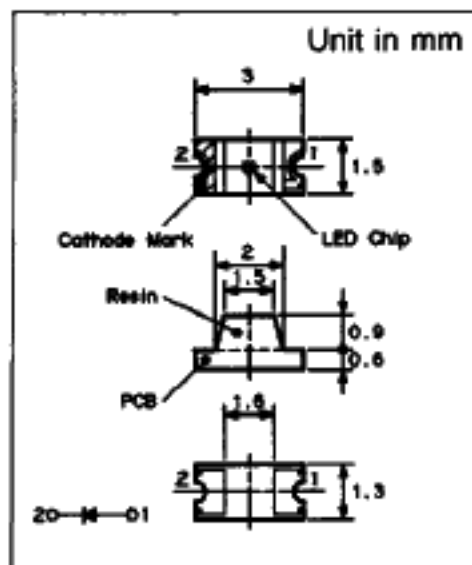
- Current derating at temperatures above T_a=25°C is 0.42mA/°C (DC), 0.93mA/°C (pulsed).
- I_{FM} is for t_w ≥ 1 msec and duty cycle ≤ 1/20.
- In case of bicolor type, absolute maximum ratings are P_d=75mW, I_F=30mA, I_{FM}=70mA when both diodes are ON.

■ SPECTRAL DISTRIBUTION



LED LAMP

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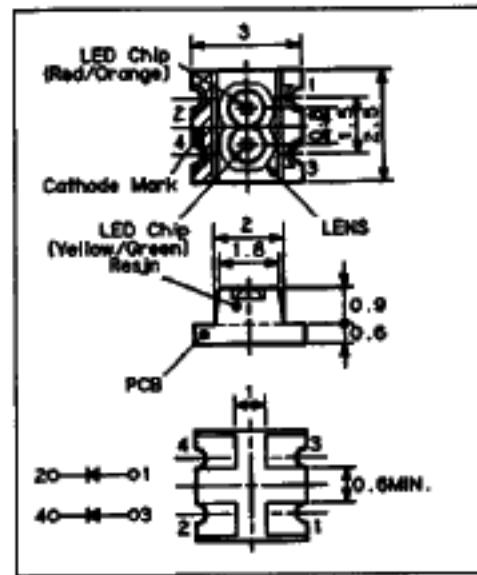
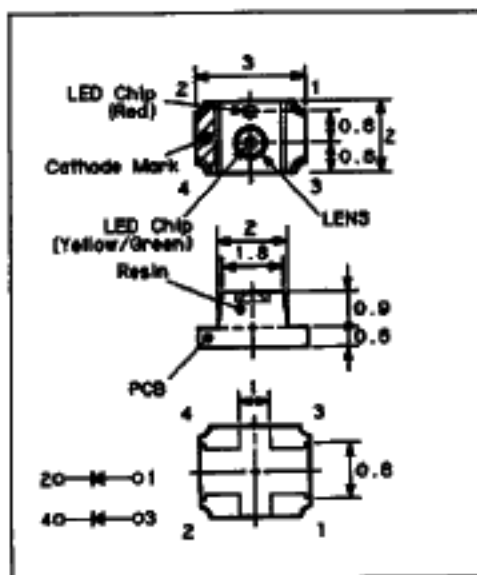
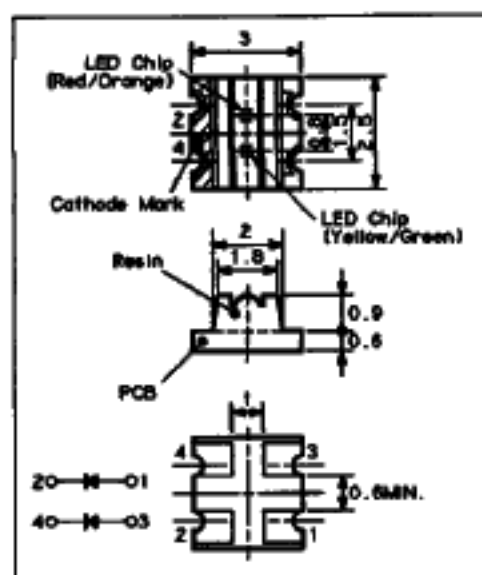
■ Package Dimensions

Electro-Optical Characteristics

(Ta=25°C)

TYPE NO.	Color	Package Color	Forward Voltage			Reverse Current		Luminous Intensity			Wave Length			Fig
			TYP.	MAX.	If	I _r MAX.	V _r	MIN.	TYP.	If	Peak λ _p TYP.	Δλ TYP.	If	
BR1101W	Red	Water Clear	1.7	2.0	20	100	4	1.6	4.5	20	660	30	20	1
VR1101W	Red		2.0	2.5	20	100	4	0.9	2.5	20	630	30	20	
PR1101W	Red		2.1	2.5	10	100	4	0.4	0.7	10	700	100	10	
AA1101W	Orange		2.2	2.5	20	100	4	1.0	3.6	20	605	30	20	
AY1101W	Yellow		2.2	2.5	20	100	4	2.0	3.2	20	580	30	20	
PY1101W	Yellow		2.1	2.5	20	100	4	1.4	4.0	20	570	30	20	
PG1101W	Green		2.1	2.5	20	100	4	1.2	3.0	20	560	30	20	
BG1101W	Pure Green		2.1	2.5	20	100	4	0.7	1.4	20	555	30	20	
BR1102W	Red	Water Clear	1.7	2.0	20	100	4	6.0	17.0	20	660	30	20	2
VR1102W	Red		2.0	2.5	20	100	4	3.5	6.0	20	630	30	20	
PR1102W	Red		2.1	2.5	10	100	4	0.8	1.5	10	700	100	10	
AA1102W	Orange		2.2	2.5	20	100	4	5.0	9.0	20	605	30	20	
AY1102W	Yellow		2.2	2.5	20	100	4	3.0	6.0	20	580	30	20	
PY1102W	Yellow		2.1	2.5	20	100	4	6.0	12.0	20	570	30	20	
PG1102W	Green		2.1	2.5	20	100	4	3.0	7.5	20	560	30	20	
BG1102W	Pure Green		2.1	2.5	20	100	4	0.9	2.3	20	555	30	20	
Units			V		mA	μA	V	mod	mA		nm	mA		

■ Package Dimensions

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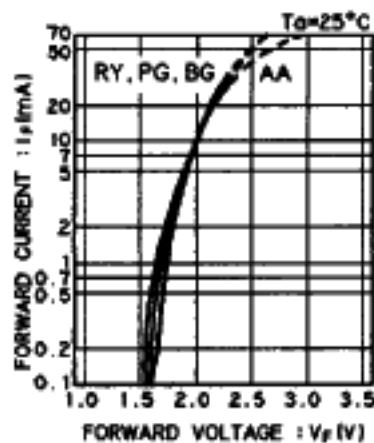
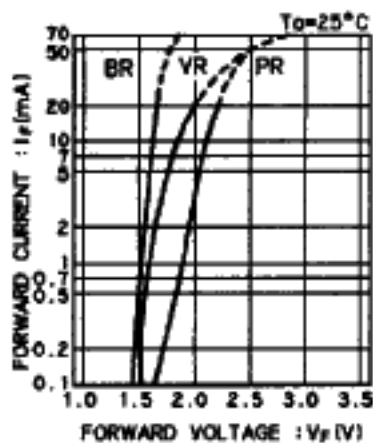
Electro-Optical Characteristics

(Ta=25°C)

TYPE NO.	Color	Package Color	Forward Voltage			Reverse Current		Luminous Intensity			Wave Length			Fig
			TYP.	MAX.	If	I _r MAX.	V _r	MIN.	TYP.	I _f	Peak λ _p TYP.	Δλ TYP.	λ _f	
BRPY1201W	Red	Water Clear	1.7	2.0	20	100	4	1.6	4.5	20	660	30	20	
	Yellow		2.1	2.5				1.4	4.0		570	30		
BRPG1201W	Red		1.7	2.0	20	100	4	1.6	4.5	20	660	30	20	
	Green		2.1	2.5				1.2	3.0		560	30		
BRBG1201W	Red		1.7	2.0	20	100	4	1.6	4.5	20	660	30	20	
	Pure Green		2.1	2.5				0.7	1.4		555	30		
AAPY1201W	Orange		2.2	2.5	20	100	4	1.0	3.6	20	605	30	20	
	Yellow		2.1	2.5				1.4	4.0		570	30		
BRPY1202W	Red		Water Clear	1.7	2.0	20	100	4	3.2	9.0	20	660	30	20
	Yellow			2.1	2.5				2.8	8.0		570	30	
BRPG1202W	Red			1.7	2.0	20	100	4	3.2	9.0	20	660	30	20
	Green			2.1	2.5				2.4	6.0		560	30	
BRBG1202W	Red	1.7		2.0	20	100	4	3.2	9.0	20	660	30	20	
	Pure Green	2.1		2.5				1.4	4.0		555	30		
AAPY1202W	Orange	2.2		2.5	20	100	4	4.0	7.2	20	605	30	20	
	Yellow	2.1		2.5				2.8	8.0		570	30		
BRPY1203W	Red	Water Clear		1.7	2.0	20	100	4	3.5	10.0	20	660	30	20
	Yellow			2.1	2.5				6.0	12.0		570	30	
BRPG1203W	Red			1.7	2.0	20	100	4	3.5	10.0	20	660	30	20
	Green			2.1	2.5				3.0	7.5		560	30	
BRBG1203W	Red		1.7	2.0	20	100	4	3.5	10.0	20	660	30	20	
	Pure Green		2.1	2.5				0.9	2.3		555	30		
BRPY1204W	Red		Water Clear	1.7	2.0	20	100	4	6.0	17.0	20	660	30	20
	Yellow			2.1	2.5				6.0	12.0		570	30	
BRPG1204W	Red			1.7	2.0	20	100	4	6.0	17.0	20	660	30	20
	Green			2.1	2.5				3.0	7.5		560	30	
BRBG1204W	Red			1.7	2.0	20	100	4	6.0	17.0	20	660	30	20
	Pure Green			2.1	2.5				0.9	2.3		555	30	
AAPY1204W	Orange	2.2		2.5	20	100	4	5.0	9.0	20	605	30	20	
	Yellow	2.1		2.5				6.0	12.0		570	30		
Units				V		mA	μA	V	mcd		mA	nm		mA

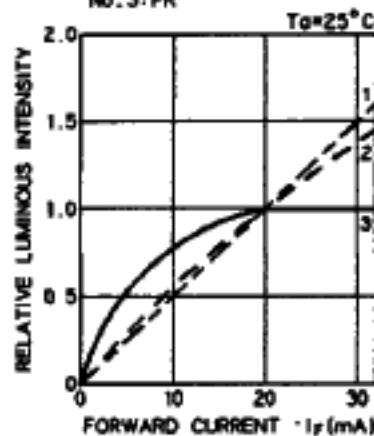
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■ FORWARD CURRENT vs. FORWARD VOLTAGE

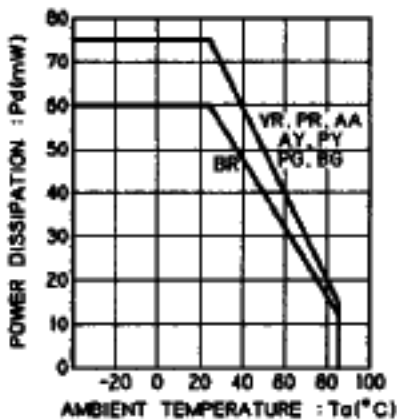


■ RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

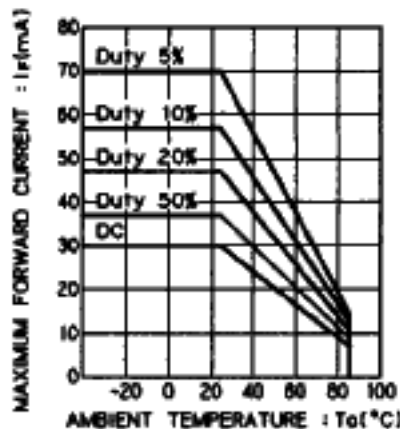
No. 1: VR, AA, AY, PY, PG, BG
No. 2: BR
No. 3: PR



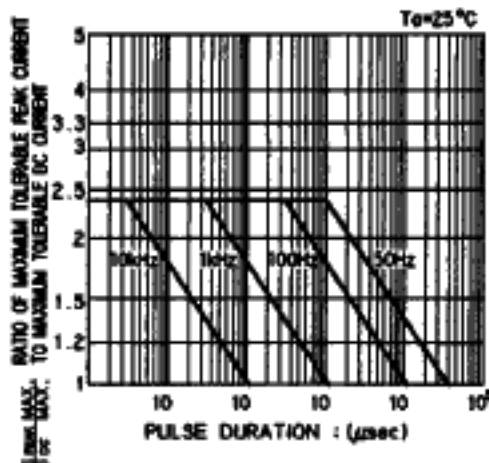
■ POWER DISSIPATION vs. AMBIENT TEMPERATURE



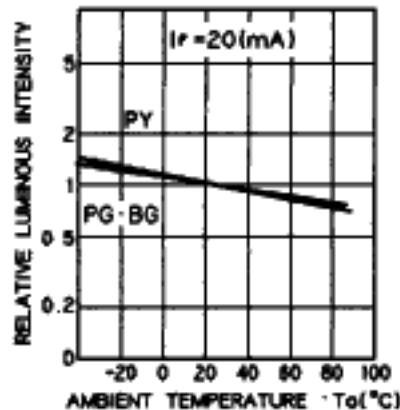
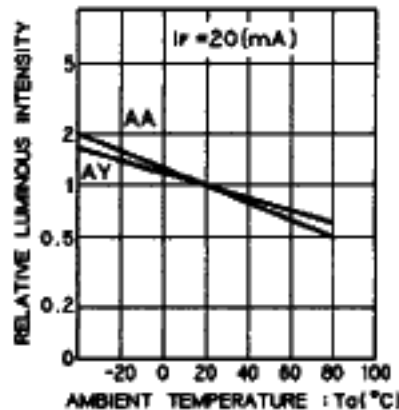
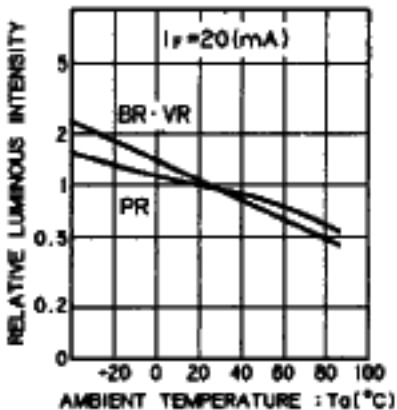
■ MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



■ MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



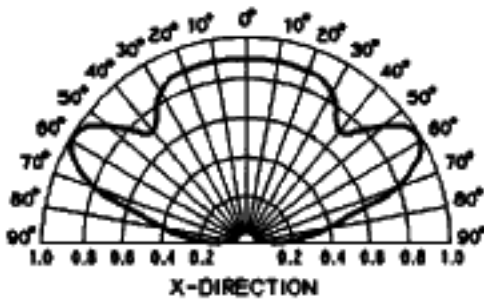
■ RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE



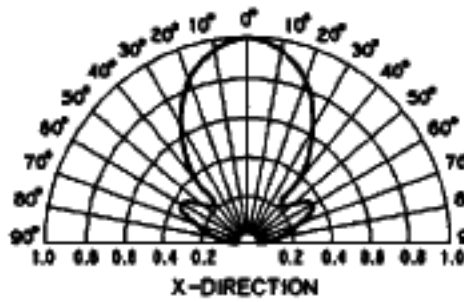
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■ SPATIAL DISTRIBUTION

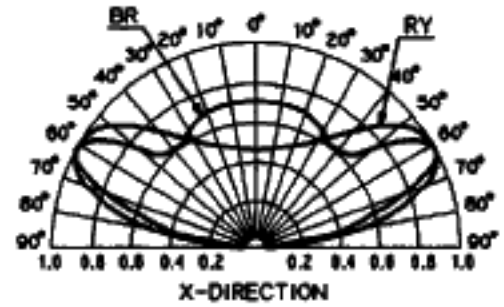
BR 1101W $T_a=25^\circ\text{C}$
 $I_f=20\text{mA}$



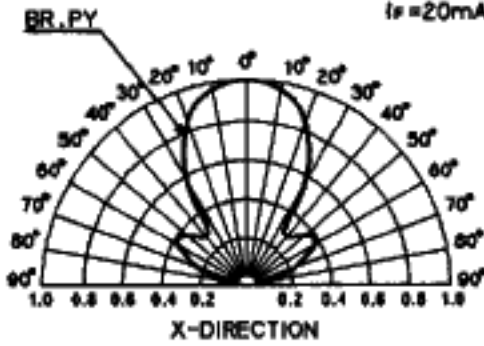
BR 1102W $T_a=25^\circ\text{C}$
 $I_f=20\text{mA}$



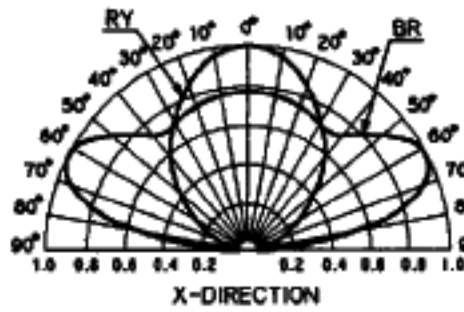
BRPY 1201W $T_a=25^\circ\text{C}$
 $I_f=20\text{mA}$



BRPY 1202W $T_a=25^\circ\text{C}$
 $I_f=20\text{mA}$



BRPY 1203W $T_a=25^\circ\text{C}$
 $I_f=20\text{mA}$



BRPY 1204W $T_a=25^\circ\text{C}$
 $I_f=20\text{mA}$

