



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**

T-46-19

**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**

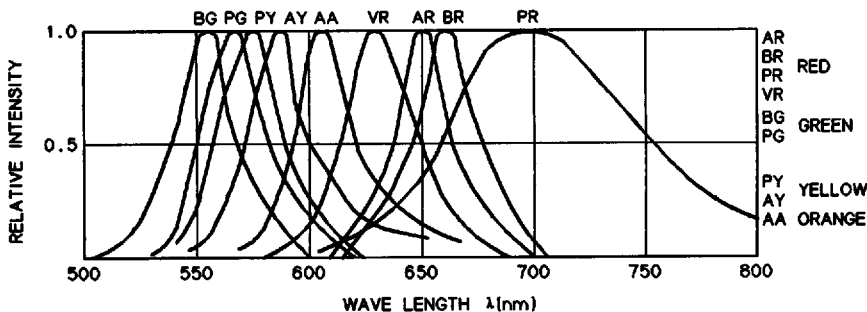
- TELEPHONES
- AV EQUIPMENT
- OA EQUIPMENT

**Absolute Maximum Ratings**

Parameter	Symbol	Red		Green	Yellow	Orange	Units
		BR	VR, PR	PG, BG	AY, PY	AA	
Forward Current	I <sub>F</sub>	30					mA
Peak Forward Current	I <sub>FM</sub>	70					mA
Reverse Voltage	V <sub>R</sub>	4					V
Power Dissipation	P <sub>d</sub>	60	75				mW
Operating Temperature	T <sub>opr</sub>	-30 ~ +85					°C
Storage Temperature	T <sub>stg</sub>	-30 ~ +90					°C

- Current derating at temperatures above T<sub>a</sub>=25°C is 0.42mA/°C (DC), 0.93mA/°C (pulsed).
- I<sub>FM</sub> is for t<sub>w</sub> ≧ 1 msec and duty cycle ≦ 1/20.
- In case of bicolor type, absolute maximum ratings are P<sub>d</sub>=75mA, I<sub>F</sub>=30mA, I<sub>FM</sub>=70mA when both diodes are ON.

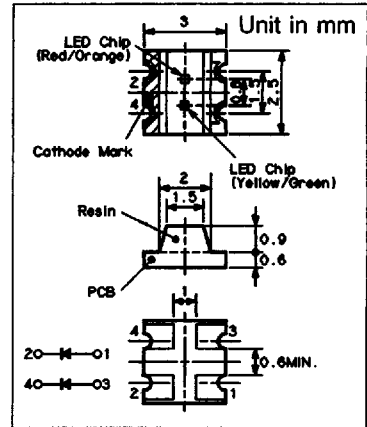
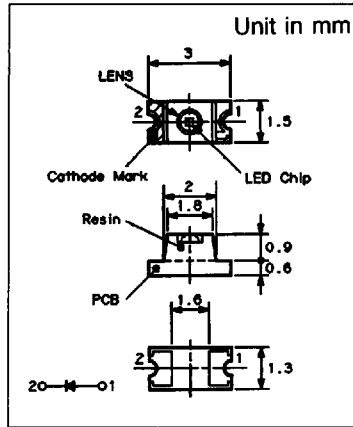
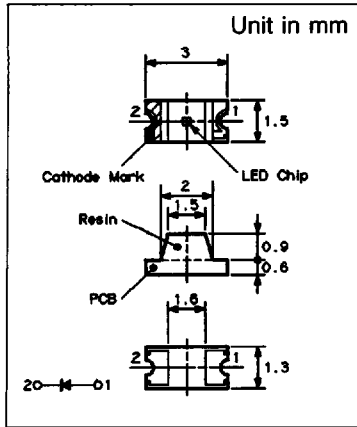
**SPECTRAL DISTRIBUTION**



LED LAMP

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■ Package Dimensions



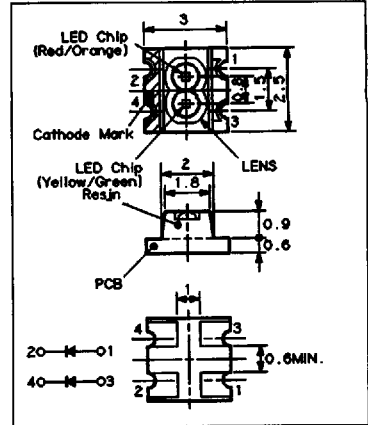
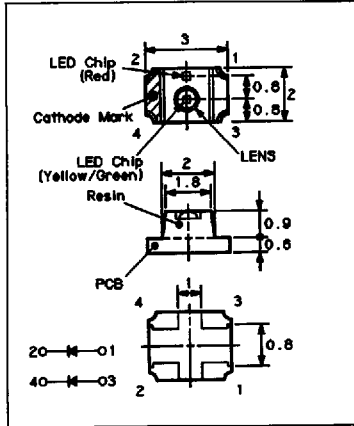
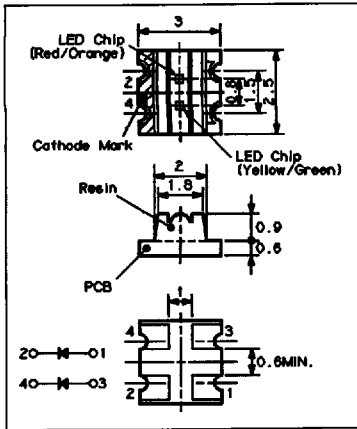
Electro-Optical Characteristics

(Ta=25°C)

TYPE NO.	Color	Package Color	Forward Voltage			Reverse Current		Luminous Intensity			Wave Length			Fig
			TYP.	MAX.	If	Ir MAX.	Vr	MIN.	TYP.	If	Peak λp 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	mcd	mA		nm	mA		

Package Dimensions

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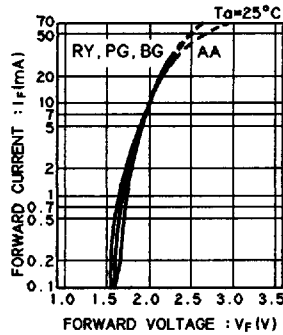
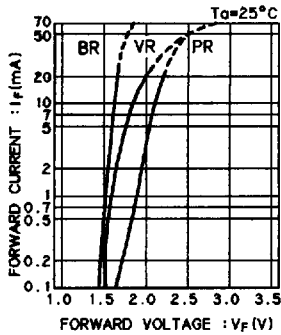
Electro-Optical Characteristics

(Ta=25°C)

TYPE NO.	Color	Package Color	Forward Voltage			Reverse Current		Luminous Intensity			Wave Length			Fig
			TYP.	MAX.	If	Ir MAX.	Vr	MIN.	TYP.	If	Peak λp TYP.	Δλ TYP.	If	
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		

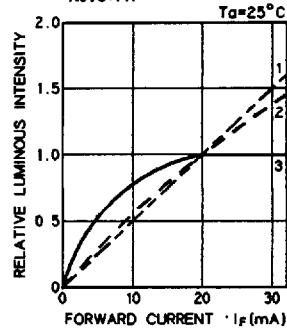
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■ FORWARD CURRENT vs. FORWARD VOLTAGE

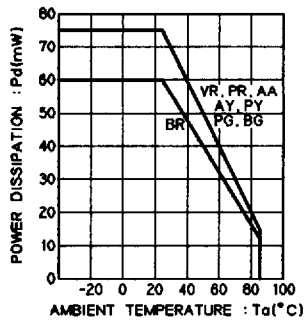


■ RELATIVE LUMINOUS INTENSITY vs. FORWARD CURRENT

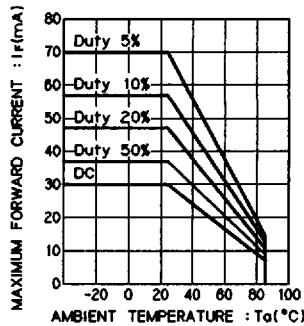
No. 1: VR, AA, AY, PY, PG, BG  
No. 2: BR  
No. 3: PR



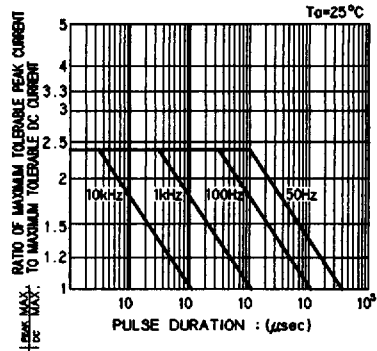
■ POWER DISSIPATION vs. AMBIENT TEMPERATURE



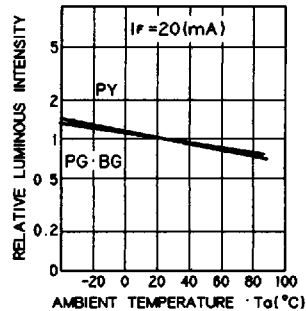
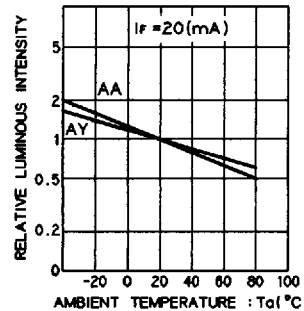
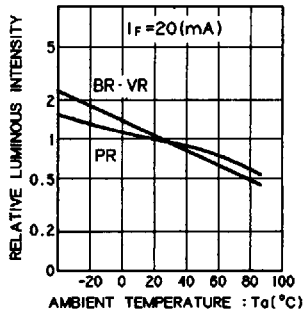
■ MAXIMUM FORWARD CURRENT vs. AMBIENT TEMPERATURE



■ MAXIMUM TOLERABLE PEAK CURRENT vs. PULSE DURATION



■ RELATIVE LUMINOUS INTENSITY vs. AMBIENT TEMPERATURE

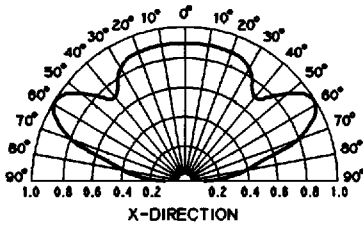


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■ SPATIAL DISTRIBUTION

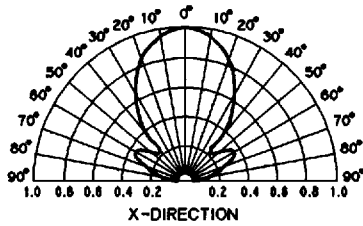
BR 1101W

Ta=25°C  
If=20mA



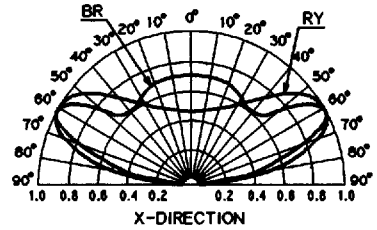
BR 1102W

Ta=25°C  
If=20mA



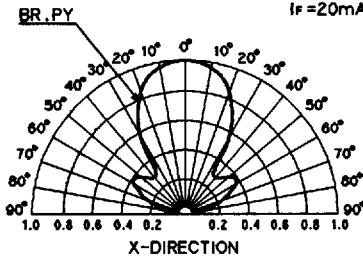
BRPY 1201W

Ta=25°C  
If=20mA



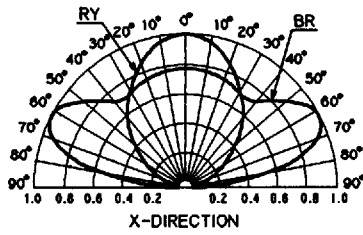
BRPY 1202W

Ta=25°C  
If=20mA



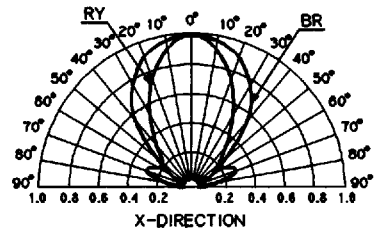
BRPY 1203W

Ta=25°C  
If=20mA



BRPY 1204W

Ta=25°C  
If=20mA



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