

CHIP LED FOR SURFACE MOUNTING

Chip LEDs were developed for surface mounting, there by contributing to both product compactness and economy. To meet a broad spectrum of application requirements, all colors and combinations are available, in addition to a variety of packages, providing a combination to suit virtually any situation.

▼ DESCRIPTION ON TYPE NO.

BR	1	1	0	1	P	TR
Chip	Shape	Number of chips	Package Color	Shape code	Material of PCB	Orientation in taping
BR-GaAlAs VR-GaAsP/GaP PR-GaP AA-GaAsP/GaP AY-GaAsP/GaP PY-GaP PG-GaP BG-GaP	Chip Type	1: One chip 2: Two chips	0: Clear	• Single Color 1: Flat Lens 2: Inner Lens • Bi-Color 1: Flat Lens 2: Dome Lens 3: Single Lens 4: Dual Lenses	P: Glass epoxy	TR TL

▼ CHARACTERISTICS BY COLOR

Ta=25°C

Type No.	Material Emitted Color	Absolute Maximum Rating						Electro-Optical Characteristics							
		Capacitance	Forward Current	Peak Forward Current	Reverse Voltage	Operating Temperature	Storage Temperature	Forward Voltage			Reverse Current		Wavelength		
		* Pd	* IF	* IFM	VR	Topr	Tstg	TYP.	MAX.	IF	MAX.	VR	Peak λp TYP.	Δλ TYP.	IF
BR	GaAlAs (Red)	60	30	70	4	-30~+85	-30~+90	1.7	2.0	20	100	4	660	30	20
VR	GaAsP/GaP(Red)	75	30	70	4	-30~+85	-30~+90	2.0	2.5	20	100	4	630	30	20
PR	GaP (Red)	75	30	70	4	-30~+85	-30~+90	2.1	2.5	10	100	4	700	100	10
AA	GaAsP/GaP(Orange)	75	30	70	4	-30~+85	-30~+90	2.2	2.5	20	100	4	605	30	20
AY	GaAsP/GaP(Yellow)	75	30	70	4	-30~+85	-30~+90	2.2	2.5	20	100	4	580	30	20
PY	GaP (Yellow)	75	30	70	4	-30~+85	-30~+90	2.1	2.5	20	100	4	570	30	20
PG	GaP (Green)	75	30	70	4	-30~+85	-30~+90	2.1	2.5	20	100	4	560	30	20
BG	GaP (Pure Green)	75	30	70	4	-30~+85	-30~+90	2.1	2.5	20	100	4	555	30	20
Units		mW	mA	mA	V	°C		V		mA	μA	V	nm		mA

• The current derating for operation above 25°C is 0.42mA/°C for DC drive and 0.93mA/°C for pulse drive.

• I_{FM} applies for the conditions $tw \leq 1ms$ and duty cycle $\leq 1/20$.

*For two elements driven simultaneously, the absolute maximum ratings are $P_d = 75mW$, $I_F = 30mA$ and $I_{FM} = 70mA$.

▼ CHARACTERISTICS BY SHAPE

Shape	Type No.	Emitted color	Package Color	Peak Wavelength (nm)	Luminous Intensity Iv (mcd)			Features	Fig.
					MIN.	TYP.	IF(mA)		
	BR1101P	Red	Clear	660	1.6	4.5	20	• Flat lens type • Wide distribution. • Ideal for back illumination	1
	VR1101P	Red		630	0.9	2.5	20		
	PR1101P	Red		700	0.4	0.7	10		
	AA1101P	Orange		605	1.0	3.6	20		
	AY1101P	Yellow		580	2.0	3.2	20		
	PY1101P	Yellow		570	1.4	4.0	20		
	PG1101P	Green		560	1.2	3.0	20		
	BG1101P	Pure Green		555	0.7	1.4	20		
	BR1102P	Red	Clear	660	6.0	17.0	20	• Inner-Lens type • High-intensity achieved by the use of a lens. • Ideal for illumination using a lightguide lens.	2
	VR1102P	Red		630	3.5	6.0	20		
	PR1102P	Red		700	0.8	1.5	10		
	AA1102P	Orange		605	5.0	9.0	20		
	AY1102P	Yellow		580	3.0	6.0	20		
	PY1102P	Yellow		570	6.0	12.0	20		
	PG1102P	Green		560	3.0	7.5	20		
	BG1102P	Pure Green		555	0.9	2.3	20		
	BRPY1201P	Red	Clear	660	1.6	4.5	20	• Bi-color Type • Flat lens type • Wide distribution. • Ideal for back illumination	3
		Yellow		570	1.4	4.0	20		
	BRPG1201P	Red		660	1.6	4.5	20		
		Green		560	1.2	3.0	20		
	BRBG1201P	Red		660	1.6	4.5	20		
		Pure Green		555	0.7	1.4	20		
	AAPY1201P	Orange		605	2.0	3.6	20		
		Yellow		570	1.4	4.0	20		
	BRPY1202P	Red	Clear	660	3.2	9.0	20	• Bi-color Type • Dome lens • Ideal for illumination using a lightguide lens.	4
		Yellow		570	2.8	8.0	20		
	BRPG1202P	Red		660	3.2	9.0	20		
		Green		560	2.4	6.0	20		
	BRBG1202P	Red		660	3.2	9.0	20		
		Pure Green		555	1.4	4.0	20		
	AAPY1202P	Orange		605	4.0	7.2	20		
		Yellow		570	2.8	8.0	20		
	BRPY1203P	Red	Clear	660	3.5	10.0	20	• Bi-color Type • Single lens • Yellow or green has inner lens to unify the brightness with red which has flat lens.	5
		Yellow		570	6.0	12.0	20		
	BRPG1203P	Red		660	3.5	10.0	20		
		Green		560	3.0	7.5	20		
	BRBG1203P	Red		660	3.5	10.0	20		
		Pure Green		555	0.9	2.3	20		
	BRPY1204P	Red	Clear	660	6.0	17.0	20	• Bi-color Type • Both colors have inner lens respectively to achieve high intensity	6
		Yellow		570	6.0	12.0	20		
	BRPG1204P	Red		660	6.0	17.0	20		
		Green		560	3.0	7.5	20		
	BRBG1204P	Red		660	6.0	17.0	20		
		Pure Green		555	0.9	2.3	20		
	AAPY1204P	Orange		605	5.0	9.0	20		
		Yellow		570	6.0	12.0	20		

• The solder temperature should be 260°C or lower and the dip time should be 5s or shorter.

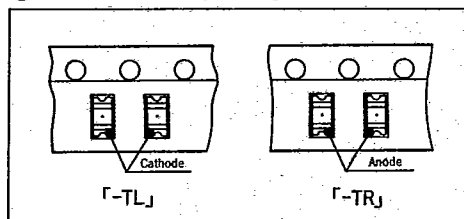
• Pre-heating of the parts to be soldered: Heat to 120°C or lower for no more than two minutes.

17 • Mounting in the reflow oven: Heat to 240°C or lower for no more than 5s

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▼CHIP LED TAPING SPECIFICATIONS

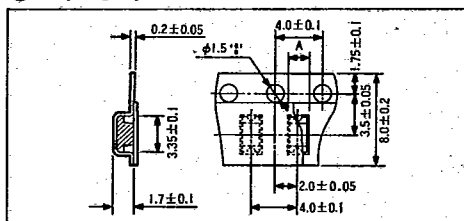
① Orientation of polarity on taping



EX. BRI 102P-TL

- Standard Orientation of polarity: $\lceil -TR \rceil$

② Taping specifications Unit:mm

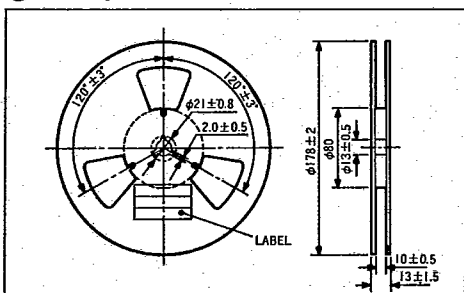


A-dimension
(Tolerance ± 0.1)

1 CHIP	1.8
2 CHIPS	2.8(2.3)

※For 1203 type

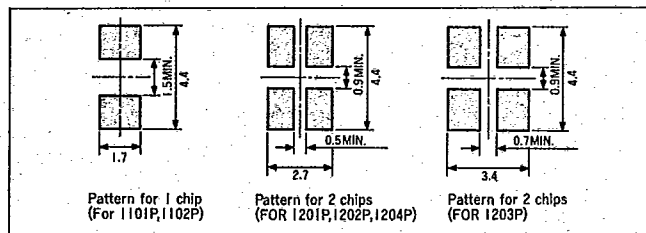
③ Reel specifications Unit:mm



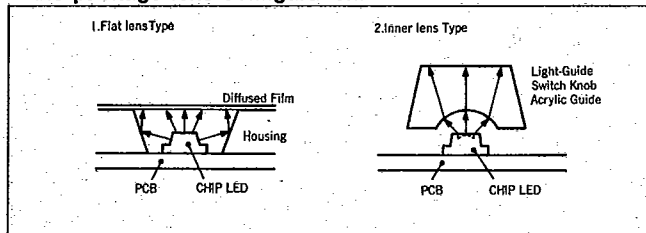
Specifications conform to EIAJ RC-1008A

▼NOTES ON USING CHIP LED

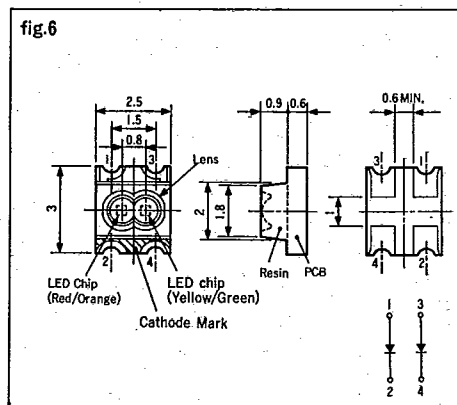
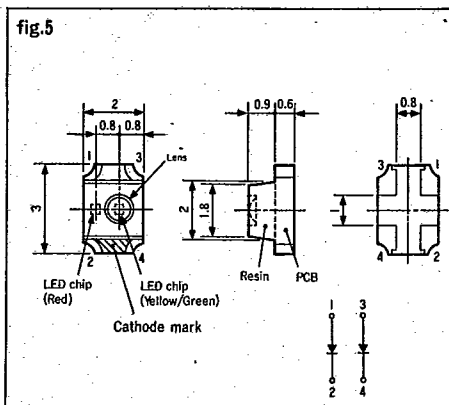
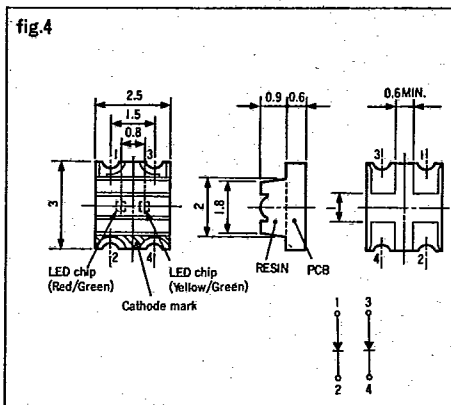
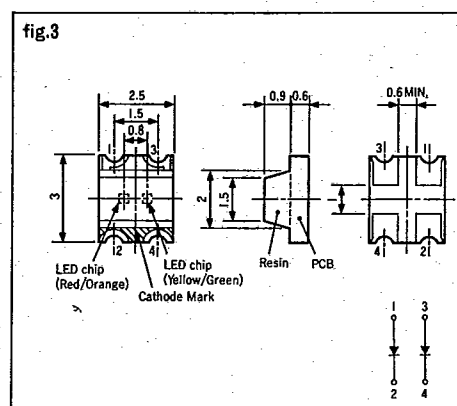
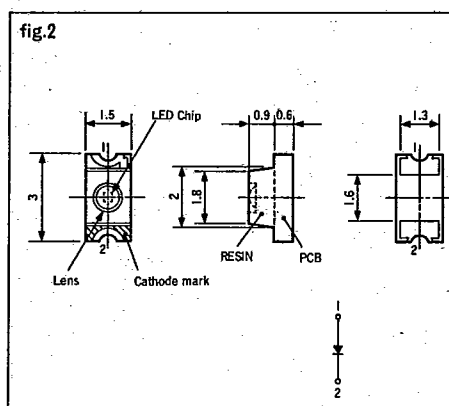
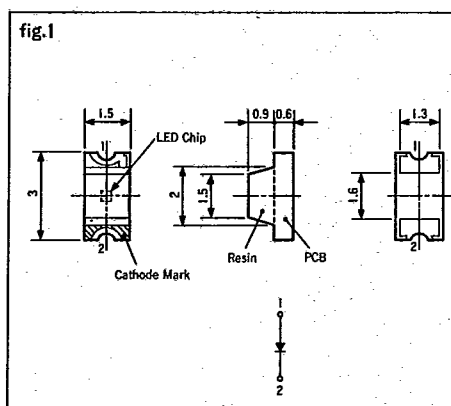
■ Mounting pattern Unit:mm



■ Housing mounting example to accommodate the package lens configuration.



▼ **PACKAGE DIMENSIONS** Unit: mm



● Tolerance: $\pm 0.2\text{mm}$