



Product Guide

1102W Series Standard Type Inner Lens SMT LED



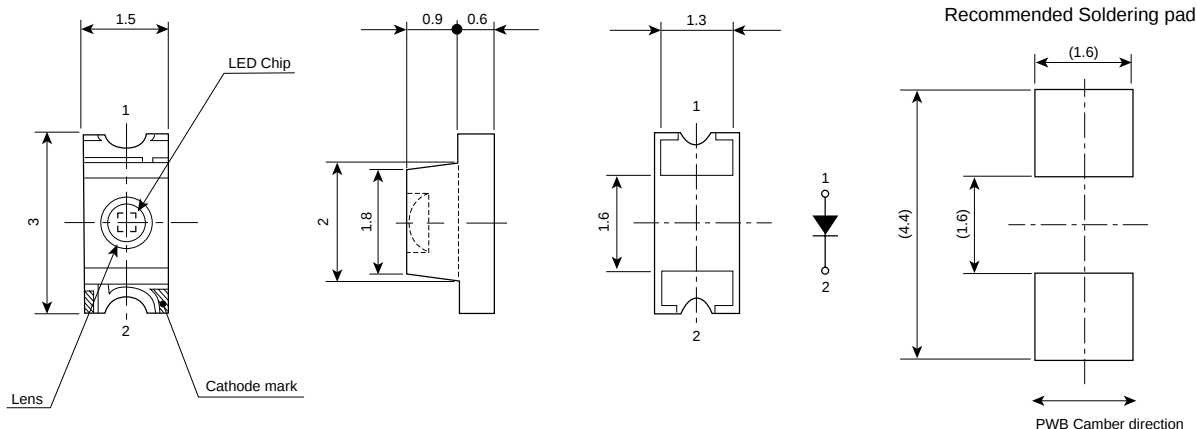
Features

- Inner lens type
- Tape and reel packaging
- Designed for reflow and solder dip soldering methods.

Applications

- Computer / Telecommunications
- Industrial / Medical
- Audio visual equipment

Outline Dimensions



Electro-Optical Characteristics

(Ta=25°C)

Type No.	Material	Emitted Color	Lens Color	Luminous Intensity I _V			Wavelength Spectral Line Half Width				Forward Voltage V _F			Reverse Current I _R		Viewing Angle (2 θ 1/2)
				MIN.	TYP.	I _F	Peak λ _p TYP.	Dominant λ _d TYP.	Δλ TYP.	I _F	TYP.	MAX.	I _F	MAX.	V _R	
BR1102W	GaAlAs	Red	Water Clear	12.0	33.6	20	660	647	30	20	1.7	2.0	20	100	4	70°
AA1102W	GaAsP	Orange		5.0	9.0	20	605	606	30	20	2.2	2.5	20	100	4	
AY1102W	GaAsP	Yellow		3.0	6.0	20	580	590	30	20	2.2	2.5	20	100	4	
PY1102W	GaP	Yellow Green		12.0	24.0	20	570	572	30	20	2.1	2.5	20	100	4	
PG1102W	GaP	Green		6.0	12.0	20	560	567	30	20	2.1	2.5	20	100	4	
BG1102W	GaP	Pure Green		1.8	4.8	20	555	558	30	20	2.1	2.5	20	100	4	
Units				mcd		mA	nm			mA	V		mA	μA	V	Deg.

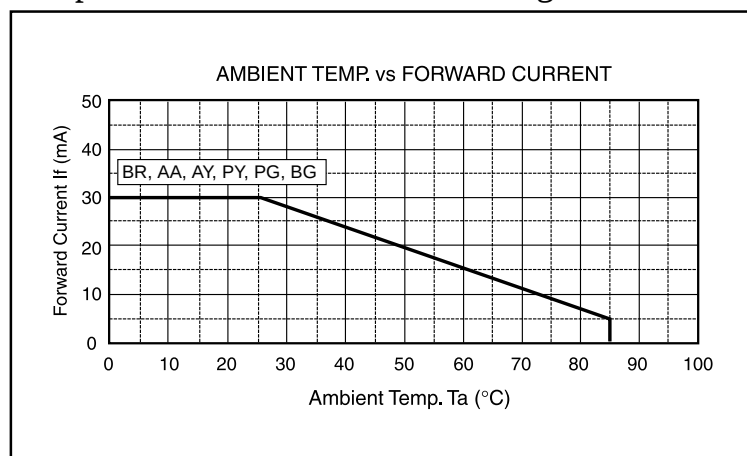
Absolute Maximum Ratings

(Ta=25°C)

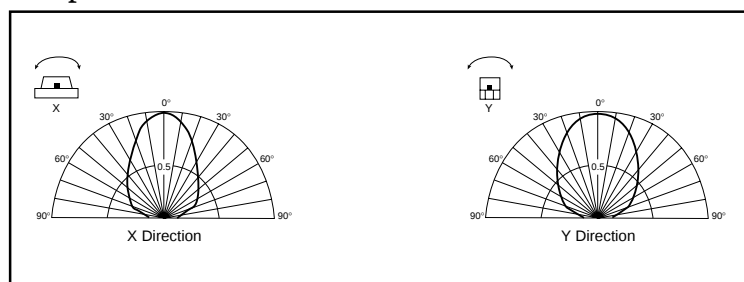
Item	Symbol	Red	Orange	Yellow	Yellow Green	Green	Pure Green	Units
		BR	AA	AY	PY	PG	BG	
Power Dissipation	Pd	60	75	75	75	75	75	mW
Forward Current	I _F	30	30	30	30	30	30	mA
Peak Forward Current	I _{FM}	70	70	70	70	70	70	mA
Reverse Voltage	V _R	4	4	4	4	4	4	V
Operating Temperature	Topr	-30 to +85						°C
Storage Temperature	Tstg	-40 to +100						°C
Derating*	ΔI _F	0.42 (DC) 0.93 (Pulse)						mA/°C

* Ta=25°C, I_{FM} applies for the pulse width ≤ 1msec. and duty cycle ≤ 1/20.

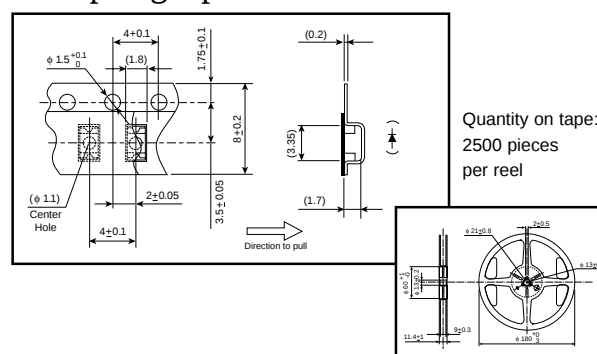
Operation Current Derating Chart



Spatial Distribution



Taping Specifications

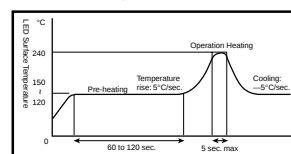


Precautions

Please follow these handling precautions to prevent damage to the chip and ensure its reliability.

1. Soldering conditions:

- **Soldering iron:** Temperature at tip of iron: 280°C max. (30W max.)
Soldering time: 3 sec. max.
- **Dip soldering:** Preheating: 120 ~ 150°C max. (resin surface temp.)
60 ~ 120 sec. max. Bath temperature: 260°C max. Dipping Time: 5 sec. max.
- **Reflow Soldering:**



2. Cleaning:

- If cleaning is required, use the following solutions for less than 1 minute, at less than 40°C.
- Appropriate chemicals: Ethyl alcohol and isopropyl alcohol.
- Effect of ultrasonic cleaning on the LED resin body differs depending on such factors as the oscillator output, size of PCB and LED mounting method. The use of ultrasonic cleaning should be enforced at proper output after confirming there is no problem.

Product specifications subject to change without notice. PG1102W-0202