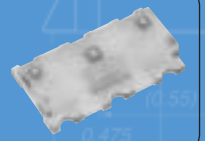




STANLEY ELECTRIC
SALES OF AMERICA

Product Guide

1312CE Super Bright Surface Mount LED



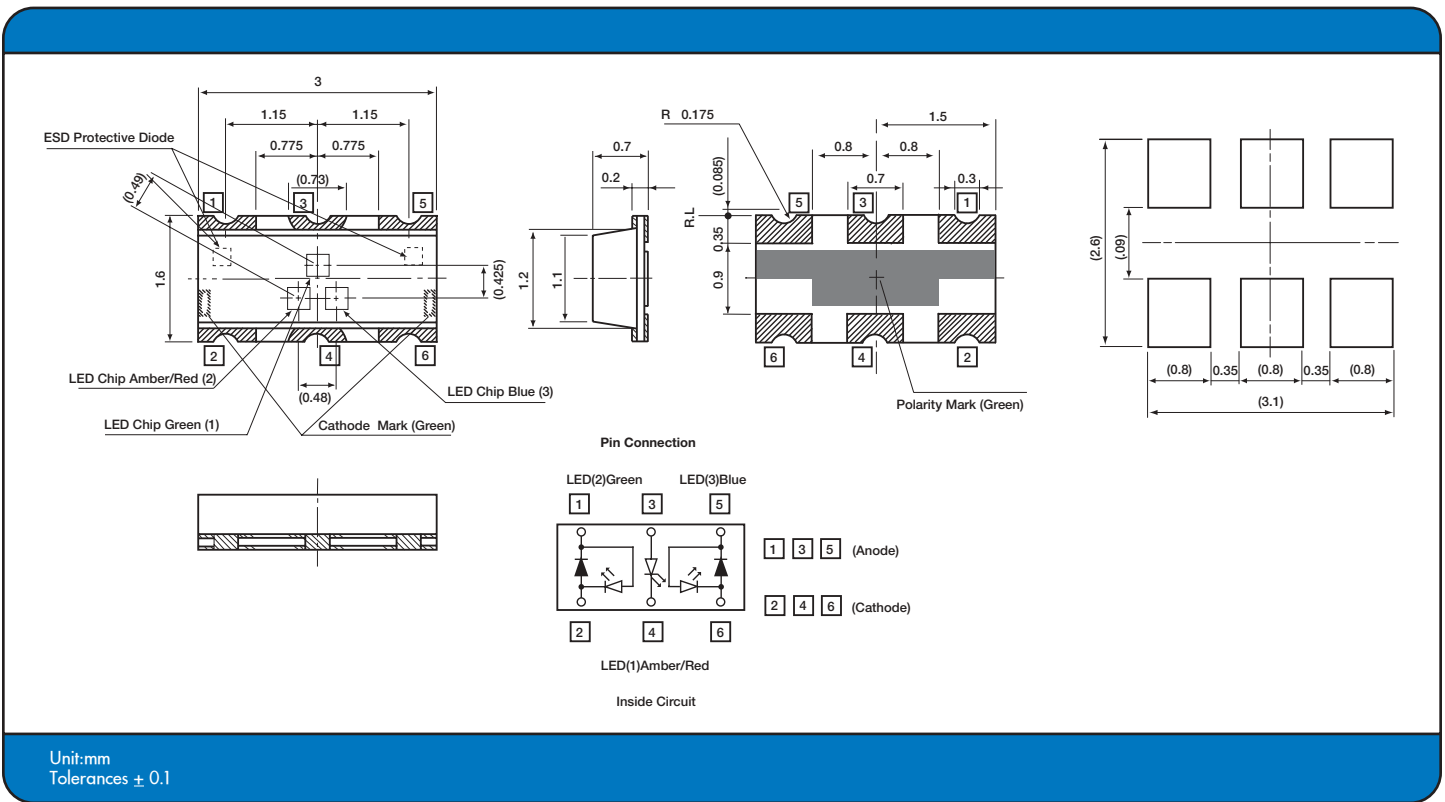
▼ Features

Full Color LED containing 3 dies
(Red, Green & Blue or Amber, Green & Blue)
Excellent color mixture emulation from narrow/triangle die layout

▼ Applications

- Backlighting
- Signal Indicator

▼ Outline Dimensions



▼ Electro-Optical Characteristics

($T_a=25^\circ\text{C}$)

Part No.	Material	Emitted Color	Lens Color	Luminous Intensity I_v			Wavelength				Forward Voltage V_f			Reverse Current I_r	
				MIN.	TYP.	I_f	Peak λ_p TYP.	Dominant λ_d TYP.	Spectral Line Half Width $\Delta\lambda$ TYP.	I_f	TYP.	MAX.	I_f	MAX.	V_R
FAGB1312CE	AllnGaP	Orange	Milky White	70	100	20	609	605	15	20	1.9	2.4	20	100	5
	GaN	Green		120	220	20	520	525	45	20	3.4	3.9	20	-	-
	GaN	Blue		24	50	20	466	470	35	20	3.4	3.9	20	-	-
FRGB1312CE	AllnGaP	Red		20	50	20	635	626	15	20	2.0	2.4	20	100	5
	GaN	Green		120	220	20	520	525	45	20	3.4	3.9	20	-	-
	GaN	Blue		24	50	20	466	470	35	20	3.4	3.4	20	-	-
Units				mcd	mA		nm			mA	V	mA	μA	V	

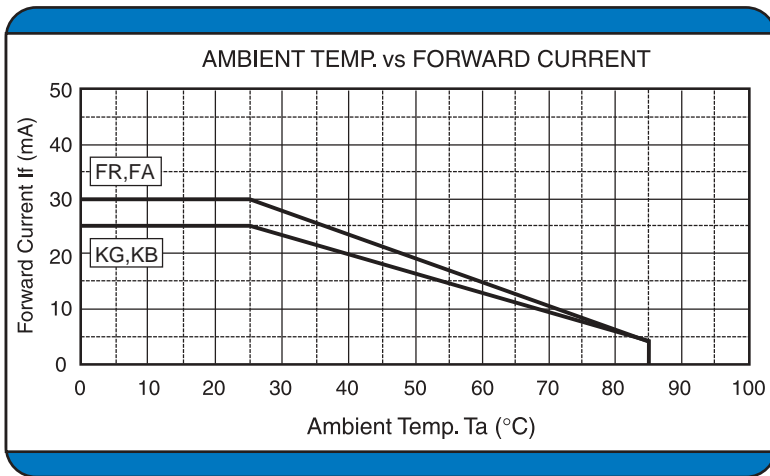
▼ Absolute Maximum Ratings

(T_a=25°C)

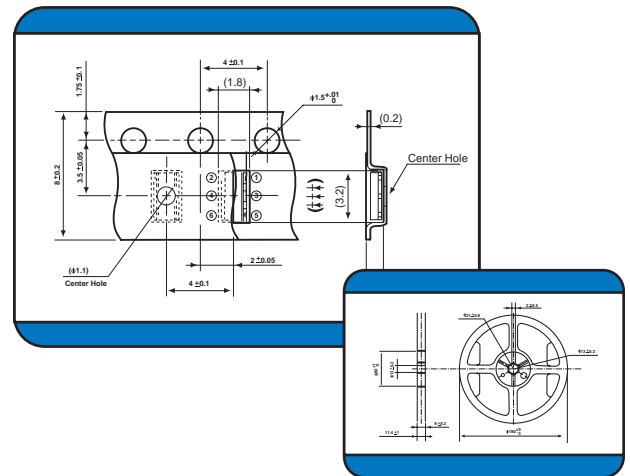
Item	Symbol	FAGB1312CE			FRGB1312CE			Unit
		Orange	Green	Blue	Red	Green	Blue	
Power Dissipation	P _d	81	98	98	81	98	98	mW
Forward Current	I _F	30	25	25	30	25	25	mA
Peak Forward Current	I _{FM}	100	100	100	100	100	100	mA
Reverse Voltage	V _R	4	-	-	4	-	-	V
Operating Temperature	T _{opr}	-40 to +85						°C
Storage Temperature	T _{stg}	-40 to +100						°C
Current Derate Linearly*	ΔI _F	0.43(DC) 1(Pulse)	0.33(DC) 1(Pulse)		0.43(DC) 1(Pulse)	0.33(DC) 1(Pulse)		mA/°C

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

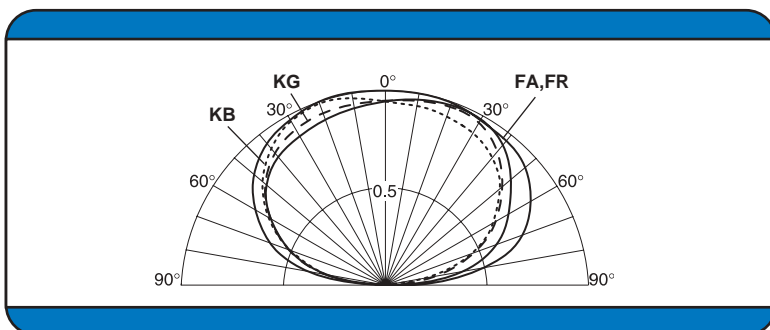
▼ Operation Current Derating Chart



▼ Taping Specifications



▼ Spatial Distribution



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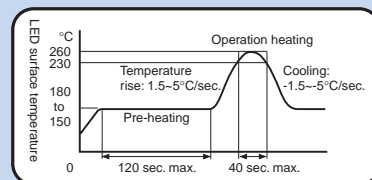
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▼ Precautions

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: 350°C max. (30W max.)
Soldering time: 3 sec. max.
- **Dip soldering:** Preheating: 120°C max. (resin surface temp.)
60 sec. max. Bath temperature: 265°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. 1312CE-0703