

# Small, chip LEDs (Blue . Green)

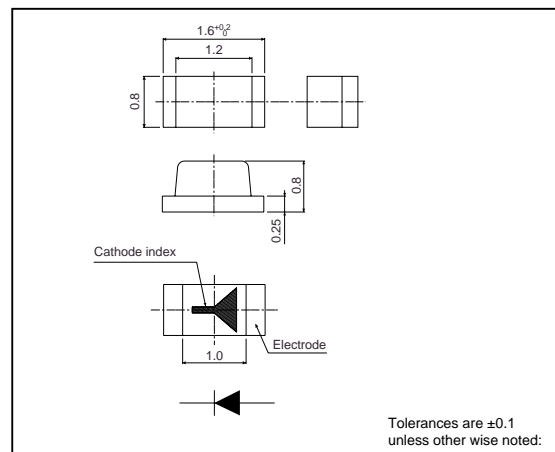
## SML31 \* Series

The SML31 \* series are small, chip LEDs. The compact and leadless design of these LED allows for high mounting density.

### ●Features

- 1) Two colors, three types (Blue and Green)
- 2) Rectangular and leadless (1.6x0.8mm, 0.8mm thick)
- 3) Can be mounted by automatic mounting.

### ●External dimensions (Units : mm)



### ●Selection guide

Lens	Emitting color		
	Blue (GaN)	Blue (InGaN)	Green (InGaN)
Transparent clear	SML310BAT	SML311BBT	SML311EBT

### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits			Unit
		SML310BAT	SML311BBT	SML311EBT	
Power dissipation	P <sub>D</sub>	94	84		mW
Forward current	I <sub>F</sub>	20			mA
Peak forward current	I <sub>FP</sub>	70	100		mA*
Reverse voltage	V <sub>R</sub>	5			V
Operating temperature	T <sub>opr</sub>	-20~+80			°C
Storage temperature	T <sub>stg</sub>	-30~+100			°C

\* Duty 1 / 10 , 1KHZ

LED lamps

●Electrical and optical characteristics (Ta=25°C)

Parameter Type	Color	Forward voltage			Reverse current			Luminous intensity			Peak wavelength		Spectral line half width	
		V <sub>F</sub> (V)		Cond.	I <sub>R</sub> (μA)	Cond.	I <sub>v</sub> (mcd)		λ <sub>P</sub> (m)	Cond.	Δλ(nm)			
		Typ.	Max.	I <sub>F</sub> (mA)	Max.	V <sub>R</sub> (V)	Min.	Typ.	I <sub>F</sub> (mA)	Typ.	I <sub>F</sub> (mA)	Typ.	I <sub>F</sub> (mA)	
SML310BAT	Blue	3.8	4.7	20	100	5	1.4	3.6	20	428	20	65	20	
SML311BBT	Blue	3.5	4.2	20	100	5	5.6	14	20	468	20	26	20	
SML311EBT	Blue	3.5	4.2	20	100	5	36	90	20	523	20	36	20	

●Directional pattern

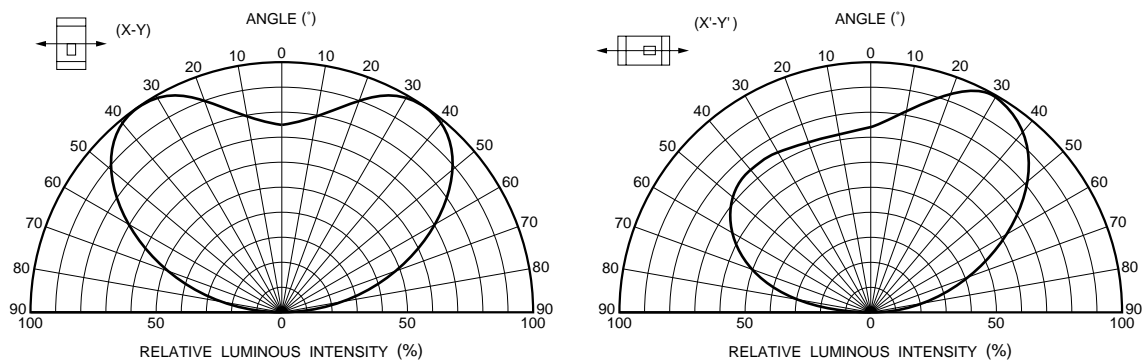


Fig. 1 Directional pattern

●Electrical characteristics curves

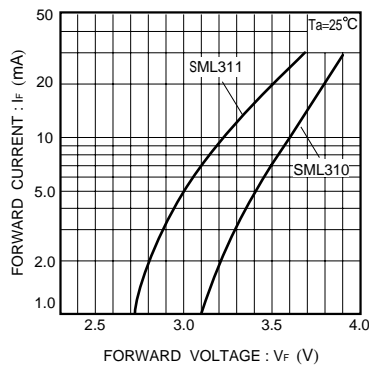


Fig.2 Forward current vs. forward voltage

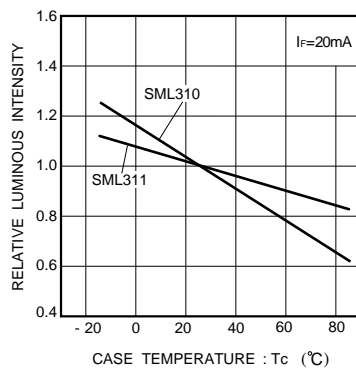


Fig.3 Lumirons intensity vs.casetemperature

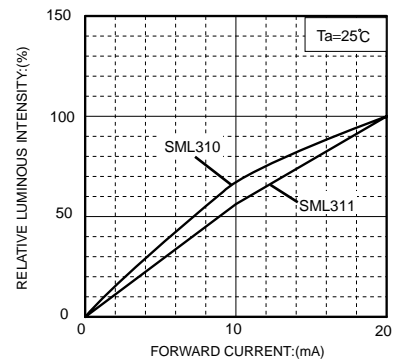


Fig.4Luminous intensity vs. forward current

LED lamps

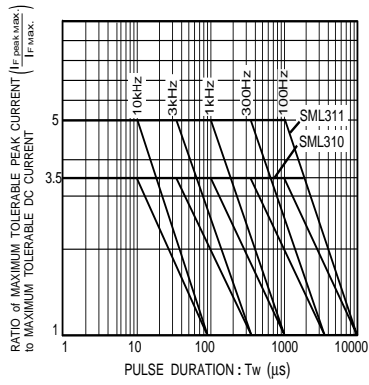


Fig.5 Maximum tolerable peak current vs. pulse duration

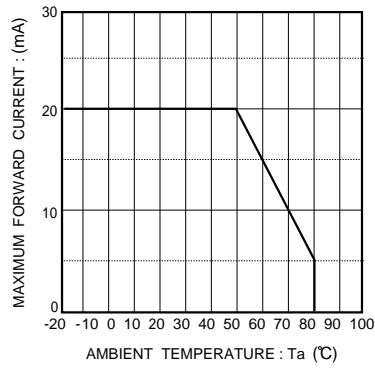


Fig.6 Maximum forward current vs. ambient temperature