

## LED lamps

## Ultra high brightness chip LEDs

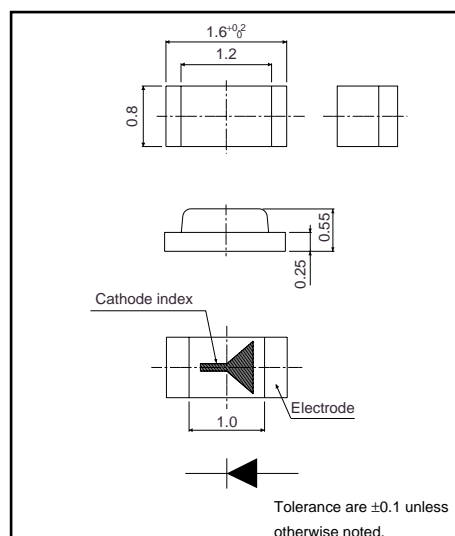
## SML-512 Series

The SML-512 series are ultra high brightness chip LEDs equipped with an AlGaInP chip. The compact and leadless design of these LEDs allows for high mounting density.

## ●Features

- 1) Three colors : red, orange and yellow.
- 2) Rectangular and leadless (1.6x0.8mm, 0.55mm thick)
- 3) Can be mounted by automatic mounting.

## ●External dimensions (Units : mm)



## ●Selection guide

Emitting color	Red	Orange	Yellow
Lens			
Transparent clear	SML-512UW	SML-512DW	SML-512WW

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

Parameter	Symbol	Limits	Unit
Power dissipation	P <sub>D</sub>	62	mW
Forward current	I <sub>F</sub>	25	mA
Peak forward current	I <sub>FP</sub>	60	mA*
Reverse voltage	V <sub>R</sub>	4	V
Operating temperature	T <sub>opr</sub>	-30~+85	°C
Storage temperature	T <sub>stg</sub>	-40~+85	°C

\* Pulse width 1ms Duty 1 / 5

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

Parameter	Color	Forward voltage			Reverse current			Luminous intensity			Peak wavelength		Spectral line half width	
		V <sub>F</sub> (V)		Cond.	I <sub>R</sub> (mA)	Cond.	I <sub>v</sub> (mcd)		λ <sub>p</sub> (nm)	Cond.	Δλ(nm)	Cond.		
		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)	
SML-512	UW	Red	1.9	2.5	20	100	4	22	63	20	630	20	18	20
	DW	Orange	1.9	2.5	20	100	4	36	63	20	611	20	16	20
	WW	Yellow	1.9	2.5	20	100	4	36	63	20	590	20	15	20

●Directional pattern

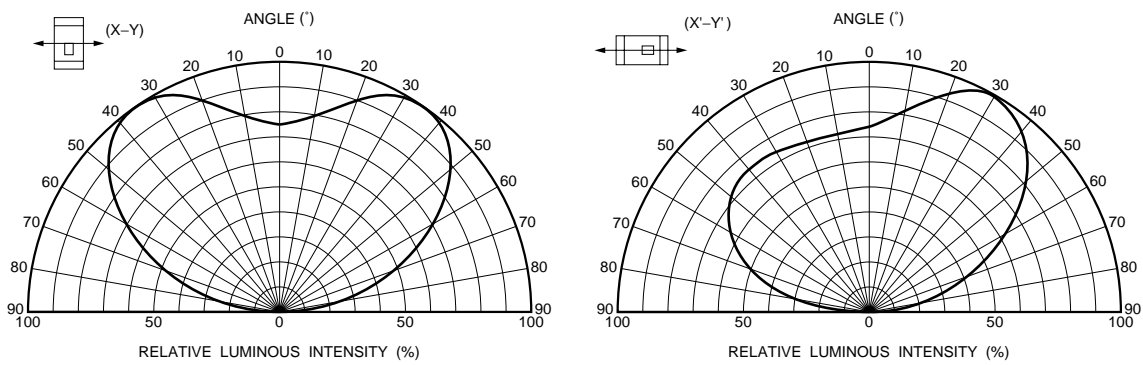


Fig.1 Directional pattern

●Electrical characteristics curves

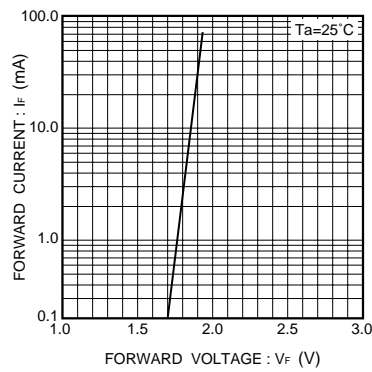


Fig. 2 Forward current vs. forward voltage

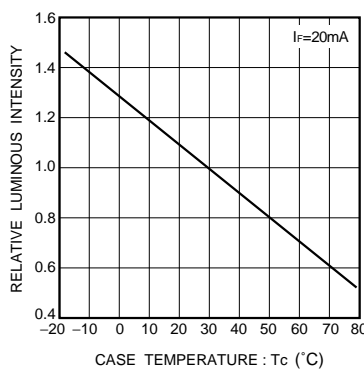


Fig. 3 Luminous intensity vs. case temperature

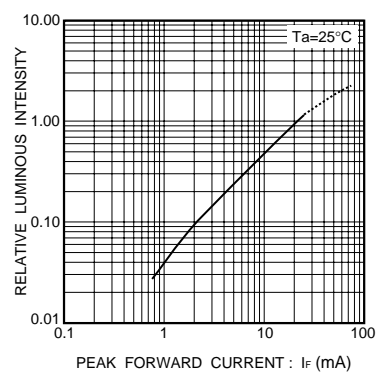


Fig. 4 Luminous intensity vs. forward current

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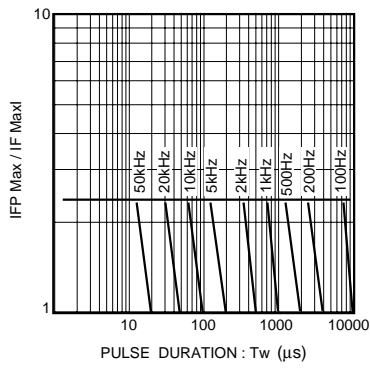


Fig. 5 Maximum tolerable peak current vs. pulse duration

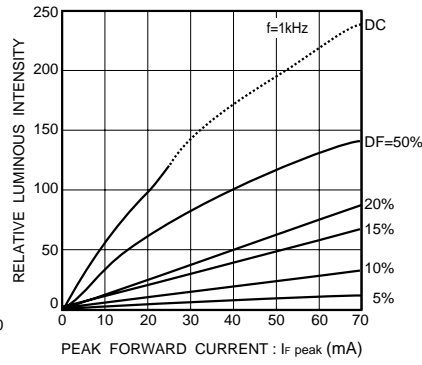


Fig. 6 Luminous intensity vs. peak forward current

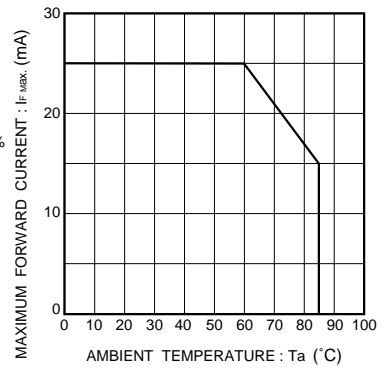


Fig.7 Maximum forward current vs. ambient temperature (Derating)