

Ultra high brightness chip LEDs

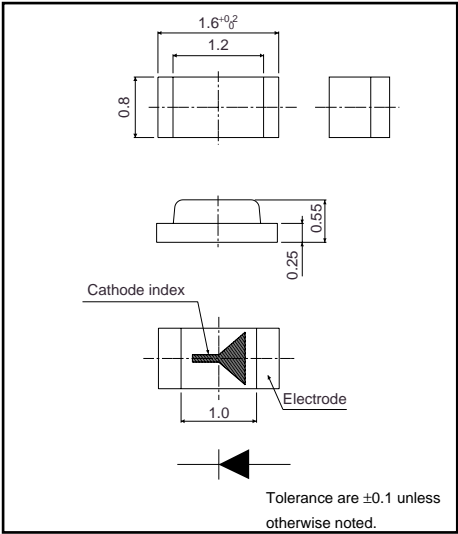
SML-512 Series

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 _D	62	mW
Forward current	I _F	25	mA
Peak forward current	I _{FP}	60	mA*
Reverse voltage	V _R	4	V
Operating temperature	T _{opr}	-30~+85	°C
Storage temperature	T _{stg}	-40~+85	°C

* Pulse width 1ms Duty 1 / 5

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 _F (V)		Cond.	I _R (mA)	Cond.	I _v (mcd)		λ _p (nm)	Cond.	Δλ(nm)			
		Typ.	Max.	I _F (mA)	Max.	V _R (V)	Min.	Typ.	I _F (mA)	Typ.	I _F (mA)	Typ.	I _F (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

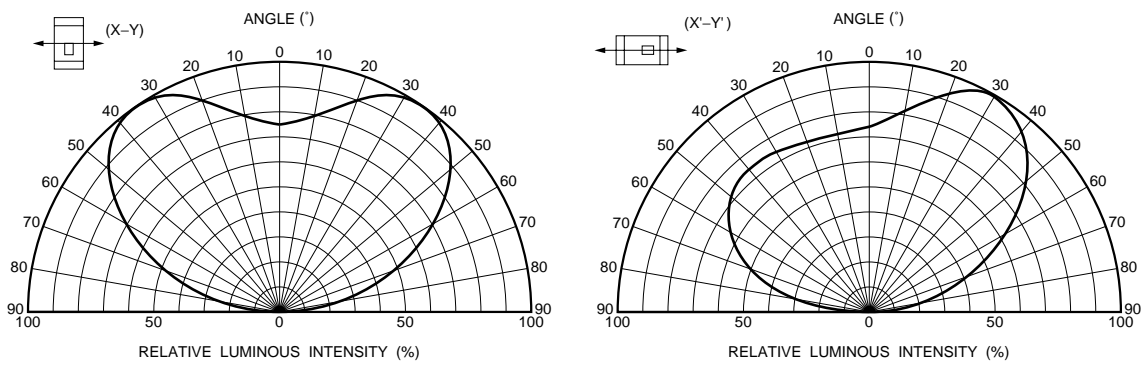


Fig.1 Directional pattern

●Electrical characteristics curves

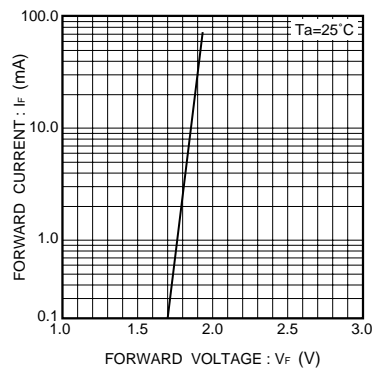


Fig. 2 Forward current vs. forward voltage

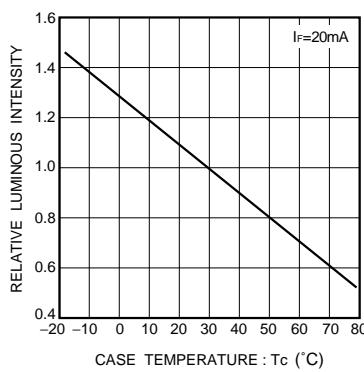


Fig. 3 Luminous intensity vs. case temperature

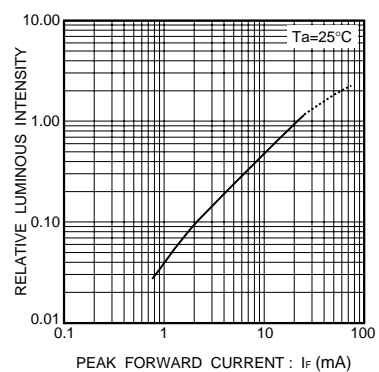


Fig. 4 Luminous intensity vs. forward current

LED lamps

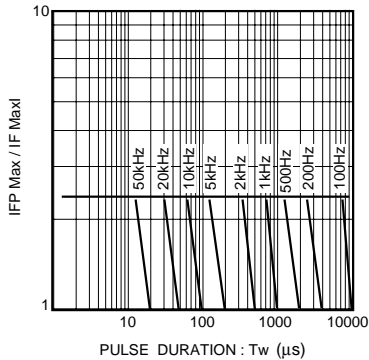


Fig. 5 Maximum tolerable peak current vs. pulse duration

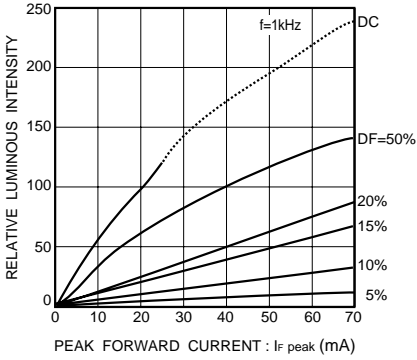


Fig. 6 Luminous intensity vs. peak forward current

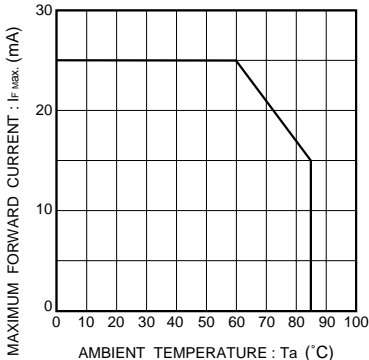


Fig.7 Maximum forward current vs. ambient temperature (Derating)