

Ultra high brightness chip LEDs

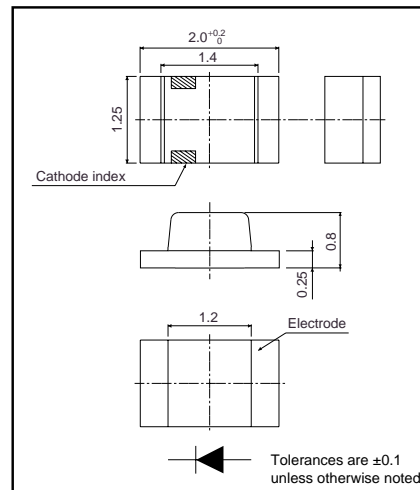
SML-212 Series

The SML-212 series are Ultra high brightness chip LEDs equipped with an AlGaInP chip.

●Features

- 1) Three colors : red, orange and yellow.
- 2) Rectangular and leadless (2 x 2.5 mm, 0.8 mm thick)
- 3) Can be mounted by automatic mounting.

●External dimensions (Units : mm)



●Selection guide

Lens	Emitting color		
	Red	Orange	Yellow
Transparent clear	SML-212VT	SML-212DT	SML-212YT

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power dissipation	P _D	75	mW
Forward current	I _F	30	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)

Type	Parameter	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)	Cond.	
			Typ.	Max.	I _F (mA)	Max.	V _R (V)	Min.	Typ.	I _F (mA)	Typ.	I _F (mA)	Typ.	I _F (mA)
SML-212	VT	Red	2.05	2.5	20	100	4	22	63	20	639	20	40	20
	DT	Orange	2.05	2.5	20	100	4	22	63	20	611	17	40	20
	YT	Yellow	2.05	2.5	20	100	4	22	63	20	591	15	40	20

● Directional pattern

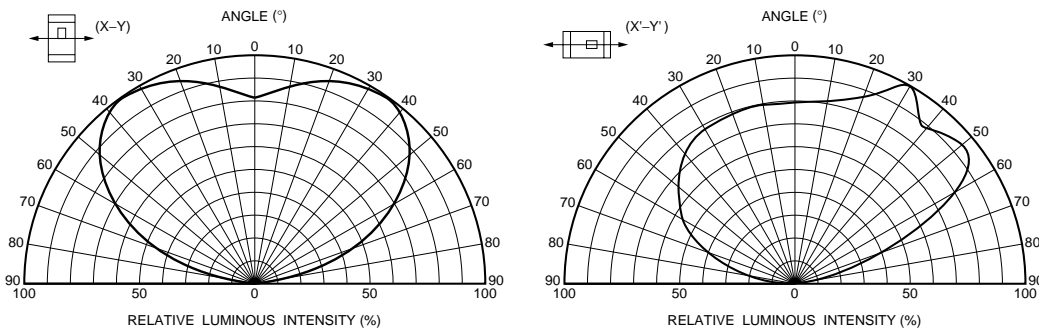


Fig.1 Directional pattern

● Electrical characteristics curves

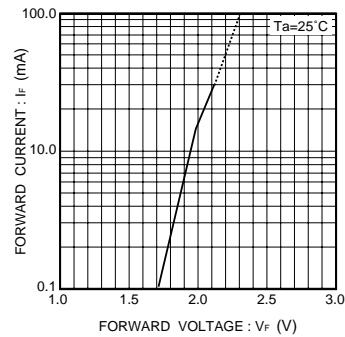


Fig. 2 Forward current vs. forward voltage

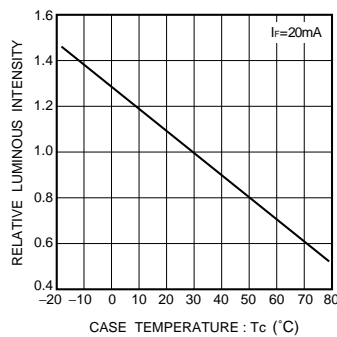


Fig. 3 Luminous intensity vs. case temperature

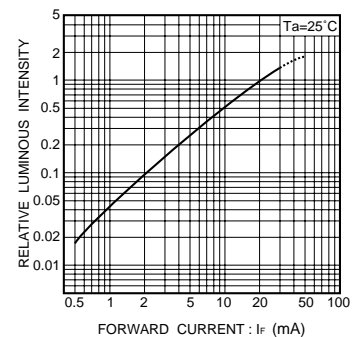


Fig. 4 Luminous intensity vs. forward current

LED lamps

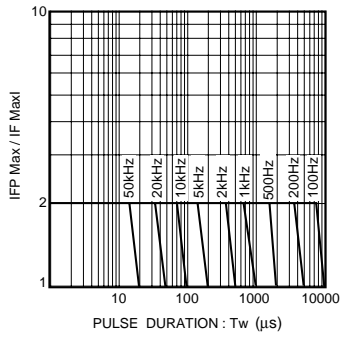


Fig. 5 Maximum tolerable peak current vs. pulse duration

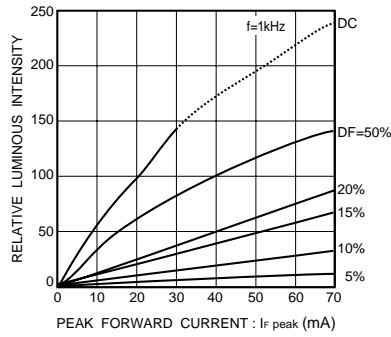


Fig. 6 Luminous intensity vs. peak forward current

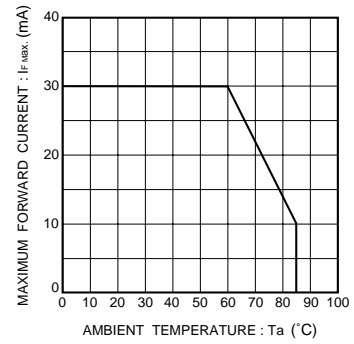


Fig.7 Maximum forward current vs. ambient temperature (Derating)