High Brightness Type Mini-molded chip LEDs

SML-51 * Series

	Green	Yellow	Orange	Red	
Package Size (mm)		AlGaInF			
	570nm	590nm	611nm	630nm	
1608 (0603) 1.6×0.8 t=0.55	SML-512MW	SML-511WW SML-512WW	SML-511DW SML-512DW	SML-511UW SML-512UW	

■ Absolute Maximum Ratings (Ta=25°C)

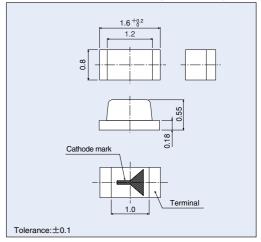
Part No.	Emitting color	Power dissipation Po (mW)	Forward current IF (mA)	Peak forward current IFP (mA)	Reverse voltage V _R (V)	Operating temperature Topr	Stotage temperature T _{stg} (°C)	
SML-512MW	Green	65	25	100*2	5	-30 to +85	-40 to +85	
SML-511WW	Yellow	62	25	60*1	4	-30 to +85	-40 to +85	
SML-512WW	reliow	75	30	100*2	5	-40 to +100	-40 to +100	
SML-511DW	Orongo	62	25	60*1	4	-30 to +85	-40 to +85	
SML-512DW	Orange	75	30	100*2	5	-40 to +100	-40 to +100	
SML-511UW	Red	62	25	60*1	4	-30 to +85	-40 to +85	
SML-512UW	neu	75	30	100*2	5	-40 to +100	-40 to +100	

^{*1} IFP measured under duty ≦1/5,pulse width ≦1ms.

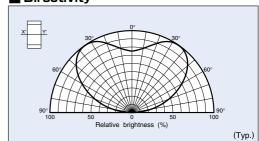
■ Electrical Optical Characteristics (Ta=25°C)

Part No.	Resin Color	Forward voltage V _F		Reverse current In		Light wavelength Peak Half-wave λρ Δλ			Brightness Iv		
		Typ. (V)	lF (mA)	Max. (μA)	VR (V)	Typ. (nm)	Typ. (nm)	lF (mA)	Min. (mcd)	Typ. (mcd)	lF (mA)
SML-512MW		2.1		100	5	570	18		14	40	
SML-511WW				100	4	590	15		22	40	
SML-512WW				10	5	590	15		36	63	
SML-511DW	Milky White	0.0	20	100	4	011	10	20	14	40	20
SML-512DW		2.0		10	5	611	16		22	63	
SML-511UW				100	4	630	18		14	40	
SML-512UW				10	5	030	18		22	63	

■ External Dimensions (Unit:mm)



Directivity

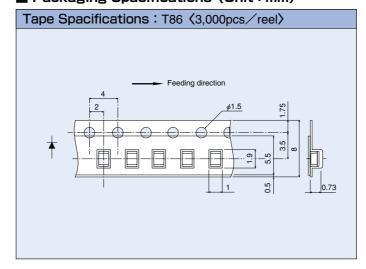


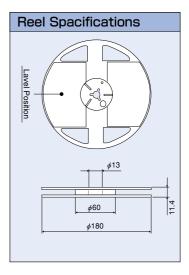
■ Recommemded Pad Layout

(Unit:mm)

The recommended thickness of the screen mask for soldering is between 100 and $200\,\mu m$. The hole size of the screen mask should be same as the recommended land pattern or smaller.

■ Packaging Spacifications (Unit:mm)

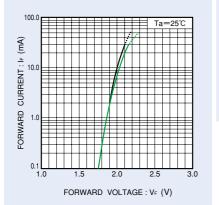




^{*2} IFP measured under duty 1/10, 1kHz

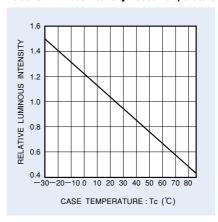
■ Electrical Characteristic Curves

Forward Current - Forward Voltage



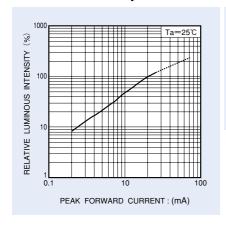
— SML-512WW
— SML-511WW
SML-511DW
SML-511DW
SML-512DW
SML-511UW
SML-511UW

Relative Luminous Intensity - Case Temperature



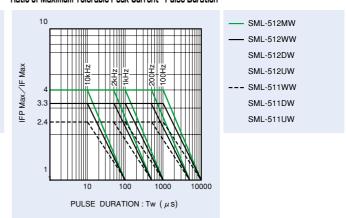
SML-512MW
SML-511WW
SML-511DW
SML-512DW
SML-511UW
SML-512UW

Relative Luminous Intensity - Forward Current

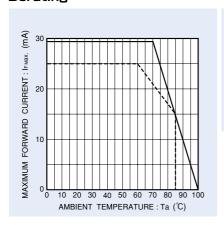


SML-512MW
SML-511WW
SML-511DW
SML-511DW
SML-512DW
SML-511UW
SML-512UW

Ratio of Maximum Tolerable Peak Current - Pulse Duration



Derating



SML-512DW SML-512UW --- SML-512MW SML-511WW SML-511DW SML-511UW

SML-512WW

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