







Bi-Color Chip LEDs with Reflector 1210 <3.0×2.5 t=1.3mm> Standard and High Brightness Type

SML-02* Series

Emitting Color	Part No.		Blue	Green(Yellowish Green)	Red	
Material			InGaN on SiC	GaP	GaAsP on GaP	AlGaInP on GaAs
Package Size(mm)	SML-020MVT					
						

3025(1210) 3.0×2.5(t=1.3)

note) "-" will be taken out for emitting color B/E series.

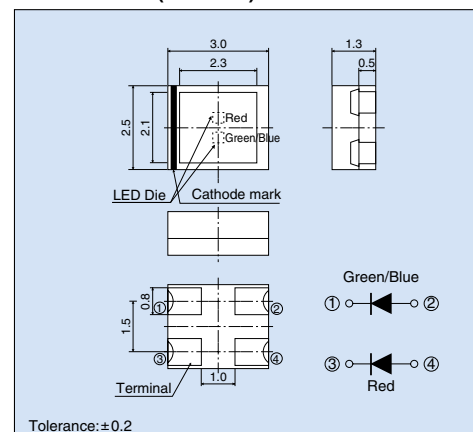
Absolute Maximum Ratings (Ta=25°C)

Part No.	Emitting color	Power dissipation Pd (mW)	Forward current IF (mA)	Peak forward current IFP (mA)	Reverse voltage VR (V)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
SML-020MVT	Green (Yellowish Green)	60	25	60 ^{*1}	4	-30 to +85	-40 to +85
	Red						
SML022BUT	Blue	120	30	80 ^{*2}	5	-30 to +85	-40 to +100
	Red	75					

*1: Duty ≤ 1/5, pulse width ≤ 1ms.

*2: Duty ≤ 1/10, 1kHz.

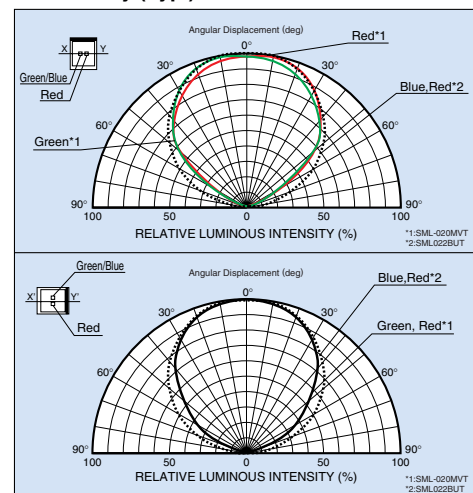
Dimensions (Unit:mm)



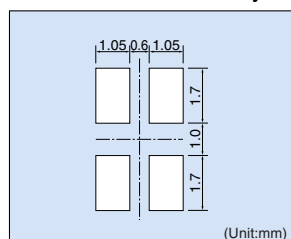
Electrical Optical Characteristics (Ta=25°C)

Part No.	Resin Color	Forward voltage VF		Reverse current IR		Light wavelength				Brightness Iv		
		Typ. (V)	IF (mA)	Max. (μA)	VR (V)	Dominant λD (nm)	Peak λp (nm)	Half-wave Δλ (nm)	IF (mA)	Min. (mcd)	Typ. (mcd)	IF (mA)
SML-020MVT	Transparent	2.2	20	100	4	—	570	40	20	9.0	20	20
	Colorless	2.0				—	650	—		3.6	6.3	
SML022BUT	Transparent	3.2	20	100	5	470	—	—	20	56	140	20
	Colorless	2.0				624	—	—		90	220	

Directivity (Typ.)

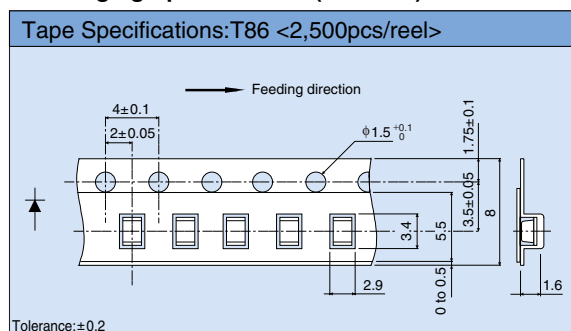


Recommended Pad Layout

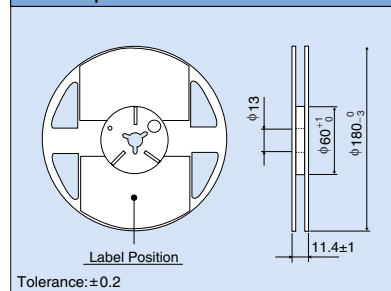


The recommended thickness of the screen mask for soldering is between 100 and 150μm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

Packaging Specifications (Unit:mm)

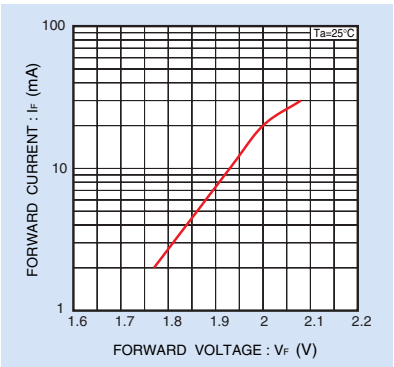
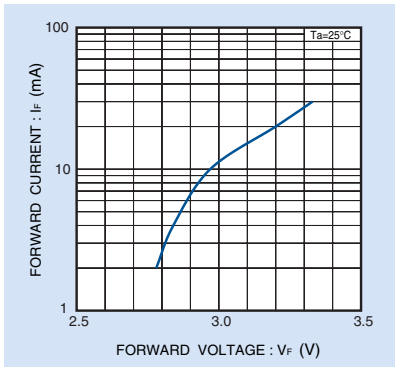


Reel Specifications



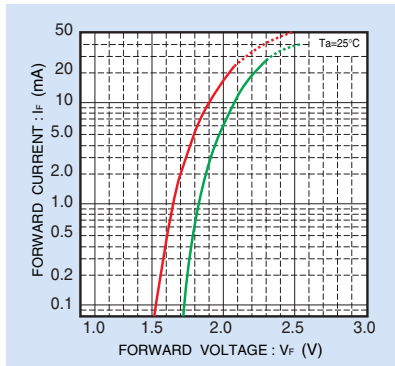
■ Electrical Characteristic Curves

Forward Current - Forward Voltage

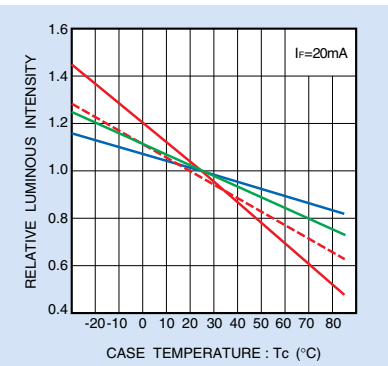


— SML022BUT <Blue>
 — SML022BUT <Red>

Relative Luminous Intensity - Case Temperature

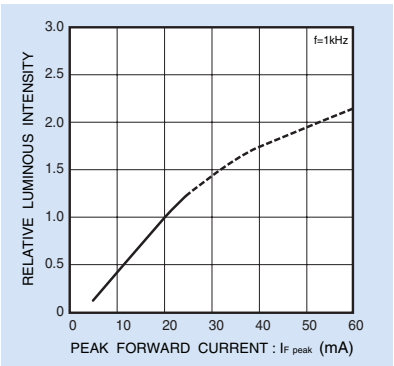
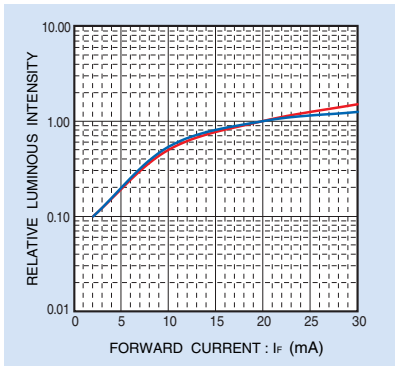


— SML-020MVT<Red>
 — SML-020MVT<Green>



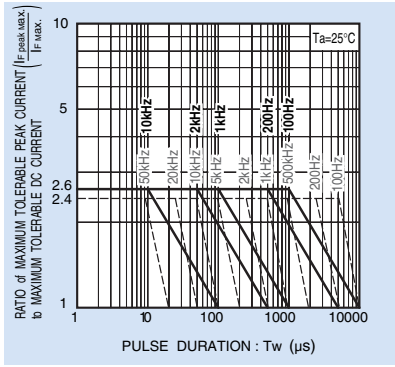
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 — SML022BUT <Red>
 - - SML-020MVT<Red>
 — SML-020MVT<Green>

Relative Luminous Intensity - Forward Current



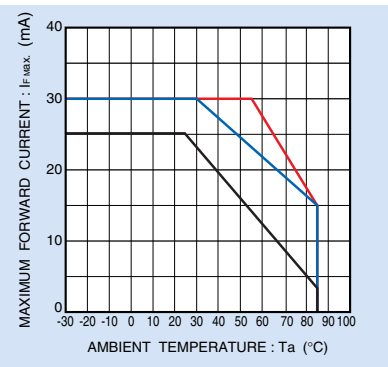
— SML022BUT <Blue>
 — SML022BUT <Red>
 — (SML-020MVT<Green>
 SML-020MVT<Red>)

Ratio of Maximum Tolerable Peak Current - Pulse Duration



— (SML022BUT <Blue>
 SML022BUT <Red>
 - - (SML-020MVT<Green>
 SML-020MVT<Red>)

Derating



— SML022BUT <Blue>
 — SML022BUT <Red>
 — (SML-020MVT<Green>
 SML-020MVT<Red>)

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