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

SML-02∗ Series

Emitting Color / Material	Part No.		Blue InGaN on SiC	Green(Yellowish Green) GaP	Red GaAsP on GaP	Red AlGaInP on GaAs
Package Size(mm)  3025(1210) 3.0×2.5(t=1.3)	SML-020MVT			○	○	
	SML022BUT		○			○

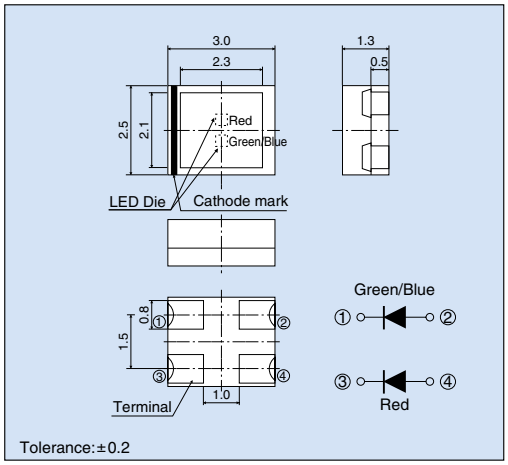
note) "-" will be taken out for emitting color B/E series.

■Absolute Maximum Ratings (Ta=25°C)

Part No.	Emitting color	Power dissipation P_D (mW)	Forward current I_F (mA)	Peak forward current I_{FP} (mA)	Reverse voltage V_R (V)	Operating temperature T_{opr} (°C)	Storage temperature T_{stg} (°C)
SML-020MVT	Green (Yellowish Green)	60	25	60*1	4	-30 to +85	-40 to +85
	Red						
SML022BUT	Blue	80	30	80*2	5		-40 to +100
	Red	50					

∗1: Duty ≦ 1/5, pulse width≦1ms. ∗2: Duty ≦ 1/10, 1kHz.

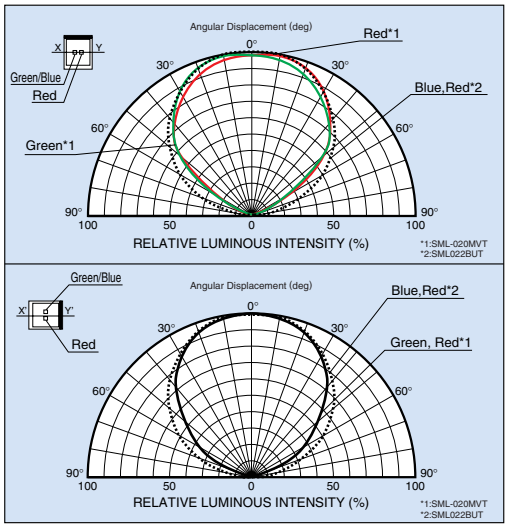
■Dimensions (Unit:mm)



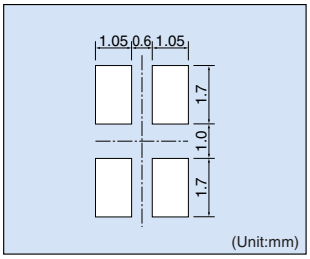
■Electrical Optical Characteristics (Ta=25°C)

Part No.	Resin Color	Forward voltage V_F Typ. (V)	I_F (mA)	Reverse current I_R Max. (μA)	V_R (V)	Light wavelength Dominant λD Typ. (nm)	Peak λp Typ. (nm)	Half-wave Δλ Typ. (nm)	I_F (mA)	Brightness Iv Min. (mcd)	Typ. (mcd)	I_F (mA)
SML-020MVT	Transparent Colorless	2.2	20	100	4	—	570	40	20	9.0	20	20
		2.0				—	650			3.6	6.3	
SML022BUT	Transparent Colorless	3.2			5	470	—	—		56	140	
		2.0				620	—	—		90	250	

■Directivity (Typ.)



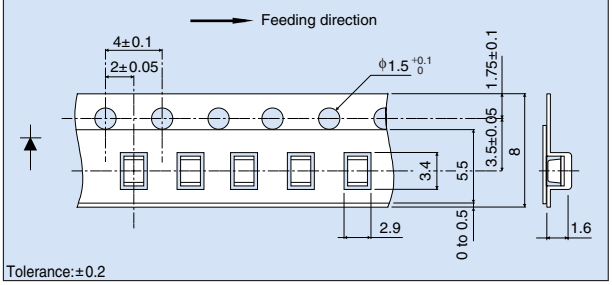
■Recommended Pad Layout



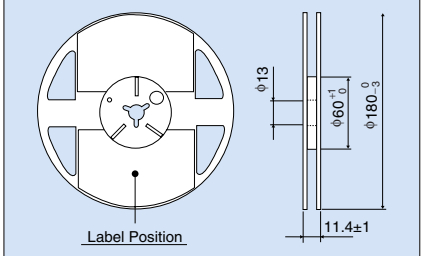
The recommended thickness of the screen mask for soldering is between 100 and 150μm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

■Packaging Specifications (Unit:mm)

Tape Specifications:T86 <2,500pcs/reel>



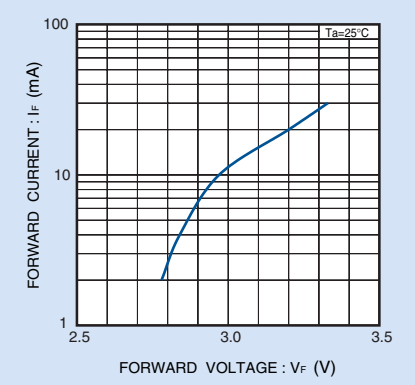
Reel Specifications

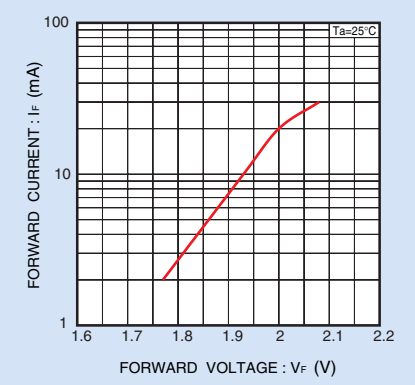


Rev.D

■Electrical Characteristic Curves

Forward Current - Forward Voltage





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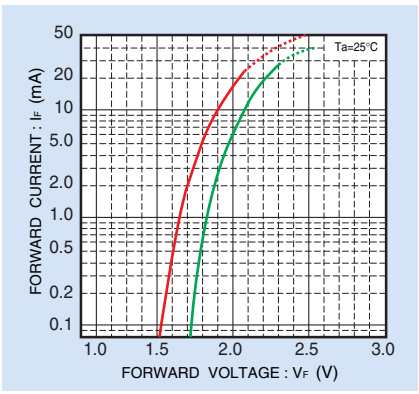
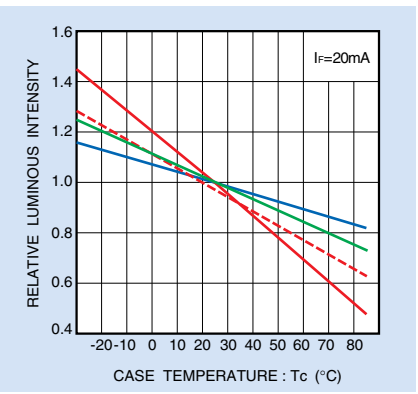


SML-020MVT<Red>
SML-020MVT<Green>

Relative Luminous Intensity - Case Temperature



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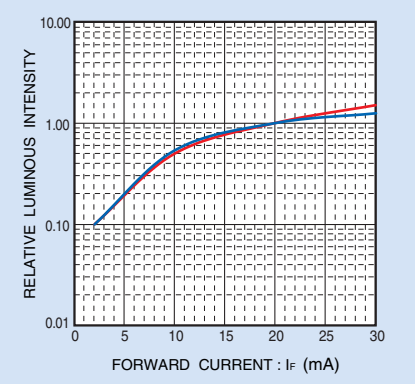
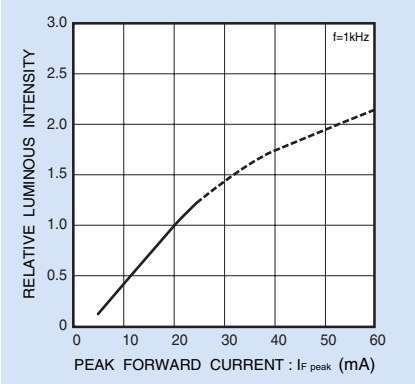
SML022BUT <Red>
SML-020MVT<Red>
SML-020MVT<Green>

Relative Luminous Intensity - Forward Current





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SML-020MVT<Green>
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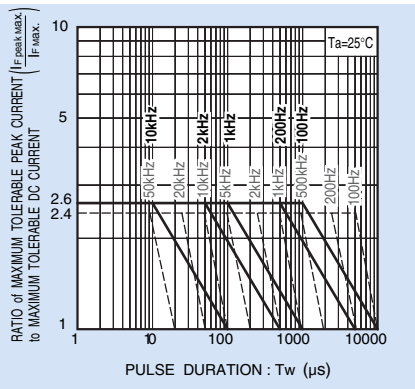
Ratio of Maximum Tolerable Peak Current - Pulse Duration



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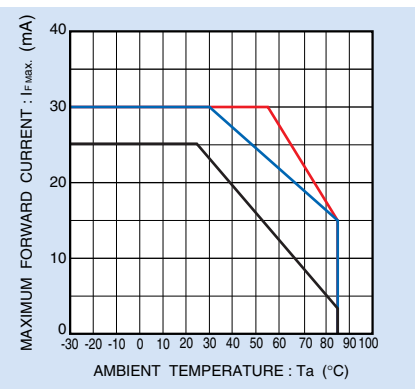
Derating



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

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Contact us : webmaster@rohm.co.jp

ROHM CO., LTD. 21, Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan
TEL : +81-75-311-2121
FAX : +81-75-315-0172