

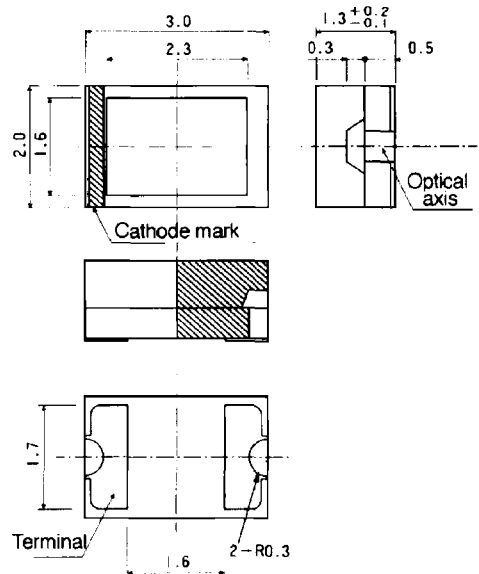
The SML-010 series LEDs are small, high luminance single color chip LEDs with reflectors.

Features

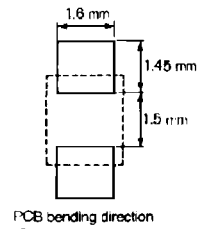
- single LED per package
- transparent lens
- small, leadless structure allowing high density mounting
- include an internal reflector to enhance luminance
- available in bright red, red, orange, yellow, green, and bright green
- available on tape for mounting by an automatic machine

Note: For special procedures and cautions when using these LEDs, please refer to the Introduction to this data book.

Dimensions (Units : mm)



LAND PATTERN



Selection guide

	Red	Orange	Yellow	Green
Part no.	SML-010LT	SML-010DT	SML-010YT	SML-010MT
Color & wavelength	bright red 660 nm	orange 610 nm	yellow 585 nm	green 563 nm
Lens	Transparent clear	Transparent clear	Transparent clear	Transparent clear
Availability	standard	standard	semi-standard	standard
Part no.	SML-010VT			SML-010PT
Color & wavelength	red 650 nm			pure green 555 nm
Lens	Transparent clear			Transparent clear
Availability	standard			semi-standard

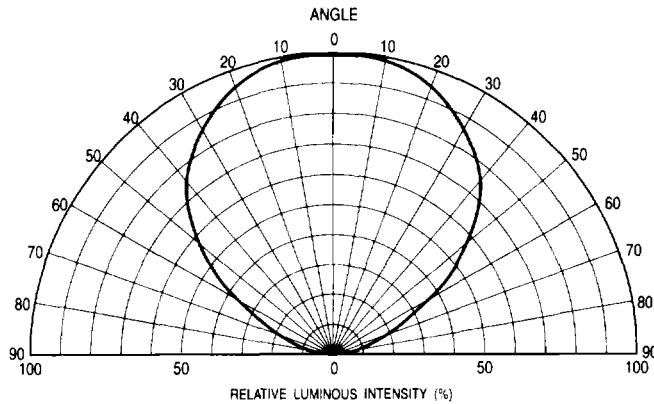
Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits		Unit	Conditions
		L type	Other		
Power dissipation	P_d	75	70	mW	
Forward current	I_F	30	25	mA	
Peak forward current	I_{FP}	75	60	mA	Pulse width 1 ms, duty 20%
Reverse voltage	V_R	4		V	
Operating temperature	T_{opr}	-30 ~ +85		$^\circ\text{C}$	
Storage temperature	T_{stg}	-40 ~ +85		$^\circ\text{C}$	

Electro-optical characteristics ($T_a = 25^\circ\text{C}$)

Part no.	Color	Forward voltage			Reverse current		Luminous intensity			Peak wavelength		Spectral half-width	
		V_F (V)		Cond	I_R (μA) Max	Cond	I_V (mcd)		Cond	λ_p (nm) TYP	Cond	$\Delta\lambda$ (nm) TYP	Cond
		Typ	Max	I_F (mA)			V_R (V)	Min					
SML-010LT	Bright red	1.75	2.5	20	100	4	5.6	16.0	20	660	20	25	20
SML-010VT	Red	2.0	2.8	20	100	4	2.2	6.3	20	650	20	40	20
SML-010DT	Orange	2.0	2.8	20	100	4	3.6	10.0	20	610	20	40	20
SML-010YT	Yellow	2.1	2.8	20	100	4	2.2	6.3	20	585	20	40	20
SML-010MT	Green	2.2	2.8	20	100	4	5.6	16.0	20	563	20	40	20
SML-010PT	Pure green	2.2	2.8	20	100	4	1.6	4.0	20	555	20	40	20

Directional pattern



Electrical characteristic curves for SML-010LT

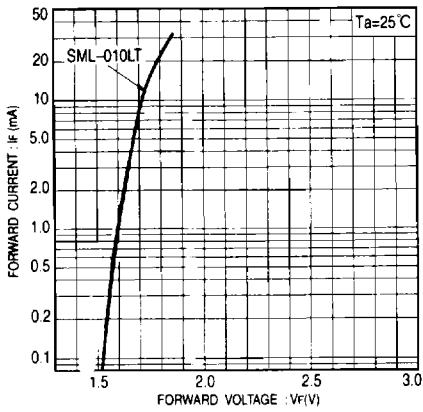


Figure 1

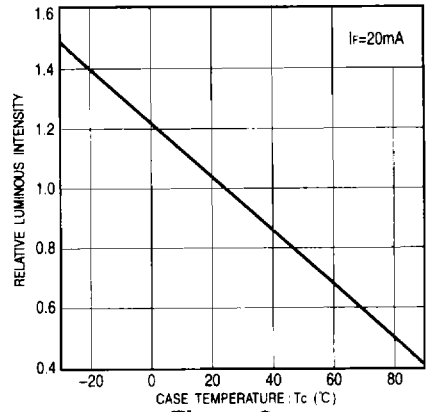


Figure 2

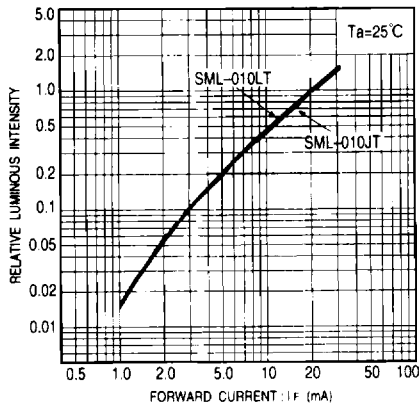


Figure 3

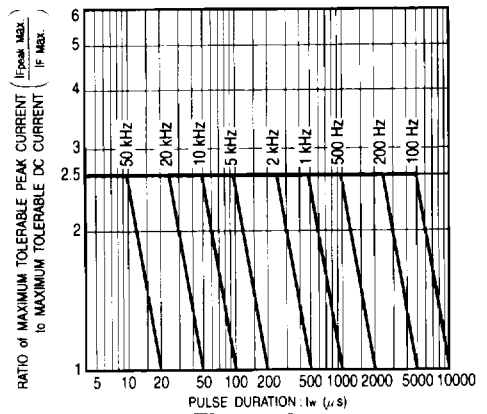


Figure 4

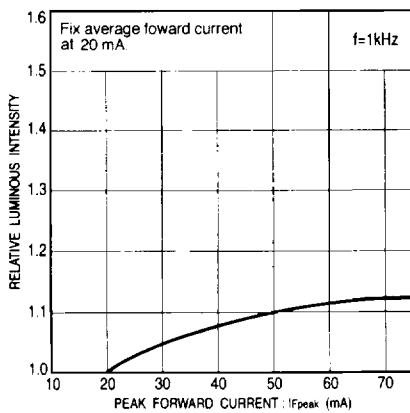


Figure 5

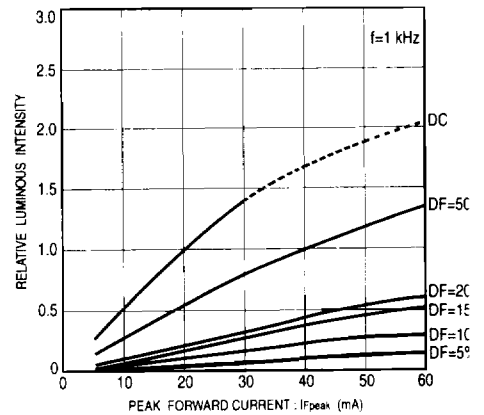


Figure 6

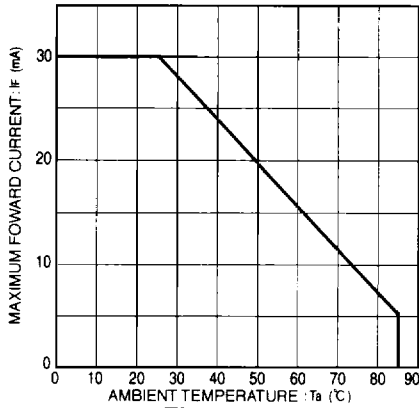


Figure 7

Electrical characteristic curves for SML-010VT

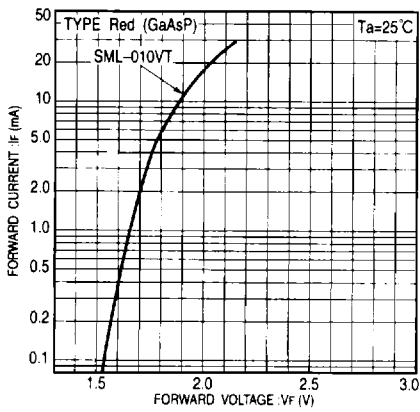


Figure 8

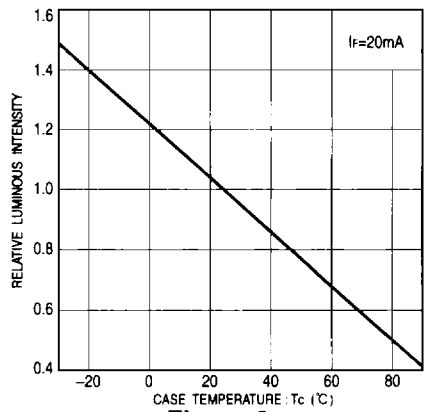


Figure 9

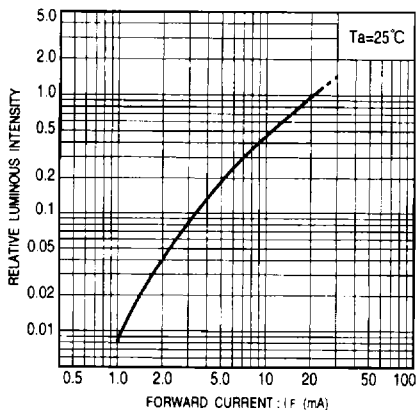


Figure 10

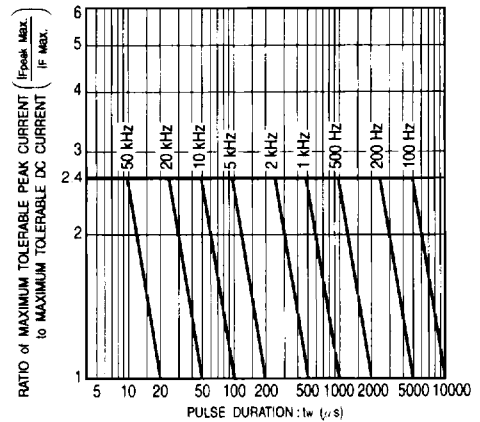


Figure 11

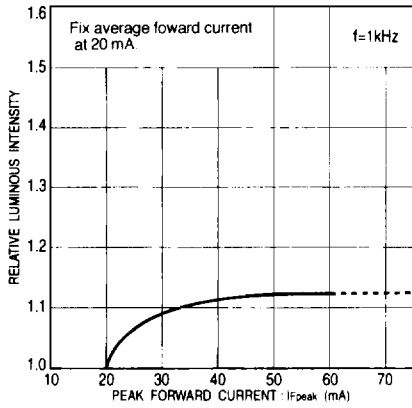


Figure 12

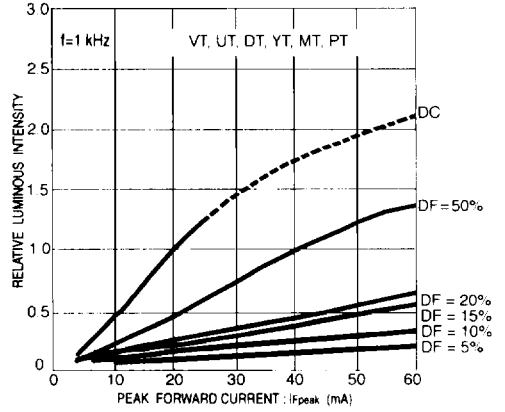


Figure 13

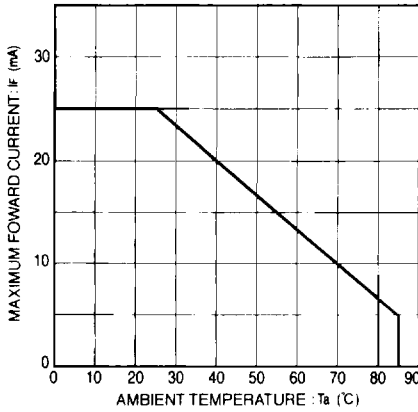


Figure 14

Electrical characteristic curves for SML-010DT

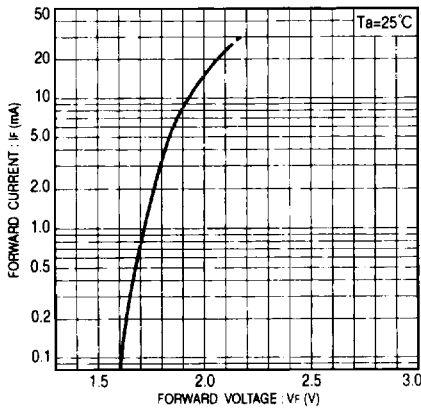


Figure 15

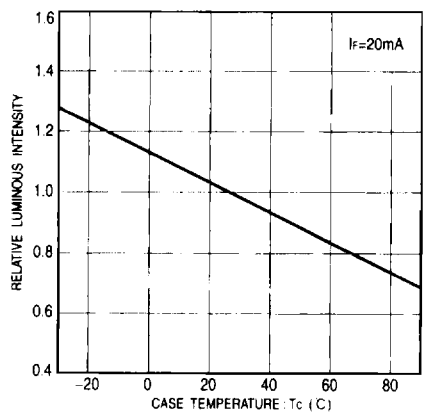


Figure 16

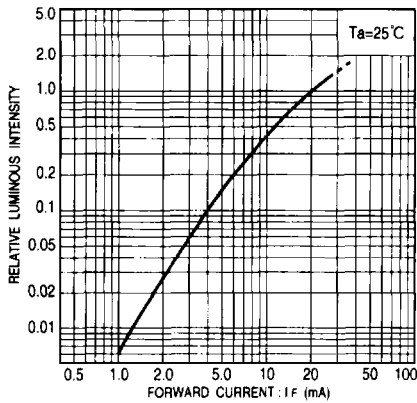


Figure 17

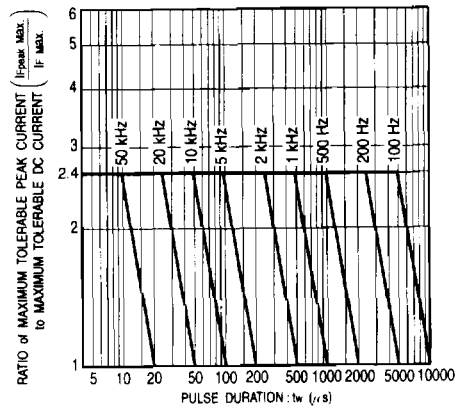


Figure 18

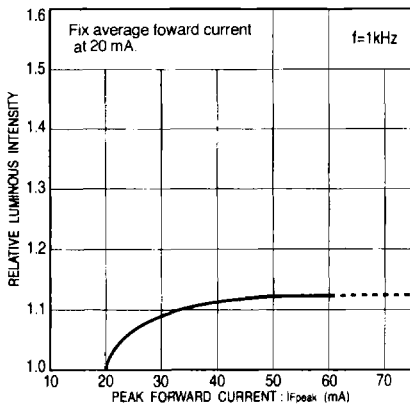


Figure 19

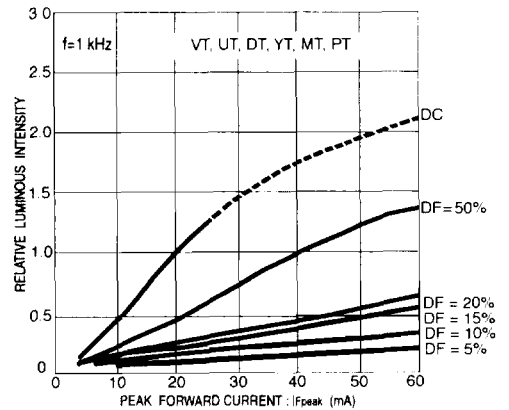


Figure 20

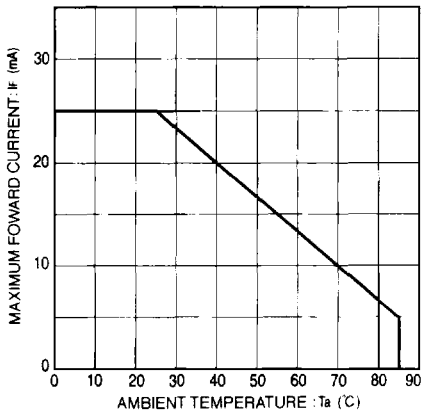


Figure 21

Electrical characteristic curves for SML-010MT and SML-010PT

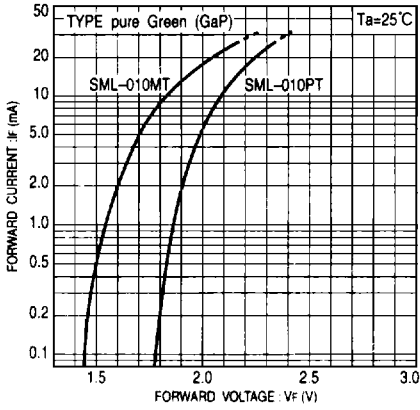


Figure 22

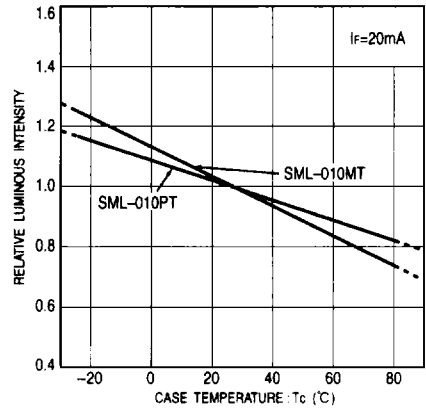


Figure 23

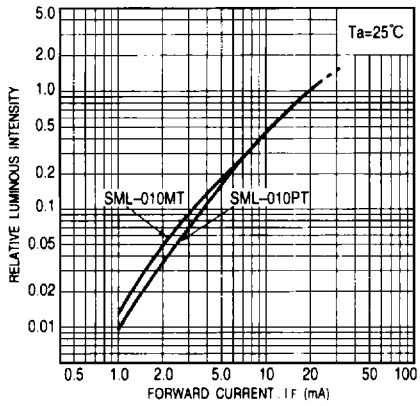


Figure 24

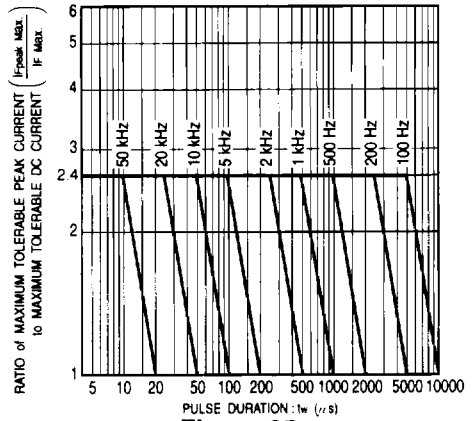


Figure 25

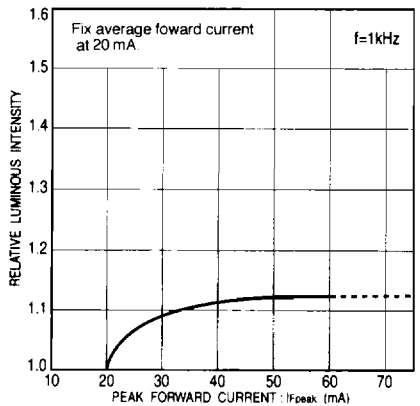


Figure 26

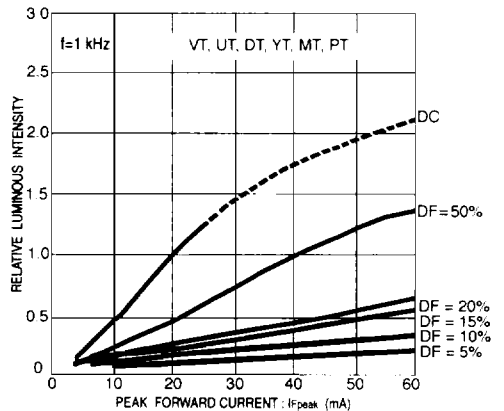


Figure 27

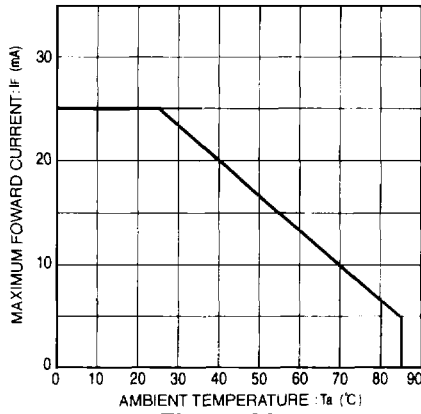


Figure 28