

High luminance, small LEDs ($\phi 5.0$ mm)

SLA-560 / SLA-570 / SLA-580 Series

The SLA-560, SLA-570 and SLA-580 series are high luminance LEDs which give you a choice of narrow to wide viewing angles. Two red types and one green type are available in three packages for a total of nine different types, and they suitable for use in a wide variety of applications.

●Features

- 1) Very bright.
- 2) Ideal for outdoor and semi-outdoor applications.
- 3) High reliability.

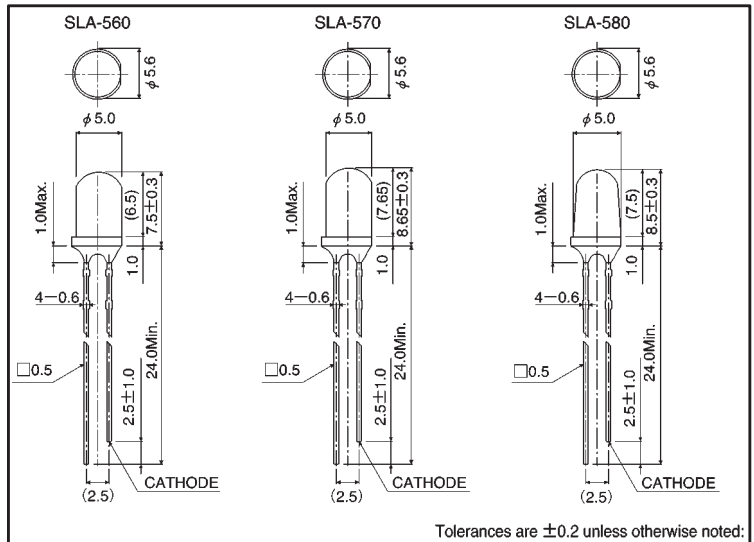
●Selection guide

Lens	Chip	Single-hetero GaAlAs (red)	Double-hetero GaAlAs (red)	GaP (green)
	Narrow type		SLA-580LT	SLA-580JT
Medium viewing type		SLA-570LT	SLA-570JT	SLA-570MT
Wide viewing type		SLA-560LT	SLA-560JT	SLA-560MT

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Red	Green	Unit
		SLA-560LT / JT SLA-570LT / JT SLA-580LT / JT	SLA-560MT SLA-570MT SLA-580MT	
Power dissipation	P _D	100	75	mW
Forward current	I _F	50	25	mA
Peak forward current	I _{FP}	75	60	mA
Reverse voltage	V _R	4	4	V
Operating temperature	T _{opr}	-25~+85		°C
Storage temperature	T _{stg}	-30~+100		°C
Soldering temperature	—	260°C 5 seconds maximum		—

●External dimensions (Units: mm)



●Electrical and optical characteristics (Ta = 25°C)

Parameter	Symbol	Conditions	Red			Green			Unit			
			Min.	Typ.	Max.	Min.	Typ.	Max.				
Forward voltage	V_F	$I_F=20mA$	—	1.75	2.5	—	2.3	3.0	V			
Reverse current	I_R	$V_R=4V$	—	—	100	—	—	10	μA			
Peak wavelength	λ_P	$I_F=20mA$	—	660	—	—	563	—	nm			
Spectral line half width	$\Delta \lambda$	$I_F=20mA$	—	25	—	—	40	—	nm			
Viewing angle	SLA-560	$2\theta_{1/2}$	—	—	—	—	—	—	deg			
	SLA-570									40	25	10
	SLA-580									25	10	10

●Luminous intensity vs. wavelength

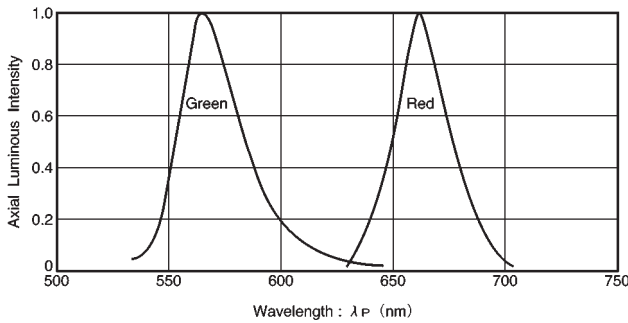


Fig.1

●Luminous intensity

Color	λ_P	Type	Min.	Typ.	Max.	Unit
Red	660	SLA-560JT	200	470	—	mcd
		SLA-560LT	42	100	—	mcd
		SLA-570JT	420	1000	—	mcd
		SLA-570LT	90	220	—	mcd
		SLA-580JT	420	1500	—	mcd
		SLA-580LT	200	600	—	mcd
Green	563	SLA-560MT	42	100	—	mcd
		SLA-570MT	135	400	—	mcd
		SLA-580MT	200	600	—	mcd

Note: Measured at $I_F = 10\text{ mA}$

●Directional pattern

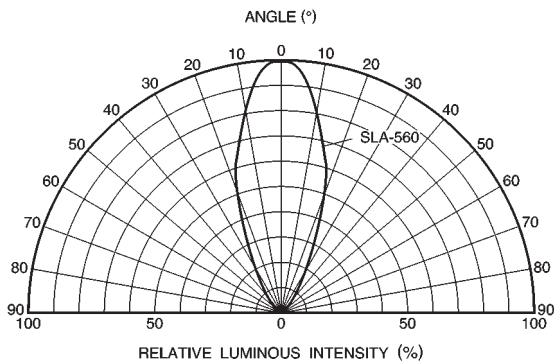


Fig. 2 SLA-560 Directional pattern

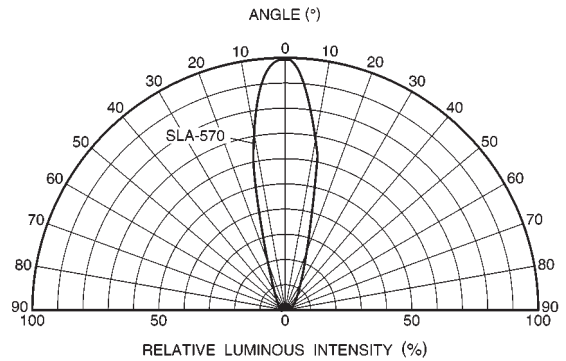


Fig. 3 SLA-570 Directional pattern

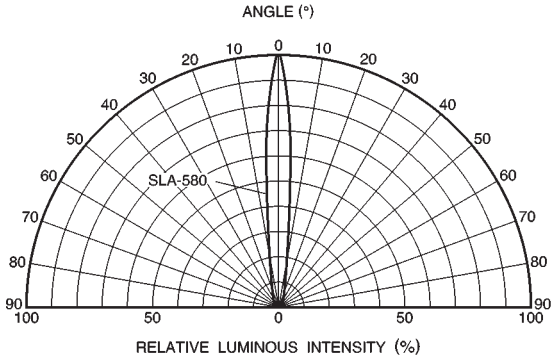


Fig. 4 SLA-580 Directional pattern

● Electrical characteristic curves 1 (red)

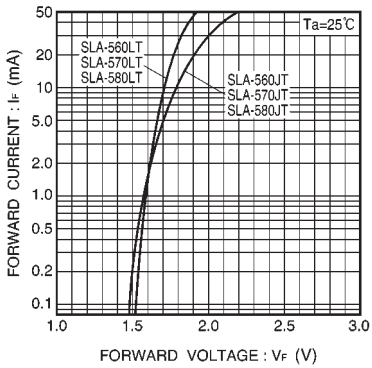


Fig. 5 Forward current vs. forward voltage

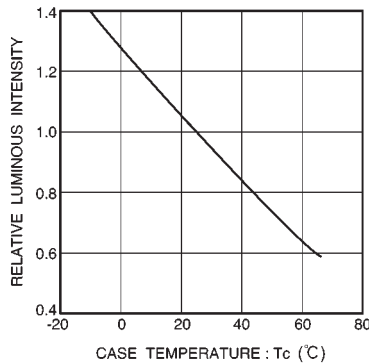


Fig. 6 Luminous intensity vs. case temperature

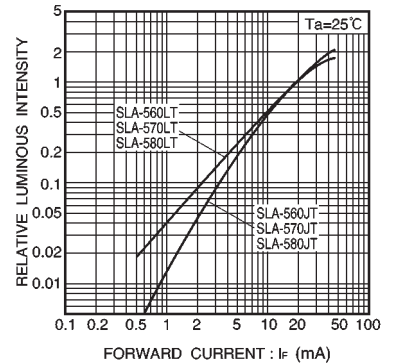


Fig. 7 Luminous intensity vs. forward current

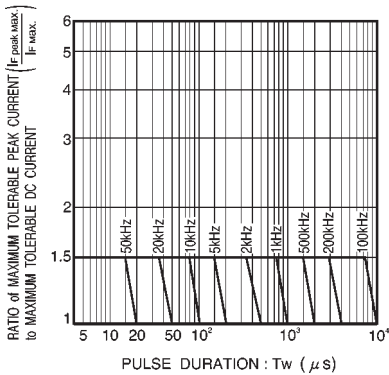


Fig. 8 Maximum tolerable peak current vs. pulse duration

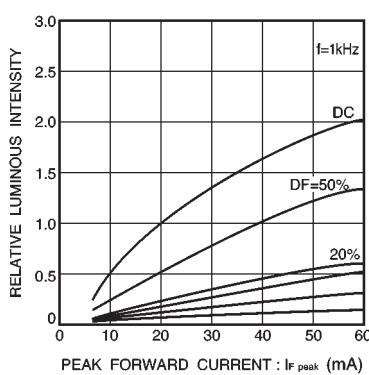


Fig. 9 Luminous intensity vs. peak forward current

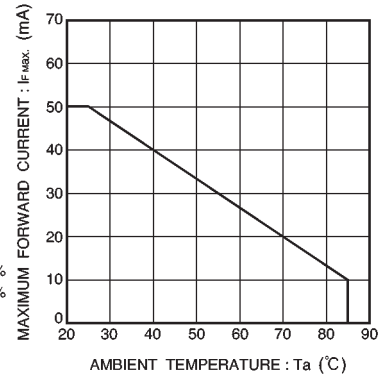


Fig. 10 Maximum forward current vs. ambient temperature

● Electrical characteristic curves 2 (green)

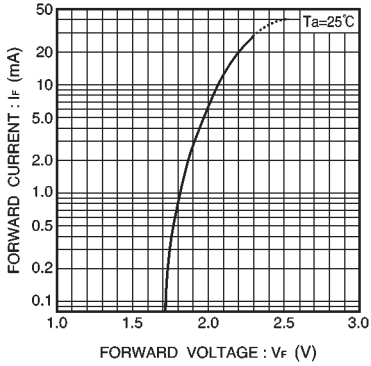


Fig. 11 Forward current vs. forward voltage

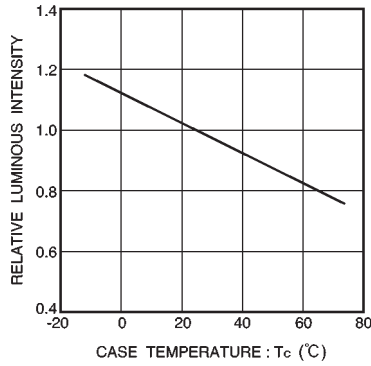


Fig. 12 Luminous intensity vs. case temperature

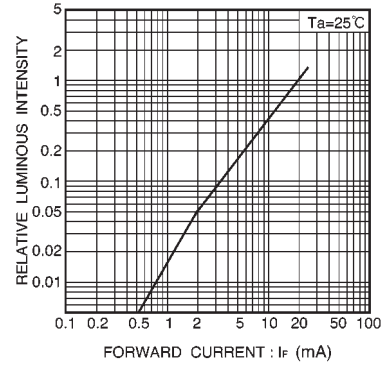


Fig. 13 Luminous intensity vs. forward current

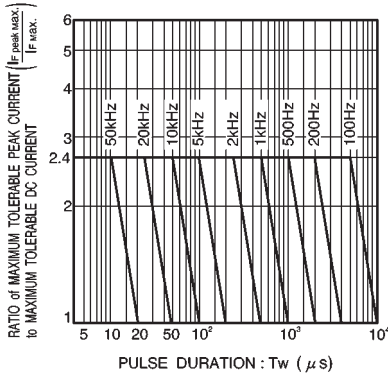


Fig. 14 Maximum tolerable peak current vs. pulse duration

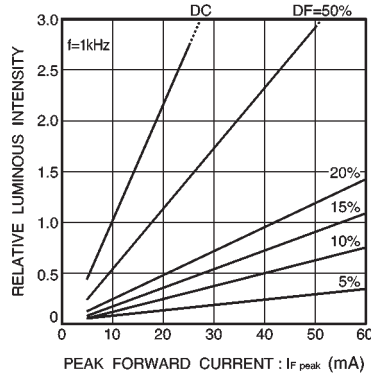


Fig. 15 Luminous intensity vs. peak forward current

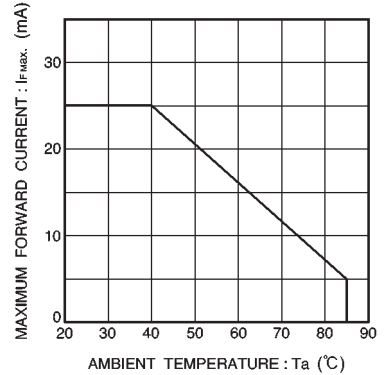


Fig. 16 Maximum forward current vs. ambient temperature