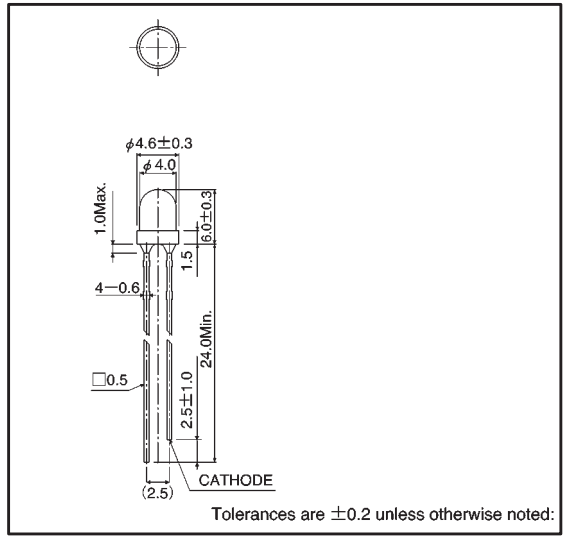
Reflecting LEDs (ϕ4.0 mm)

SLR-40 Series

The SLR-40 series are small ϕ4 mm LEDs with a high luminous efficiency. Two colors and two lens types are available for a total of four types, and they are suitable for use in a wide variety of applications.

●External dimensions (Units: mm)



●Features

1) High luminosity (with reflectors).
2) Four colors : red, orange, yellow and green.
3) Two lens types : colored diffused and colored clear.
4) Epoxy resin package with a diameter of 4 mm.
5) High reliability.

●Selection guide

Lens \ Emitting color	Red	Orange	Yellow	Green
Colored diffused	SLR-40VR	SLR-40DU	SLR-40YY	SLR-40MG
Colored clear	SLR-40VC	SLR-40DC	SLR-40YC	SLR-40MC

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		SLR-40VR SLR-40VC	SLR-40DU SLR-40DC	SLR-40YY SLR-40YC	SLR-40MG SLR-40MC	
Power dissipation	P_D	60	60	60	75	mW
Forward current	I_F	20	20	20	25	mA
Peak forward current	I_{FP}	60*	60*	60*	60*	mA
Reverse voltage	V_R	3	3	3	3	V
Operating temperature	Topr	−25～+85				℃
Storage temperature	Tstg	−30～+100				℃
Soldering temperature	—	260℃ 5seconds maximum				—

✻ Pulse width 1ms Duty 1 / 5

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

Parameter	Symbol	Conditions	Red			Orange			Yellow			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V_F	I_F=10mA	—	2.0	3.0	—	2.0	3.0	—	2.1	3.0	—	2.1	3.0	V
Reverse current	I_R	V_R=3V	—	—	10	—	—	10	—	—	10	—	—	10	μA
Peak wavelength	λ_P	I_F=10mA	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	I_F=10mA	—	40	—	—	40	—	—	40	—	—	40	—	nm
Viewing angle	$2\theta_{1/2}$	Transparent	—	40	—	—	40	—	—	40	—	—	40	—	deg
		Diffused	—	35	—	—	35	—	—	35	—	—	35	—	

●Luminous intensity vs. wavelength

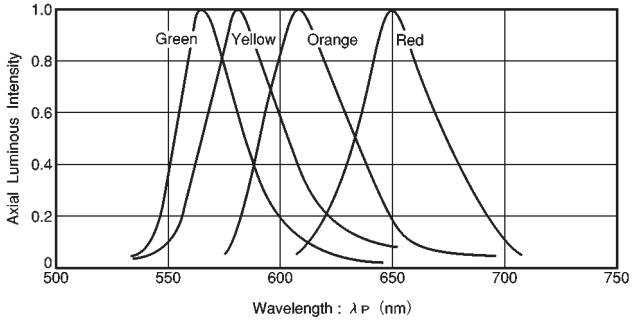


Fig.1

●Luminous intensity

Color	λ_P	Type	Min.	Typ.	Max.	Unit
Red	650	SLR-40VR	3.6	10	—	mcd
		SLR-40VC	5.6	16.0	—	mcd
Orange	610	SLR-40DU	3.6	10	—	mcd
		SLR-40DC	5.6	16.0	—	mcd
Yellow	585	SLR-40YY	2.2	6.3	—	mcd
		SLR-40YC	5.6	16.0	—	mcd
Green	563	SLR-40MG	5.6	16.0	—	mcd
		SLR-40MC	9.0	25.0	—	mcd

Note: Measured at I_F = 10 mA

●Directional pattern

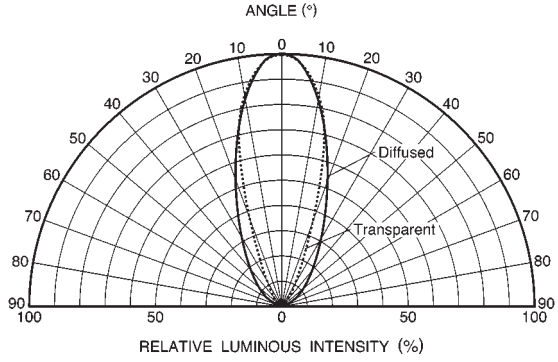


Fig. 2

●Electrical characteristic curves 1 (red)

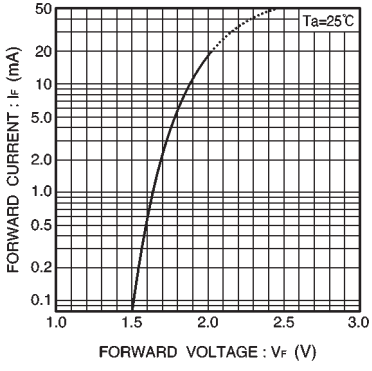


Fig. 3 Forward current vs. forward voltage

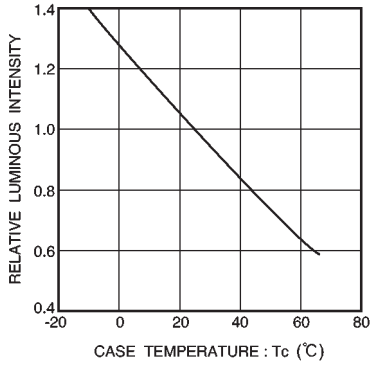


Fig. 4 Luminous intensity vs. case temperature

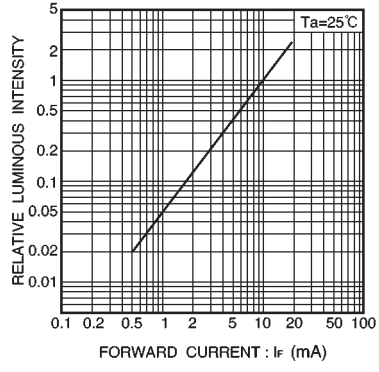


Fig. 5 Luminous intensity vs. forward current

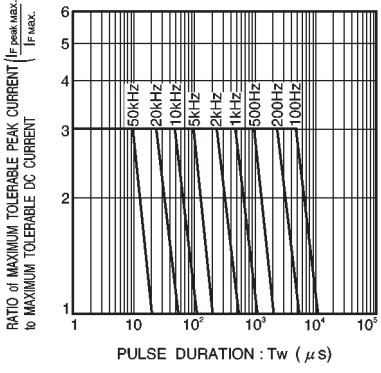


Fig. 6 Maximum tolerable peak current vs. pulse duration

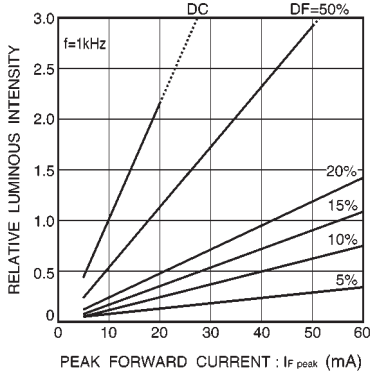


Fig. 7 Luminous intensity vs. peak forward current

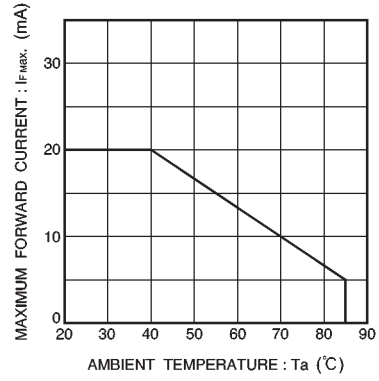


Fig. 8 Maximum forward current vs. ambient temperature

●Electrical characteristic curves 2 (orange)

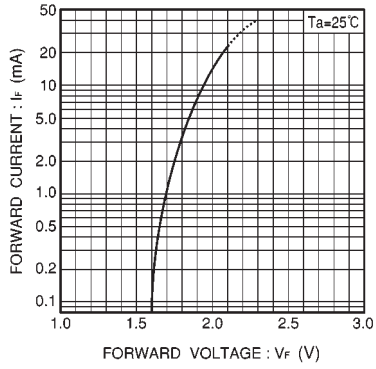


Fig.9 Forward current vs. forward voltage

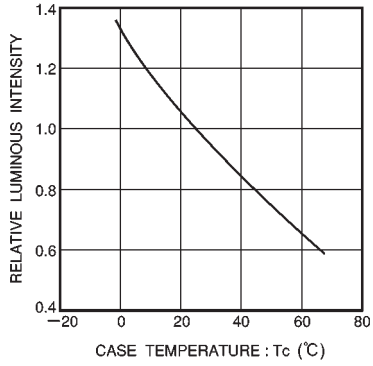


Fig.10 Luminous intensity vs. case temperature

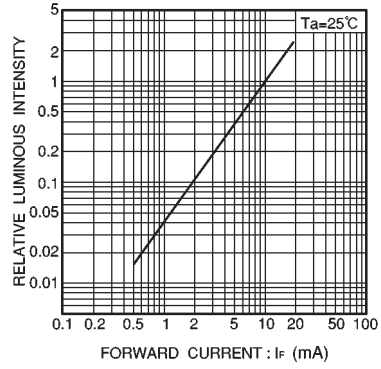


Fig.11 Luminous intensity vs. forward current

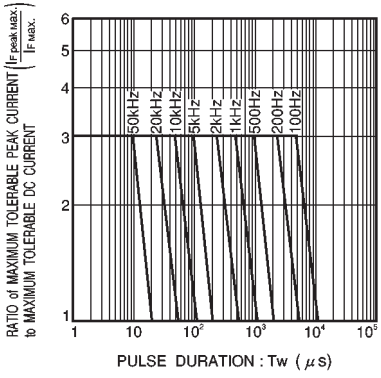


Fig.12 Maximum tolerable peak current vs. pulse duration

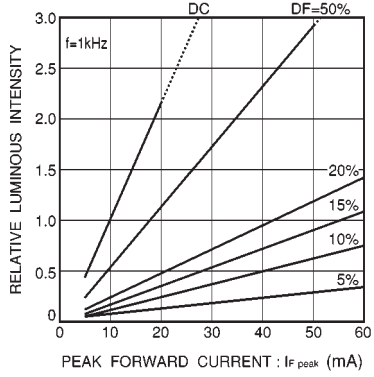


Fig.13 Luminous intensity vs. peak forward current

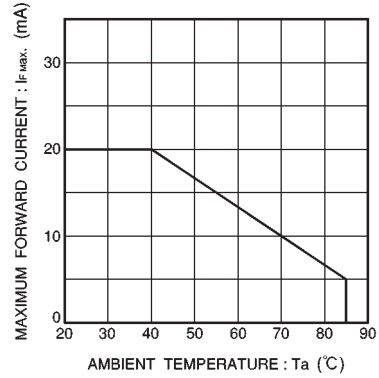


Fig.14 Maximum forward current vs. ambient temperature

●Electrical characteristic curves 3 (yellow)

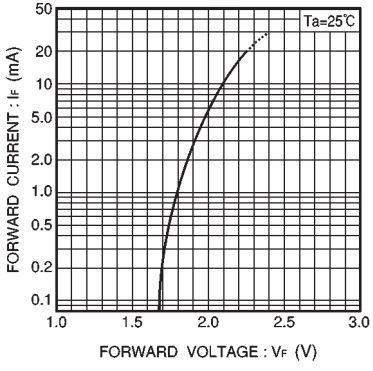


Fig.15 Forward current vs. forward voltage

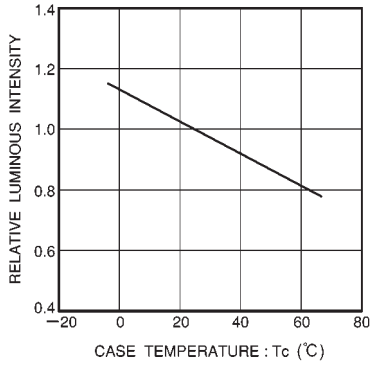


Fig.16 Luminous intensity vs. case temperature

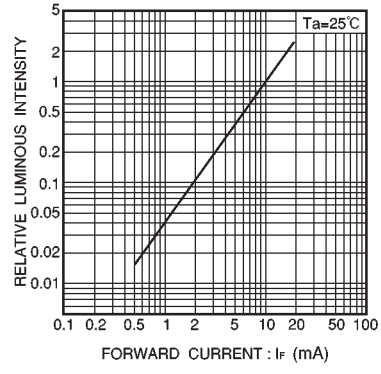


Fig.17 Luminous intensity vs. forward current

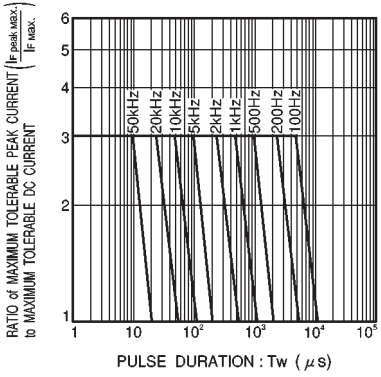


Fig.18 Maximum tolerable peak current vs. pulse duration

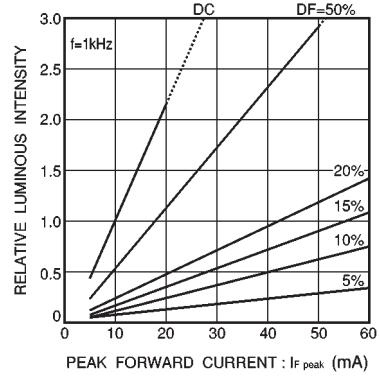


Fig.19 Luminous intensity vs. peak forward current

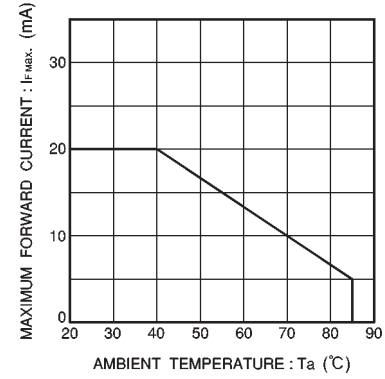


Fig.20 Maximum forward current vs. ambient temperature

●Electrical characteristic curves 4 (green)

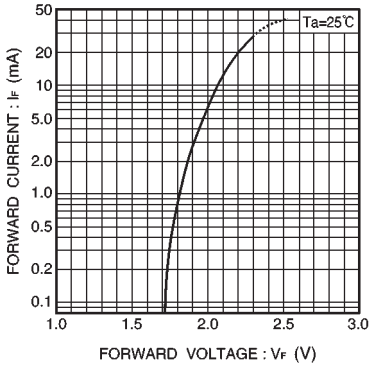


Fig. 21 Forward current vs. forward voltage

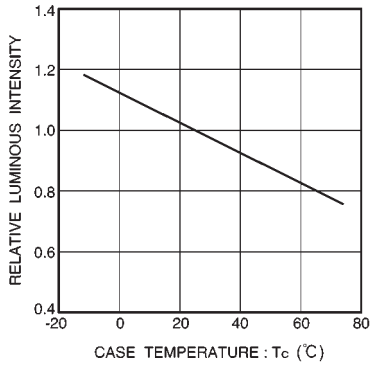


Fig. 22 Luminous intensity vs. case temperature

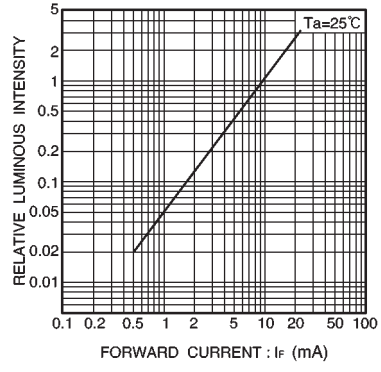


Fig. 23 Luminous intensity vs. forward current

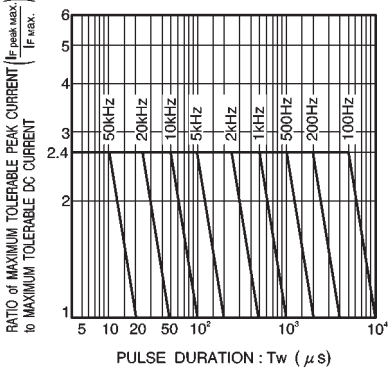


Fig. 24 Maximum tolerable peak current vs. pulse duration

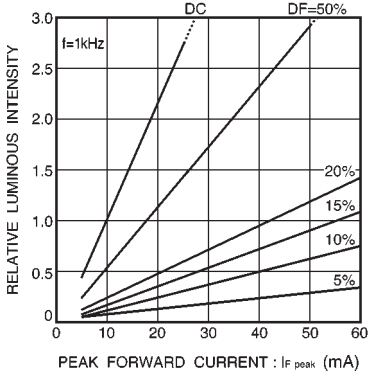


Fig. 25 Luminous intensity vs. peak forward current

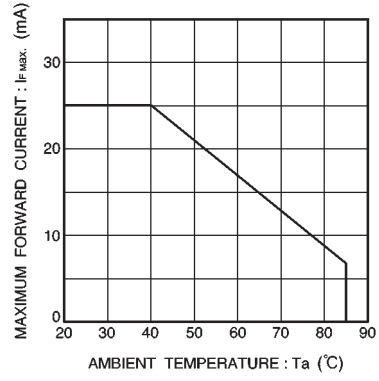


Fig. 26 Maximum forward current vs. ambient temperature