

Rectangular LEDs (2 × 4 mm)

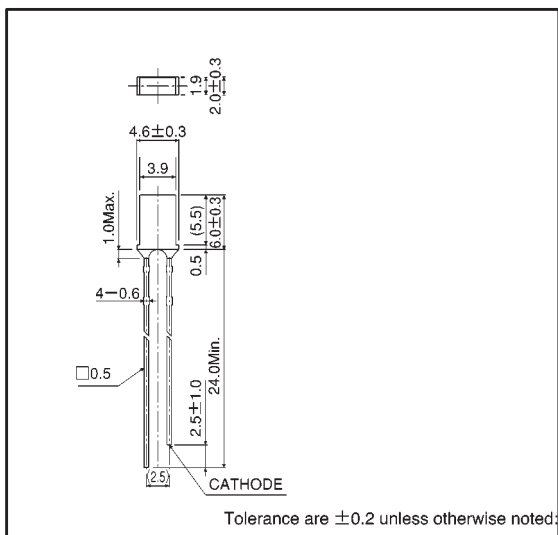
SLB-24 Series

The SLB-24 series are 2 × 4 mm rectangular LEDs with a high luminous efficiency. They are available in four colors and are suitable for use in a wide variety of applications.

●Features

- 1) Rectangular, planar light emission (2 × 4 mm).
- 2) Uniform light emission with no irregularities.
- 3) Four colors : red, orange, yellow and green.
- 4) Colored diffused lens.
- 5) High reliability.

●External dimensions (Units: mm)



●Selection guide

Emitting color	Red	Orange	Yellow	Green
Lens				
Colored diffused	SLB-24VR	SLB-24DU	SLB-24YY	SLB-24MG

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Red	Orange	Yellow	Green	Unit
		SLB-24VR	SLB-24DU	SLB-24YY	SLB-24MG	
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	T _{opr}	-25~+85				°C
Storage temperature	T _{stg}	-30~+100				°C
Soldering temperature	—	260°C 5 seconds 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	$I_F=10\text{mA}$	—	2.0	3.0	—	2.0	3.0	—	2.1	3.0	—	2.1	3.0	V
Reverse current	I_R	$V_R=3\text{V}$	—	—	10	—	—	10	—	—	10	—	—	10	μA
Peak wavelength	λ_P	$I_F=10\text{mA}$	—	650	—	—	610	—	—	585	—	—	563	—	nm
Spectral line half width	$\Delta\lambda$	$I_F=10\text{mA}$	—	40	—	—	40	—	—	40	—	—	40	—	nm
Viewing angle	$2\theta_{1/2}$	Diffused	—	150	—	—	150	—	—	150	—	—	150	—	deg

●Luminous intensity vs. wavelength

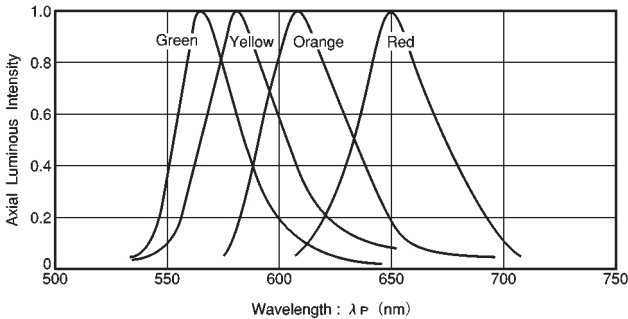


Fig.1

●Luminous intensity

Color	λ_P	Type	Min.	Typ.	Max.	Unit
Red	650	SLB-24VR	0.22	0.63	—	mcd
Orange	610	SLB-24DU	0.22	0.63	—	mcd
Yellow	585	SLB-24YY	0.22	0.63	—	mcd
Green	563	SLB-24MG	0.56	1.6	—	mcd

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

●Directional pattern

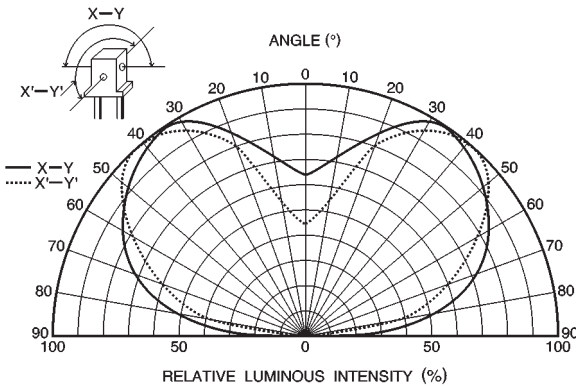


Fig. 2 Diffused type

●Electrical characteristic curves 1 (red)

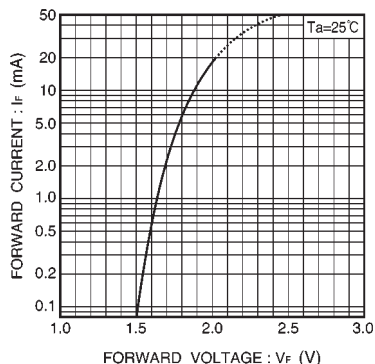


Fig. 3 Forward current vs. forward voltage

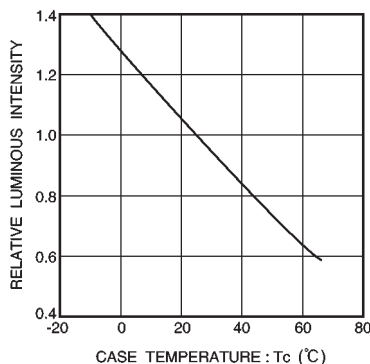


Fig. 4 Luminous intensity vs. case temperature

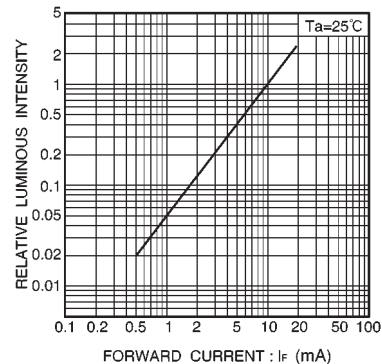


Fig. 5 Luminous intensity vs. forward current

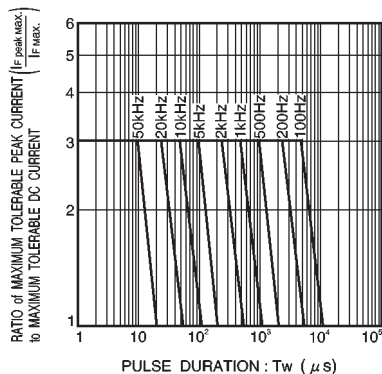


Fig. 6 Maximum tolerable peak current vs. pulse duration

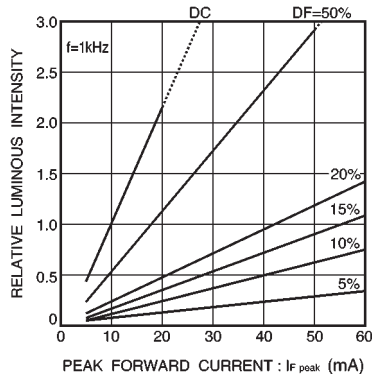


Fig. 7 Luminous intensity vs. peak forward current

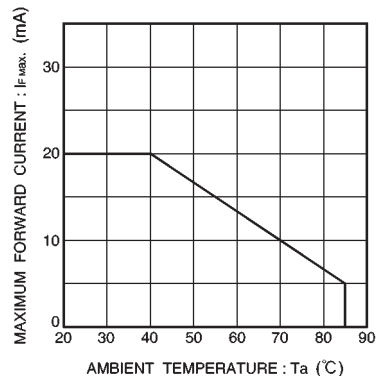


Fig. 8 Maximum forward current vs. ambient temperature

●Electrical characteristic curves 2 (orange)

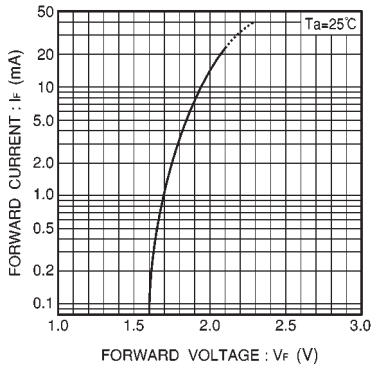


Fig.9 Forward current
vs. forward voltage

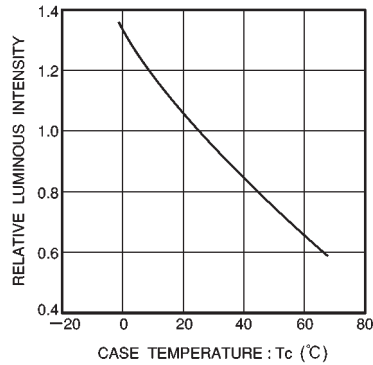


Fig.10 Luminous intensity
vs. case temperature

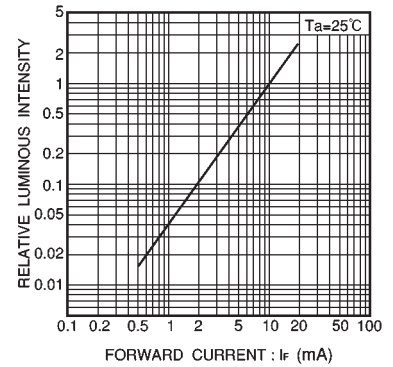


Fig.11 Luminous intensity
vs. forward current

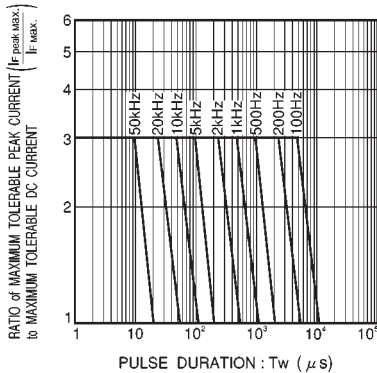


Fig.12 Maximum tolerable peak current
vs. pulse duration

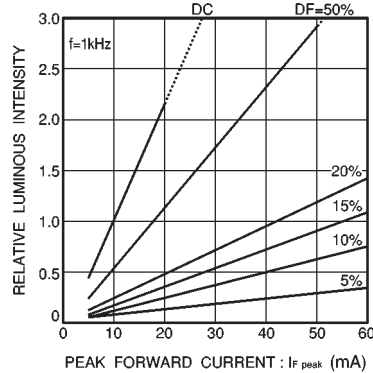


Fig.13 Luminous intensity
vs. peak forward current

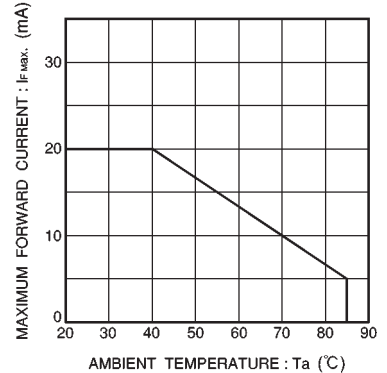


Fig.14 Maximum forward current
vs. ambient temperature

●Electrical characteristic curves 3 (yellow)

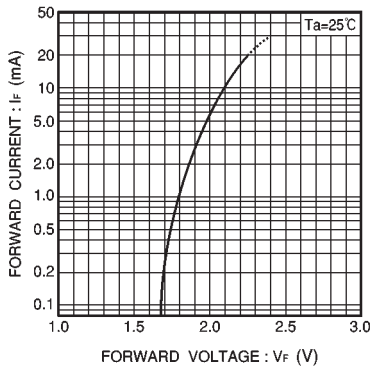


Fig.15 Forward current
vs. forward voltage

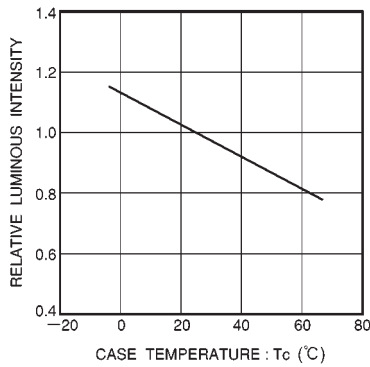


Fig.16 Luminous intensity
vs. case temperature

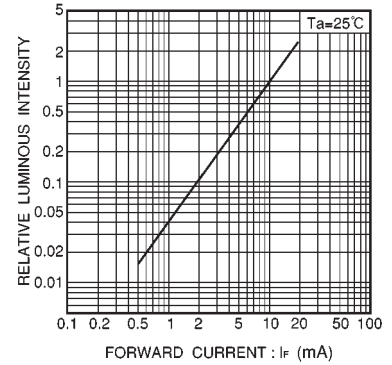


Fig.17 Luminous intensity
vs. forward current

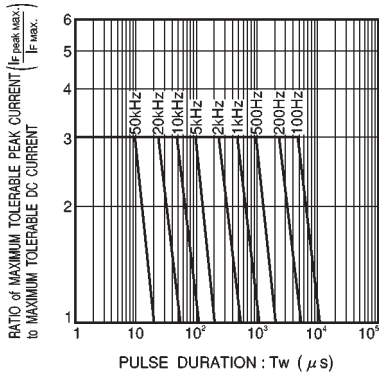


Fig.18 Maximum tolerable peak current
vs. pulse duration

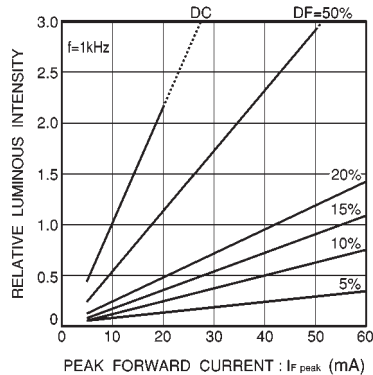


Fig.19 Luminous intensity
vs. peak forward current

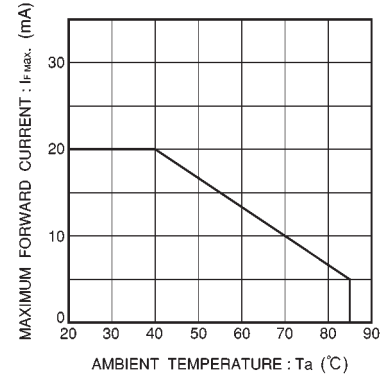


Fig.20 Maximum forward current
vs. ambient temperature

●Electrical characteristic curves 4 (green)

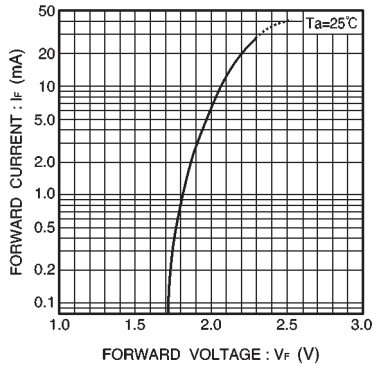


Fig. 21 Forward current
vs. forward voltage

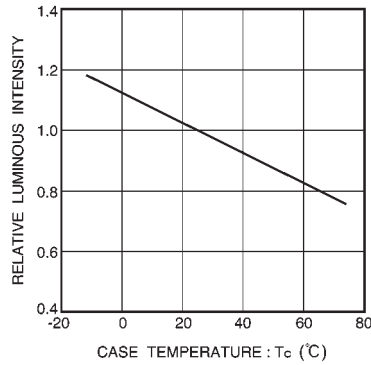


Fig. 22 Luminous intensity
vs. case temperature

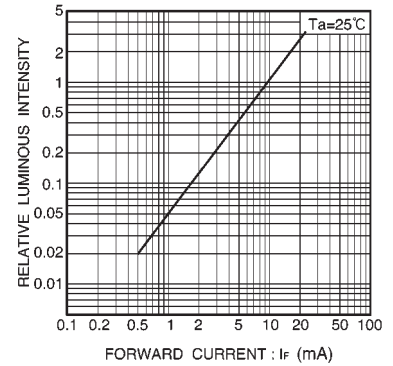


Fig. 23 Luminous intensity
vs. forward current

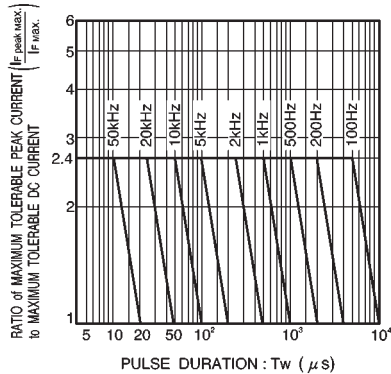


Fig. 24 Maximum tolerable peak current
vs. pulse duration

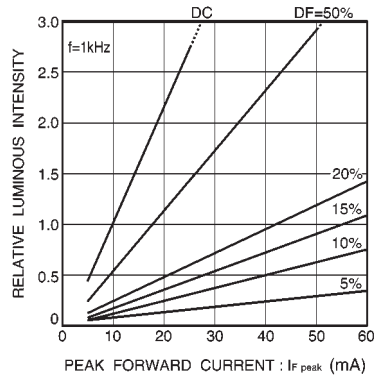


Fig. 25 Luminous intensity
vs. peak forward current

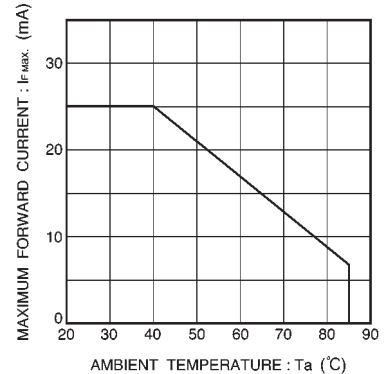


Fig. 26 Maximum forward current
vs. ambient temperature