

Two-color LEDs (φ5.0 mm)

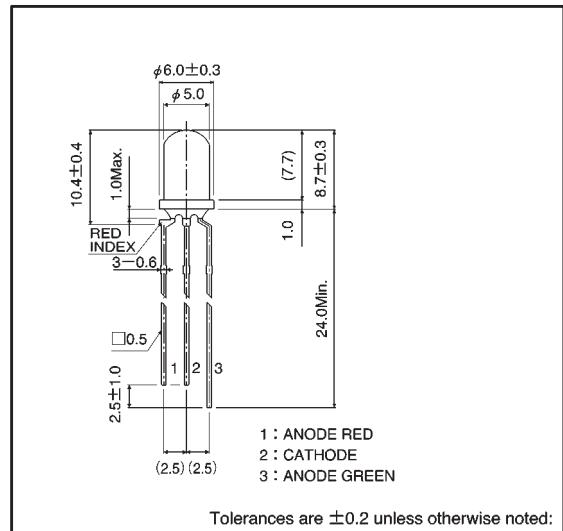
SPR-54 Series

The SPR-54 series are φ5 mm, two-color LEDs with a high luminous efficiency. Red and green elements are built into a single package, and these LEDs are suitable for a wide range of uses.

●Features

- 1) Two-color emission : red and green.
- 2) Epoxy resin package with a diameter of 5 mm.
- 3) Milky white lens.
- 4) High reliability.

●External dimensions (Units: mm)



Tolerances are ± 0.2 unless otherwise noted:

●Selection guide

Emitting color	Red / Green
Lens	
Milky white	SPR-54MVW

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Red	Green	Unit
Power dissipation	P _D	60	75	mW
Forward current	I _F	20	25	mA
Peak forward current	I _{FP}	60*	60*	mA
Reverse voltage	V _R	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			Green			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Forward voltage	V _F	I _F =10mA	—	2.0	3.0	—	2.1	3.0	V
Reverse current	I _R	V _R =3V	—	—	10	—	—	10	μA
Peak wavelength	λ _P	I _F =10mA	—	650	—	—	563	—	nm
Spectral line half width	Δ λ	I _F =10mA	—	40	—	—	40	—	nm
Viewing angle	2θ _{1/2}	Diffused	—	40	—	—	40	—	deg
Luminous intensity	I _V	I _F =10mA	2.2	6.3	—	3.6	10	—	mcd

● Luminous intensity vs. wavelength

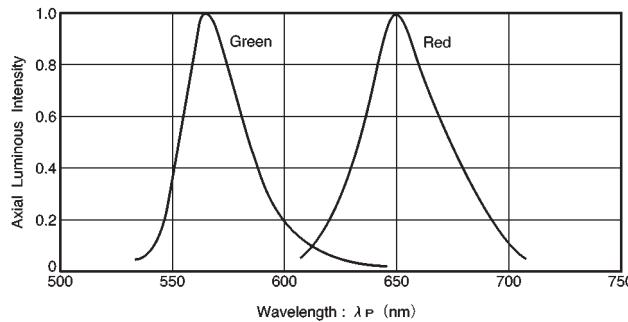


Fig. 1

● Directional pattern

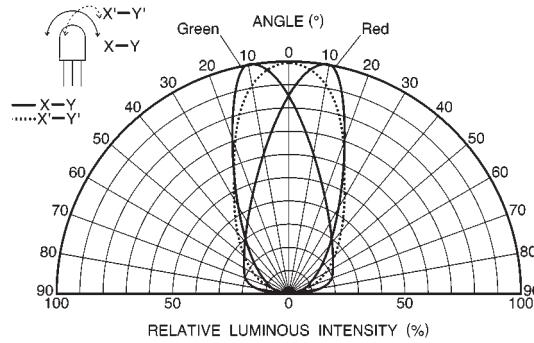


Fig.2

● Electrical characteristic curves (red, green)

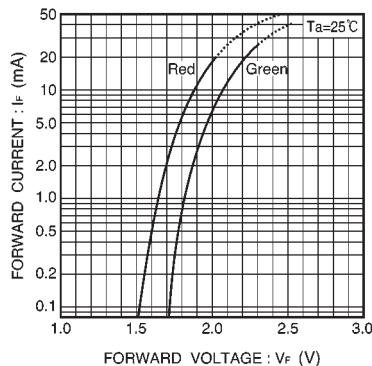


Fig. 3 Forward current vs. forward voltage

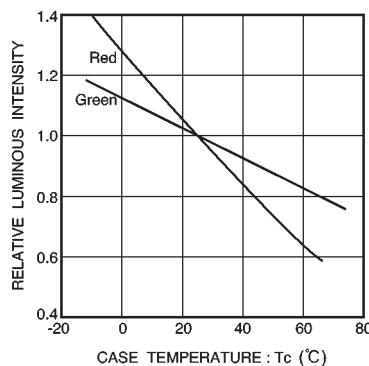


Fig. 4 Luminous intensity vs. case temperature

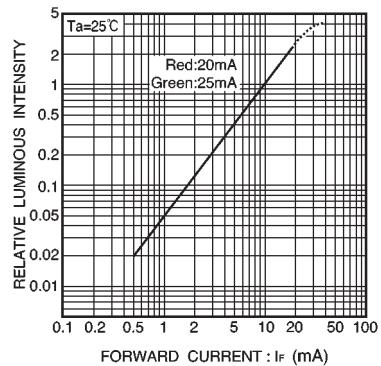


Fig. 5 Luminous intensity vs. forward current

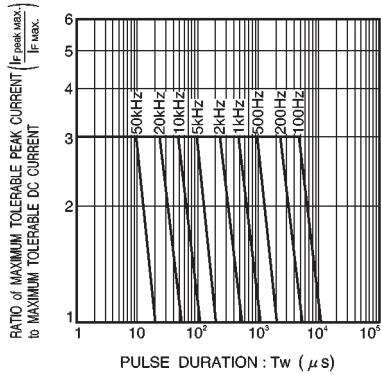


Fig. 6 Maximum tolerable peak current vs. pulse duration (red)

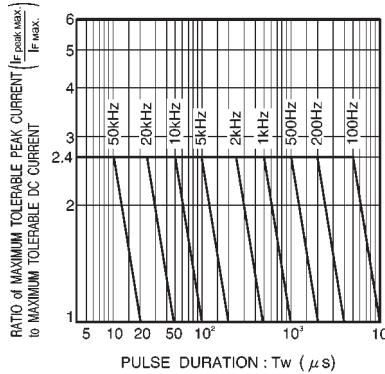


Fig. 7 Maximum tolerable peak current vs. pulse duration (green)

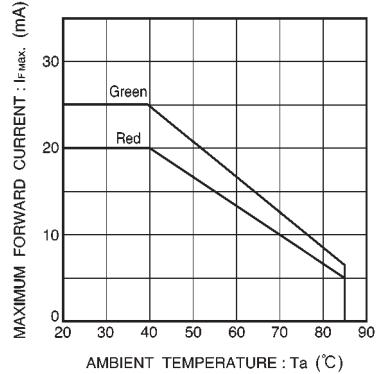


Fig. 8 Maximum forward current vs. ambient temperature