# Reflecting small LEDs, directly mountable ( $\phi$ 3.1 mm $\times$ 2 mm)

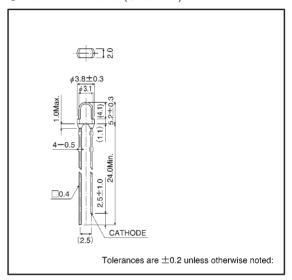
# **SLR-322 Series**

The SLR-322 series are small 3.1 mm  $\times$  2 mm LEDs which can be directly mounted on a printed circuit board. Four colors and two lens types are available for a total of eight types, and they are suitable for use in a wide variety of applications.

#### Features

- Can be directly mounted on a printed circuit board with an automatic insertion machine.
- 2) Four colors: red, orange, yellow and green.
- 3) Two lens types: Colored diffused and Colored clear.
- 4) Compact 3.1 mm  $\times$  2 mm epoxy resin package.
- 5) High reliability.

### External dimensions (Units: mm)



#### Selection guide

Emitting color Lens	Red	Orange	Yellow	Green		
Colored diffused	SLR-322VR	SLR-322DU	SLR-322YY	SLR-322MG		
Colored clear	SLR-322VC	SLR-322DC	SLR-322YC	SLR-322MC		

#### ■Absolute maximum ratings (Ta = 25°C)

Parameter		Red	Orange	Yellow	Green			
	Symbol	SLR-322VR SLR-322VC	SLR-322DU SLR-322DC	SLR-322YY SLR-322YC	SLR-322MG SLR-322MC	Unit		
Power dissipation	P□	60	60	60	75	mW		
Forward current	lF	20	20	20	25	mA		
Peak forward current	IFP	60*	60*	60*	60*	mA		
Reverse voltage	VR	3	3	3	3	V		
Operating temperature	Topr	<b>−25~+85</b>						
Storage temperature	Tstg	<b>−30~+100</b>						
Soldering temperature	_		_					

<sup>\*</sup> Pulse width 1ms Duty 1 / 5



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

Parameter Symbol	Symbol	Conditions	Red		Orange		Yellow		Green			I Imia			
	Conditions	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Min.	Тур.	Max.	Unit	
Forward voltage	VF	I==10mA	_	2.0	3.0	_	2.0	3.0	_	2.1	3.0	_	2.1	3.0	V
Reverse current	IR	V <sub>R</sub> =3V	_	_	10	_	_	10	_		10	_	_	10	μΑ
Peak wavelength	λР	I=10mA	_	650	_	_	610	_	_	585	_	_	563	_	nm
Spectral line half width	Δλ	I=10mA	_	40	_	_	40	_	_	40	_	_	40	_	nm
Viewing angle 2 θ 1	24	Transparent	_	35	_	_	35	_	_	35	_	_	35	_	deg
	201/2	Diffused	-	55	_	_	55	_	ı	55	_	_	55	_	ueg

# Luminous intensity vs. wavelength

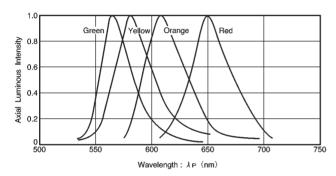


Fig. 1

#### Luminous intensity

Color	λp	Туре	Min.	Тур.	Max.	Unit
Red	650	SLR-322VR	3.6	10	_	mcd
	000	SLR-322VC	5.6	16	_	mcd
Orange	610	SLR-322DU	2.2	6.3	_	mcd
		SLR-322DC	5.6	16	_	mcd
Yellow	585	SLR-322YY	3.6	10	_	mcd
		SLR-322YC	3.6	10	_	mcd
Green	563	SLR-322MG	3.6	10	_	mcd
		SLR-322MC	9.0	25	_	mcd

Note: Measured at Ir = 10 mA

# Directional pattern

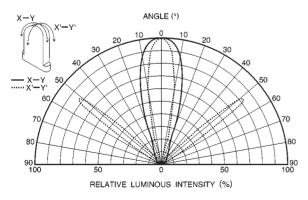


Fig. 2 Transparent type

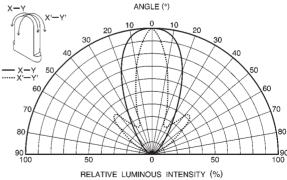


Fig. 3 Diffuse type

#### Electrical characteristic curves 1 (red)

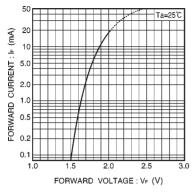


Fig. 4 Forward current vs. forward voltage

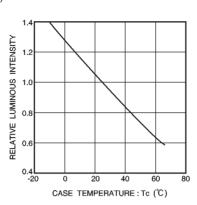


Fig. 5 Luminous intensity vs. case temperature

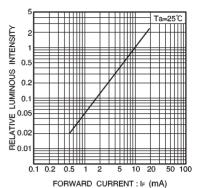


Fig. 6 Luminous intensity vs. forward current

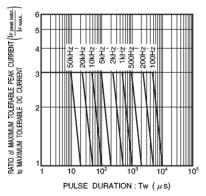


Fig. 7 Maximum tolerable peak current vs. pulse duration

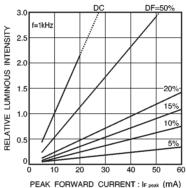


Fig. 8 Luminous intensity vs. peak forward current

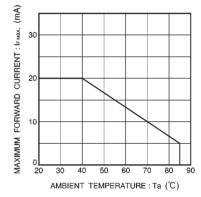


Fig. 9 Maximum forward current vs. ambient temperature

### Electrical characteristic curves 2 (orange)

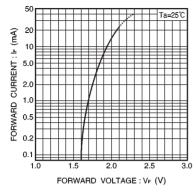


Fig. 10 Forward current vs. forward voltage

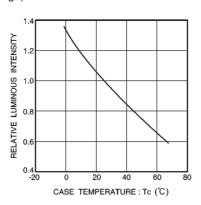


Fig. 11 Luminous intensity vs. case temperature

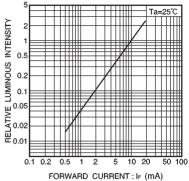


Fig. 12 Luminous intensity vs. forward current

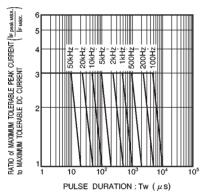


Fig. 13 Maximum tolerable peak current vs. pulse duration

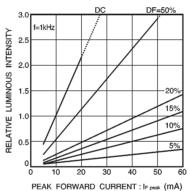


Fig. 14 Luminous intensity vs. peak forward current

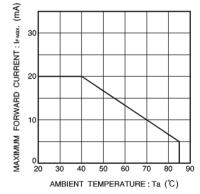


Fig. 15 Maximum forward current vs. ambient temperature

#### ●Electrical characteristic curves 3 (yellow)

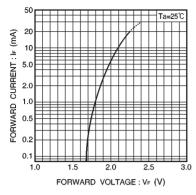


Fig. 16 Forward current vs. forward voltage

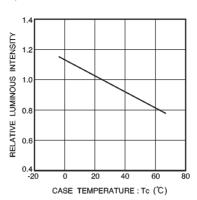


Fig. 17 Luminous intensity vs. case temperature

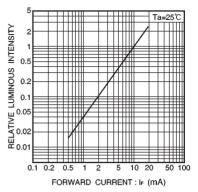


Fig. 18 Luminous intensity vs. forward current

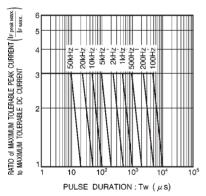


Fig. 19 Maximum tolerable peak current vs. pulse duration

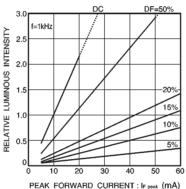


Fig. 20 Luminous intensity vs. peak forward current

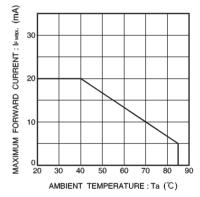


Fig. 21 Maximum forward current vs. ambient temperature

# Electrical characteristic curves 4 (green)

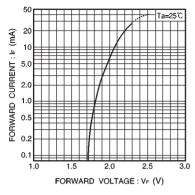


Fig. 22 Forward current vs. forward voltage

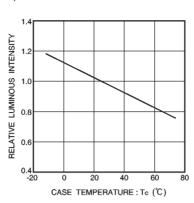


Fig. 23 Luminous intensity vs. case temperature

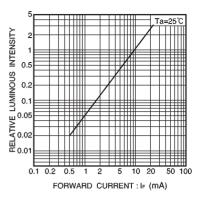


Fig. 24 Luminous intensity vs. forward current

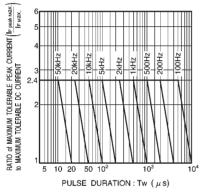


Fig. 25 Maximum tolerable peak current vs. pulse duration

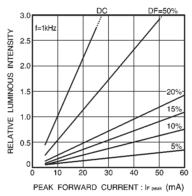


Fig. 26 Luminous intensity vs. peak forward current

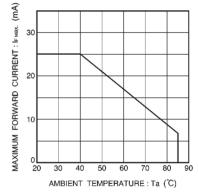


Fig. 27 Maximum forward current vs. ambient temperature