

# **SPG1316-H**

**Chip LED Lamp** 

### **Features**

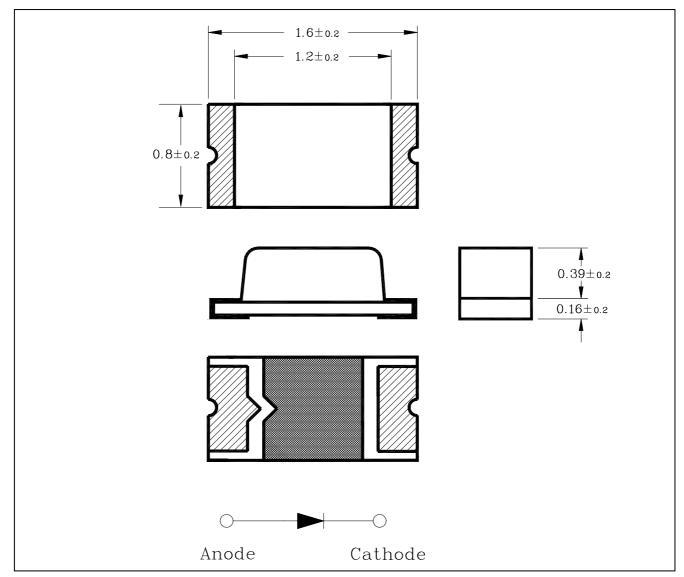
- 1.6mm(L)×0.8mm small size surface mount type
- Thin package of 0.4mm(H) thickness
- Transparent clear lens optic
- Low power consumption type chip LED
- Emitting light green (525nm)

# **Applications**

- LCD backlighting
- Keypad backlighting
- Symbol backlighting
- Front panel indicator lamp

## **Outline Dimensions**

unit: mm



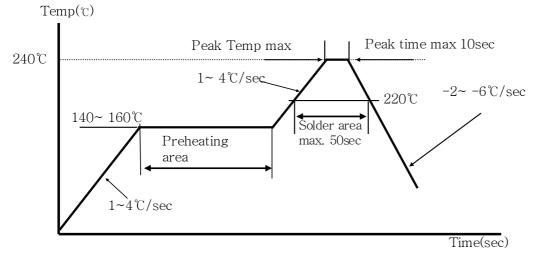
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Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Power Dissipation	$P_D$	80	mW
Forward Current	${ m I}_{\sf F}$	20	mA
*1Peak Forward Current	${ m I}_{\sf FP}$	50	mA
Reverse Voltage	$V_R$	4	V
Operating Temperature	$T_{opr}$	-25~80	$^{\circ}$ C
Storage Temperature	T <sub>stg</sub>	-30~100	$^{\circ}$
*2Soldering Temperature	$T_{sol}$	240℃ for 5 seconds	

<sup>\*1.</sup>Duty ratio = 1/16, Pulse width = 0.1ms

<sup>\*2.</sup> Recommended soldering Temperature Profile



### **Electrical Characteristics**

Characteristic	Symbol	<b>Test Condition</b>	Min	Тур	Max	Unit
* <sup>3</sup> Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA	2.6	3.0	3.6	V
* <sup>4</sup> Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 10mA	62	100	228	mcd
Peak Wavelength	$\lambda_{ m P}$	I <sub>F</sub> = 10mA	-	525	-	nm
Spectrum Bandwidth	Δλ	I <sub>F</sub> = 10mA	-	35	-	nm
Reverse Current	<sub>R</sub>	V <sub>R</sub> =4V	-	-	10	uA
* <sup>5</sup> Half Angle	X X	I <sub>F</sub> = 10mA	-	±65	-	deg
	θ1/2 Y		-	±70	-	

<sup>\*3.</sup> Forward Voltage Maximum tolerance for  $\pm 0.1V$ 

#### • Iv / VF / λ p Grade Classification

Test Condition @IF=10mA					
Forward Voltage(V)	Luminous Intensity(mcd)	Peak Wavelength(nm)			
3:2.8~3.0	B : 78~105	A: 515~520			
4:3.0~3.2	C : 105~140	B:520~525			
5:3.2~3.4	D : 140~190	C:525~530			

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<sup>\*4.</sup> Luminous Intensity Maximum tolerance for each Grade Classification limit is  $\pm 18\%$  (The test result of IF=20mA is only for reference)

<sup>\*5.</sup>  $\theta$ 1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

# **Characteristic Diagrams**

Fig. 1  $I_F$  -  $V_F$ 

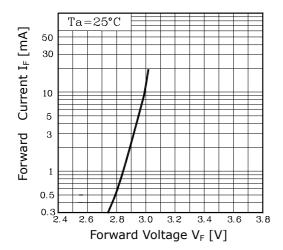


Fig. 3  $I_F$  – Ta

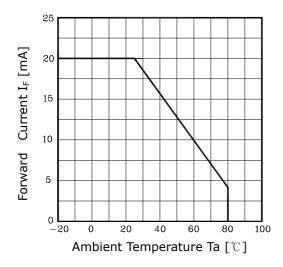
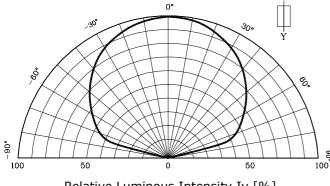
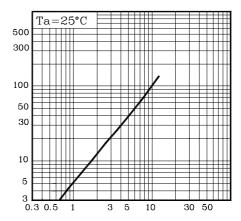


Fig. 5-1 Radiation Diagram(X)



Relative Luminous Intensity Iv [%]

Fig. 2  $I_{\rm V}$  -  $I_{\rm F}$ 



Forward Current I<sub>F</sub> [mA]

**Fig.4 Spectrum Distribution** 

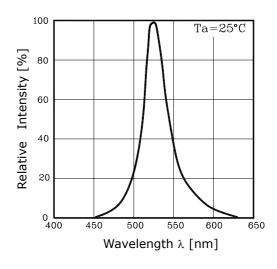
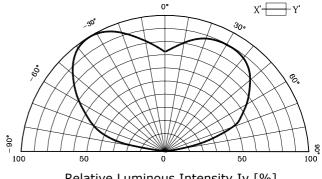


Fig. 5-2 Radiation Diagram(Y)



Relative Luminous Intensity Iv [%]

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