

SM1316-D

Chip LED

Features

- 1.6mm(L)×0.8mm(W) small size surface mount type
- Thin package of 0.55mm(H) thickness
- Transparent clear lens optic
- Low power consumption type chip led

Applications

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

Outline Dimensions unit: mm 1.57~1.63 1.25~1.30-0.75~0.85 \bigcirc Cathode Anode

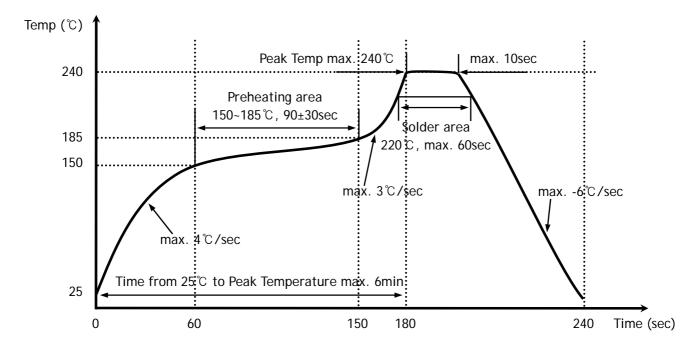
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Absolute Maximum Ratings

 $(Ta=25^{\circ}C)$

Characteristic	Symbol	Rating	Unit
Power dissipation	P_D	58	mW
Forward current	I_{F}	25	mA
* ¹ Peak forward current	\mathbf{I}_{FP}	50	mA
Reverse voltage	V_R	4	V
Operating temperature range	T_{opr}	-25~80	$^{\circ}$
Storage temperature range	T_{stg}	-30~100	$^{\circ}$
*2Soldering temperature	T _{sol}	240℃ for 10 seconds	

^{*1.}Duty ratio = 1/16, Pulse width = 0.1ms



Electrical / Optical Characteristics

 $(Ta=25^{\circ}C)$

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Characteristic	Sym	bol	Test Condition	Min	Тур	Max	Unit
Forward voltage	V	F	I _F = 10mA	1.8	-	2.3	V
*3Luminous intensity	Ι _ν	/	I _F = 10mA	6	-	27	mcd
Peak wavelength	λι	P	I _F = 10mA	569	573	578	nm
Spectrum bandwidth	Δ	λ	I _F = 10mA	-	30	-	nm
Reverse current	IF	₹	V _R =4V	-	-	10	uA
* ⁴ Half angle	θ1/2	Χ	I _F = 10mA	-	±65	-	deg
	01/2	Υ		-	±70	-	ueg

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^{*2.} Recommended reflow soldering temperature profile

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- *3. Luminous intensity maximum tolerance for each grade classification limit is $\pm 18\%$ (The test result of I_F =10mA is only for reference)
- *4. θ 1/2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

• $V_F / I_V / \lambda_P$ Grade Classification (Ta=25°C)

Test Condition @ I _F =10mA						
Forward Voltage [V]	Luminous Intensity [mcd]	Peak Wavelength [nm]				
1 : 1.8~2.0 2 : 2.0~2.3	F:6~10	a: 569~572				
	G : 10~17	b : 572~575				
	H: 17~27	c : 575~578				

(Do not use to combine grade classification. It must be used separately grade classification)

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Characteristic Diagrams

Fig. 1 I_F - V_F

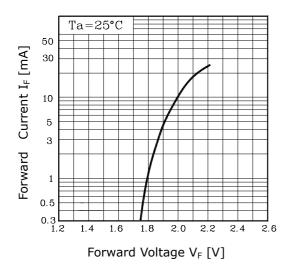


Fig. 2 I_V - I_F

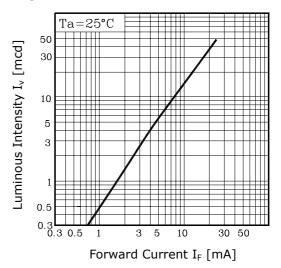


Fig. $3 I_F - Ta$

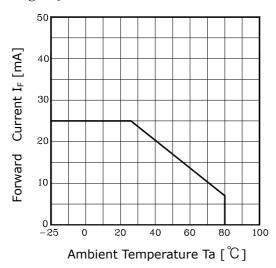


Fig.4 Spectrum Distribution

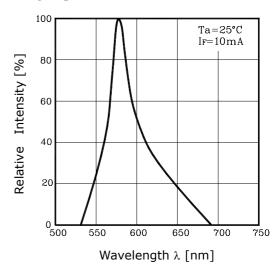


Fig. 5-1 Radiation Diagram(X)

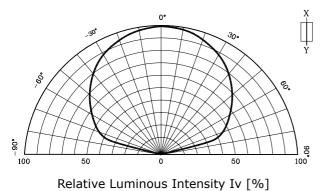
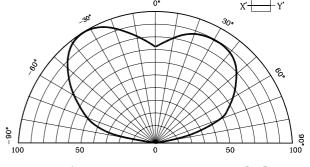


Fig. 5-2 Radiation Diagram(Y)



Relative Luminous Intensity Iv [%]

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