## SM1316-D

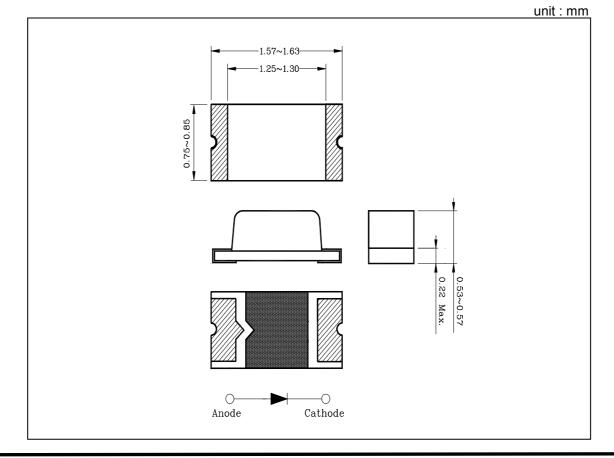
#### 1. Features

- 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

#### 2. Applications

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

#### 3. Outline Dimensions





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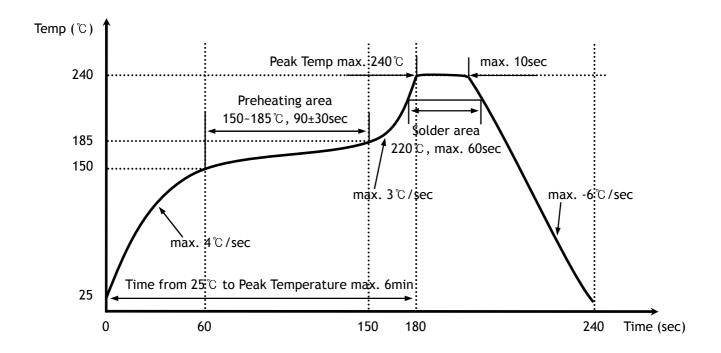
#### 4. Absolute Maximum Ratings

			(Ta=25°C)	
Characteristic	Symbol	Rating	Unit	
Power dissipation	P <sub>D</sub>	58	mW	
Forward current	I <sub>F</sub>	25	mA	
*1 Peak forward current	$\mathrm{I}_{FP}$	50	mA	
Reverse voltage	V <sub>R</sub>	4	V	
Operating temperature range	T <sub>opr</sub>	-25~80	Ĉ	
Storage temperature range	T <sub>stg</sub>	-30~100	Ĉ	
*2 Soldering temperature	T <sub>sol</sub>	240°C for 10 seconds		

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

\*2.Recommended reflow soldering temperature profile

- Preheating 150°C to 185°C within 120 seconds soldering 240°C within 10 seconds Gradual cooling (Avoid quenching)





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 $(T_{2}-25^{\circ}C)$ 

### 5. Electrical / Optical Characteristics

						(1	a=25 C)
Characteristic	Syn	nbol	Test Condition	Min	Тур	Мах	Unit
Forward voltage	V <sub>F</sub>		I <sub>F</sub> = 10mA	1.8	-	2.3	V
*3 Luminous intensity	Iv		I <sub>F</sub> = 10mA	6	-	27	mcd
Peak wavelength	λ <sub>P</sub>		I <sub>F</sub> = 10mA	569	573	578	nm
Spectrum bandwidth	$\Delta_{\lambda}$		I <sub>F</sub> = 10mA	-	30	-	nm
Reverse current	I	·R	V <sub>R</sub> =4V	-	-	10	uA
*4 Half angle	θ/2	х	I <sub>F</sub> = 10mA	-	±65	-	deg
		Y		-	±70	-	

\*3. The test result of  $I_F$ =10mA is only for reference

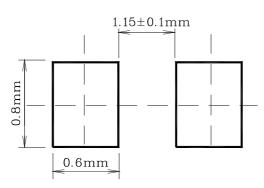
\*4. $\theta$ /2 is the off-axis angle where the luminous intensity is 1/2 the peak intensity

• V<sub>F</sub> / I<sub>V</sub> /  $\lambda_P$  Grade Classification (Ta=25°C)

Test Condition @ I <sub>F</sub> =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			

(Each V<sub>F</sub>, I<sub>V</sub>,  $\lambda_P$  range did not consider a margin. Please refer to ±0.1V of V<sub>F</sub> range, ±18% of I<sub>V</sub> range, ±1nm of  $\lambda_P$  range as a permitted limit and do not use to combine grade classification. It must be used separately grade classification)

\* Recommended Soldering Land Pattern





# <u>аик согр.</u> SM1316-D

### 6. Characteristic Diagrams

