

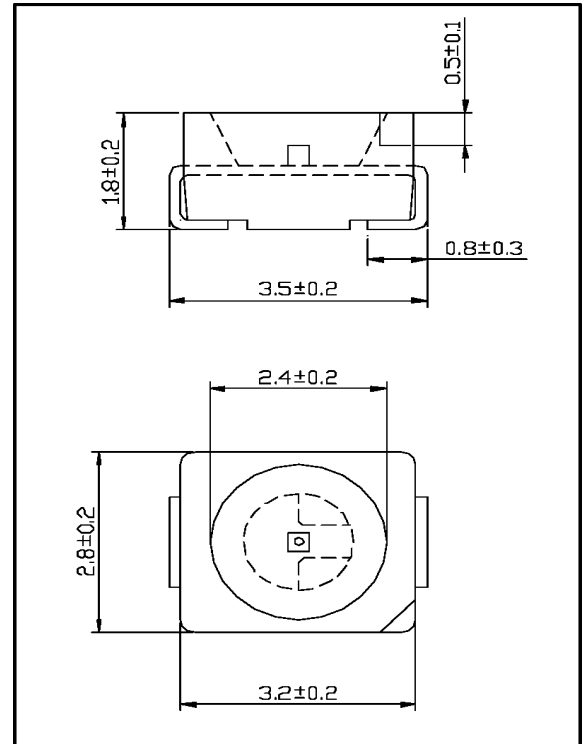
## LM1-THR1-01

### Features

Industry Standard 1210 PLCC Package (3.2 x 2.8mm)  
 High Operating Temperature Range:  $-40^{\circ} \sim +100^{\circ} \text{C}$   
 High luminosity with low power consumption  
 $120^{\circ}$  Viewing Angle  
 Wave and Re-flow Solderable

### Applications

Indicators  
 Illuminators  
 LCD Backlights  
 Automobile Applications



### Maximum Ratings ( $T_a=25^{\circ}\text{C}$ )

Characteristic	Symbol	Max.	Unit
Forward Current	$I_F$	50	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	130.00	mW
Operating Temperature	$T_{opr}$	$-40 \sim +100$	$^{\circ}\text{C}$
Storage Temperature	$T_{stg}$	$-40 \sim +100$	$^{\circ}\text{C}$
Soldering Temperature	$T_{sol}$	260	$^{\circ}\text{C}$
Soldering Time	-	for 3 sec. max	-

### Opto-Electrical Characteristics ( $T_a=25^{\circ}\text{C}$ )

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=20\text{mA}$	--	2.10	2.60	V
Reverse Current	$I_R$	$V_R=5\text{V}$	-	-	10	$\mu\text{A}$
Luminous Intensity	$I_v$	$I_F=20\text{mA}$	280.00	400.00	-	mcd
Viewing Angle	$2\theta^{1/2}$	-	-	$120^{\circ}$	-	deg.
Peak Wavelength	$\lambda_p$	$I_F=20\text{mA}$	-	639	-	nm
Dominant Wavelength	$\lambda_d$	$I_F=20\text{mA}$	-	628	-	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F=20\text{mA}$	-	23	-	nm

### Company Headquarters

120 Broadway  
 Menands, New York 12204  
 Toll Free: 800.984.5337  
 Fax: 518.432.7454



Web: [www.marktechopto.com](http://www.marktechopto.com) | Email: [info@marktechopto.com](mailto:info@marktechopto.com)

### West Coast Sales Office

950 South Coast Drive, Suite 265  
 Costa Mesa, California 92626  
 Toll Free: 800.984.5337  
 Fax: 714.850.9314

## LM1-THR1-01 Graphs

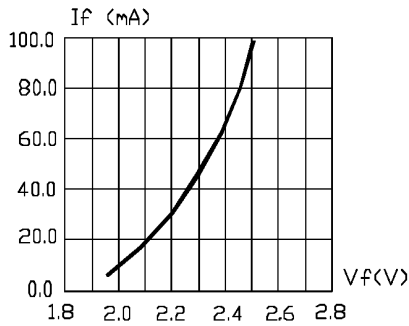


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

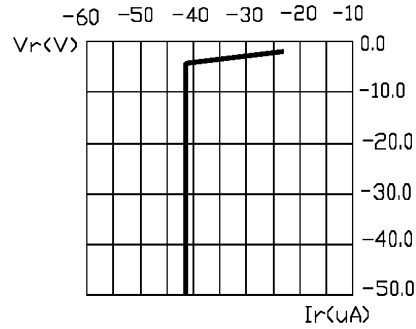


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

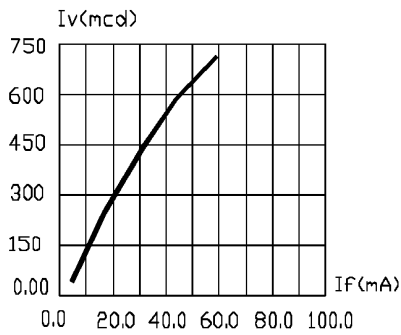


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

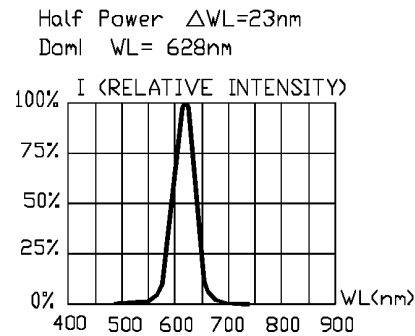


FIG.4 RELATIVE INTENSITY VS. WAVE LENGTH.

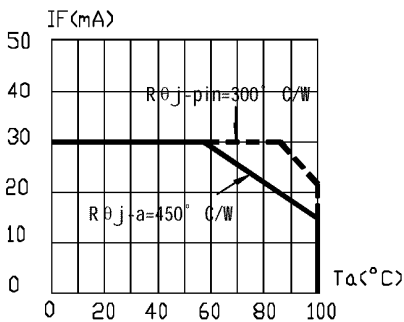


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON  $T_{jmax}=125^{\circ}C$

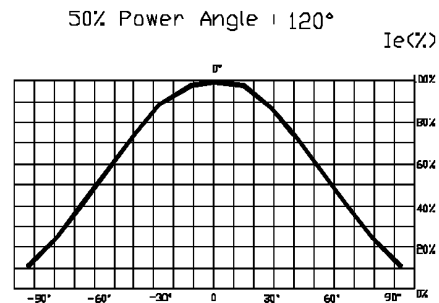


FIG.6 SPATIAL DISTRIBUTION.