

LM1-NPG1-01

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° Viewing Angle
 Wave and Re-flow Solderable

Applications

Indicators
 Illuminators
 LCD Backlights
 Automobile Applications



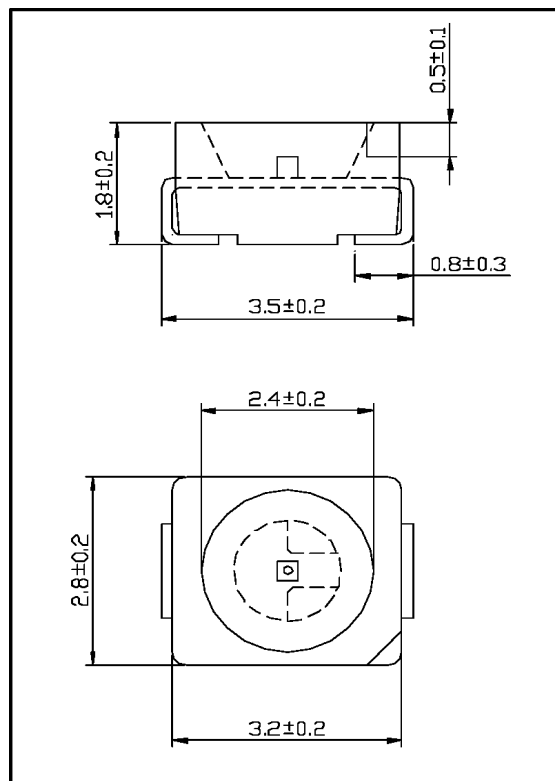
ATTENTION
 OBSERVE PRECAUTIONS
 ELECTROSTATIC
 SENSITIVE DEVICES

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

Characteristic	Symbol	Max.	Unit
Forward Current	I_F	20	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	120.00	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	$I_F=20\text{mA}$	3.20	3.60	—	V
Reverse Current	I_R	$V_R=5\text{V}$	—	—	10	μA
Luminous Intensity	I_v	$I_F=20\text{mA}$	140.00	224.00	—	mcd
Viewing Angle	$2\theta^{1/2}$	—	—	120°	—	deg.
Peak Wavelength	λ_p	$I_F=20\text{mA}$	—	520	—	nm
Dominant Wavelength	λ_d	$I_F=20\text{mA}$	—	525	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F=20\text{mA}$	—	38	—	nm



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LM1-NPG1-01 Graphs

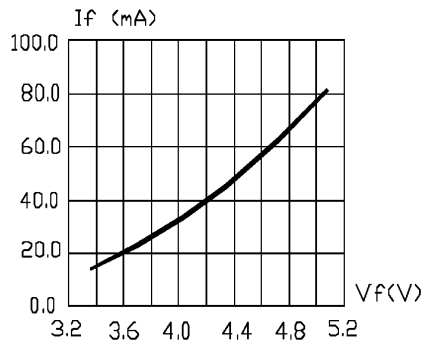


FIG.1 FORWARD CURRENT VS. FORWARD VOLTAGE.

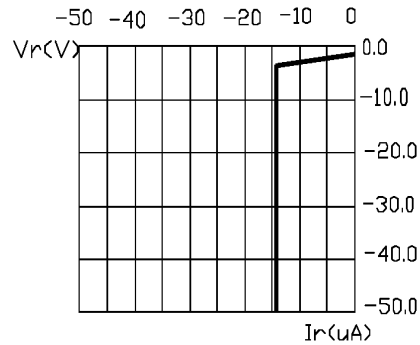


FIG.2 REVERSE CURRENT VS. REVERSE VOLTAGE.

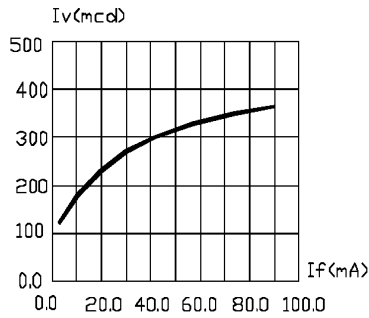


FIG.3 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

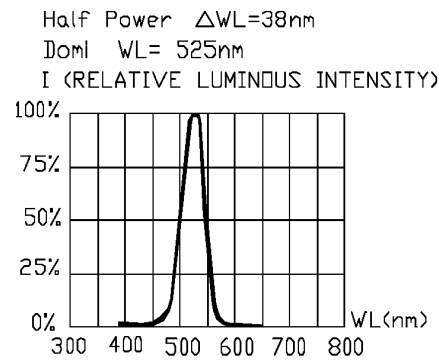


FIG.4 RELATIVE LUMINOUS INTENSITY VS. WAVELENGTH.

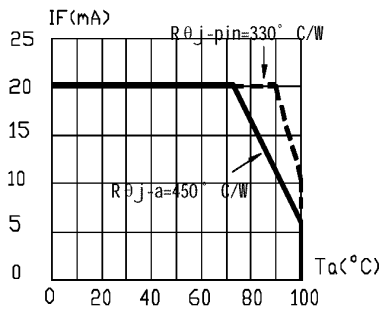


FIG.5 MAXIMUM FORWARD DC CURRENT VS TEMPERATURE. DERATING BASED ON $T_{jmax}=125^{\circ}\text{C}$

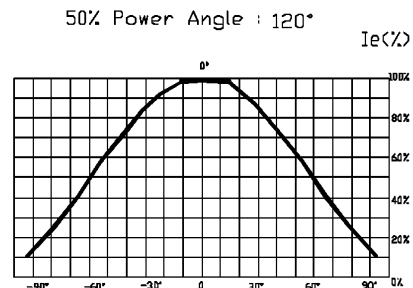


FIG.6 SPATIAL DISTRIBUTION.