

Compact, Surface Mount Type Infrared Emitting Diode

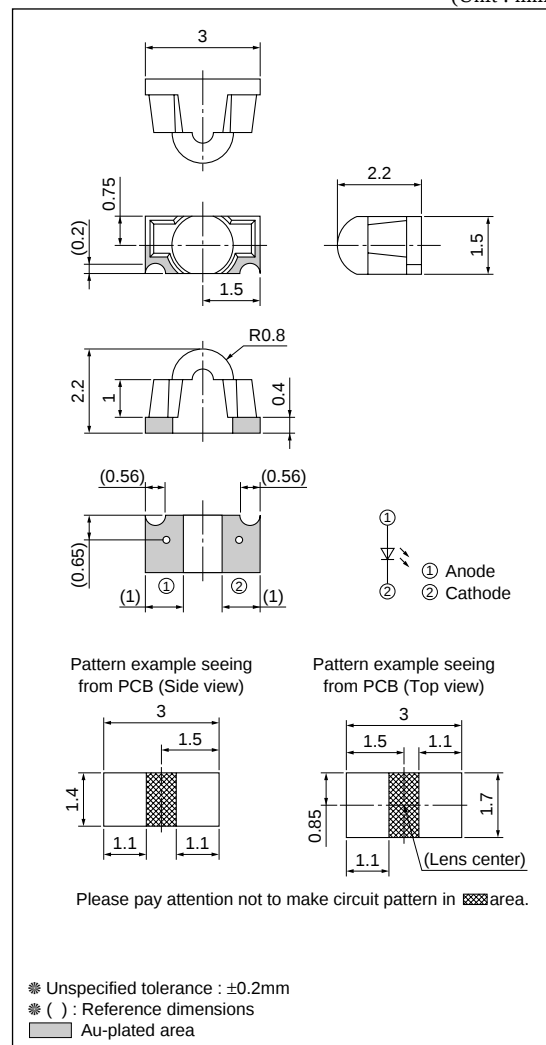
■ Outline Dimensions

1. Compact and thin package
2. Surface mount type
3. 2-way mounting ; top view/side view
4. Reflow soldering
5. High output type : **GL100MN1MP**
6. General purpose type : **GL100MN0MP**
Pair use with **PT100MC0MP/PT100MF0MP**
is recommended

1. Touch panel for ATM
2. Touch panel for Car navigation system
3. Touch panel for FA equipment

Parameter	Symbol	Rating	Unit
Forward current	I _F	50	mA
*1Peak forward current	I _{FM}	0.5	A
Reverse voltage	V _R	6	V
Power dissipation	P	75	mW
Operating temperature	T _{opr}	-30 to +85	°C
Storage temperature	T _{stg}	-40 to +95	°C
*2Soldering temperature	T _{sol}	240	°C

*1 Pulse width 100μs, duty 0.01
*2 Max. 10s



Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Forward voltage	GL100MN0MP	$I_F=20\text{mA}$	—	1.2	1.4	V
	GL100MN1MP	$I_F=20\text{mA}$	—	1.2	1.5	V
Peak forward voltage	V_{FM}	$I_{FM}=0.5\text{A}$	—	3.0	4.0	V
Reverse current	I_R	$V_R=3\text{V}$	—	—	10	μA
Radiant flux	GL100MN0MP	$I_F=20\text{mA}$	1.0	—	3.0	mW
	GL100MN1MP	$I_F=20\text{mA}$	2.0	—	6.0	mW
Peak emission wavelength	λ_p	$I_F=5\text{mA}$	—	940	—	nm
Half intensity wave length	$\Delta\lambda$	$I_F=5\text{mA}$	—	45	—	nm
Terminal capacitance	C_t	$V_R=0, f=1\text{MHz}$	—	50	—	pF
Response frequency	f_c	—	—	300	—	kHz
Half intensity angle	$\Delta\theta$	—	—	± 10	—	°

Fig.1 Forward Current vs. Ambient Temperature

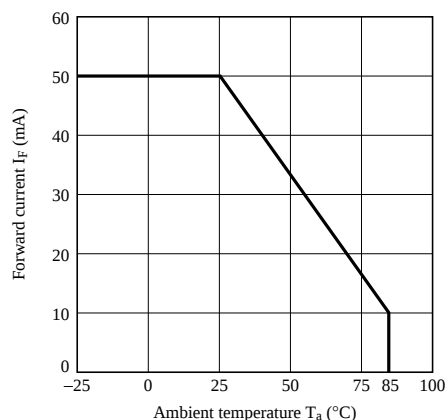


Fig.2 Peak Forward Current vs. Duty Ratio

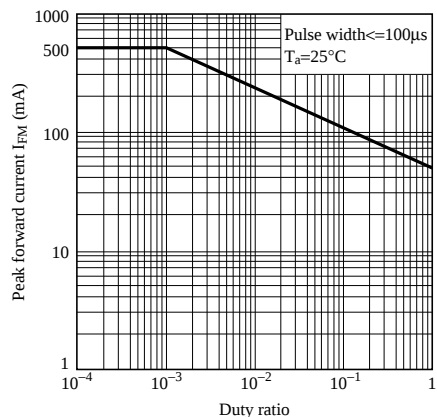


Fig.3 Spectral Distribution

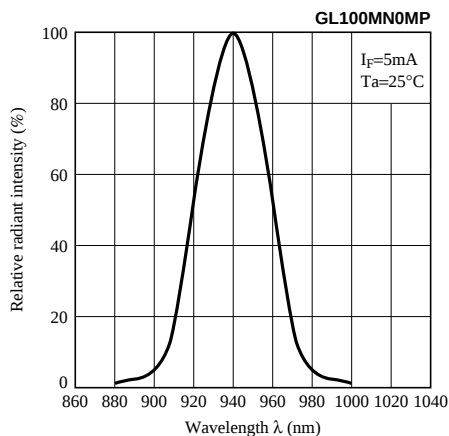


Fig.4 Spectral Distribution

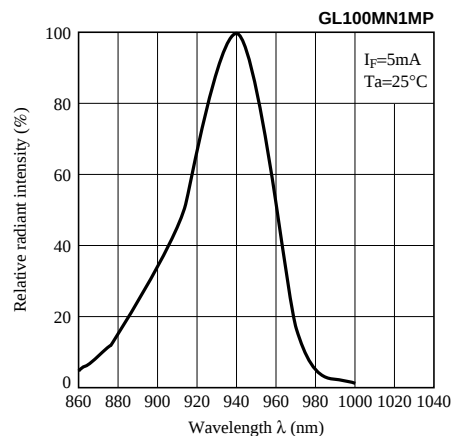


Fig.5 Peak Emission Wavelength vs. Ambient Temperature

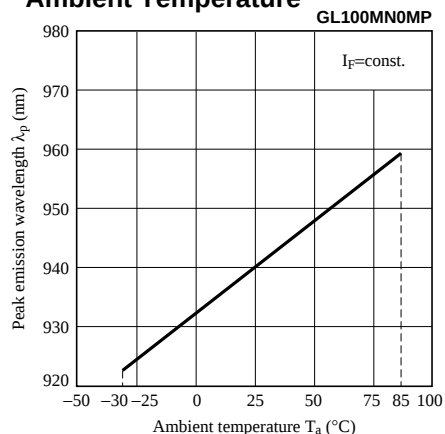


Fig.6 Peak Emission Wavelength vs. Ambient Temperature

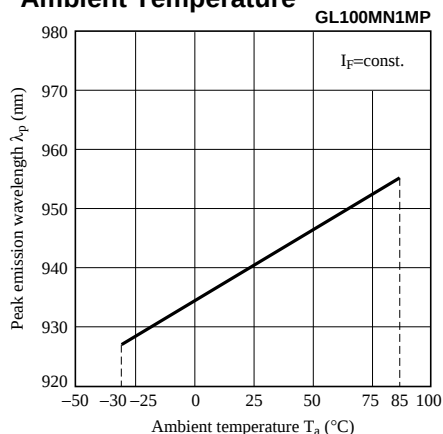


Fig.7 Forward Current vs. Forward Voltage

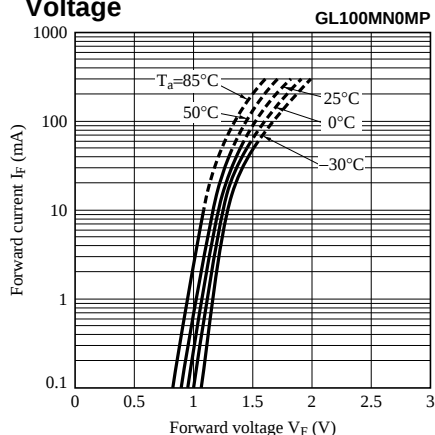


Fig.8 Forward Current vs. Forward Voltage

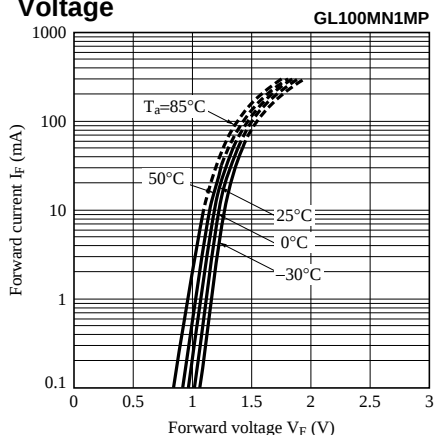


Fig.9 Relative Radiant Flux vs. Ambient Temperature

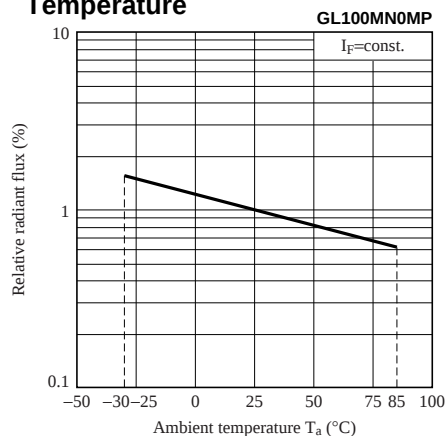


Fig.10 Relative Radiant Flux vs. Ambient Temperature

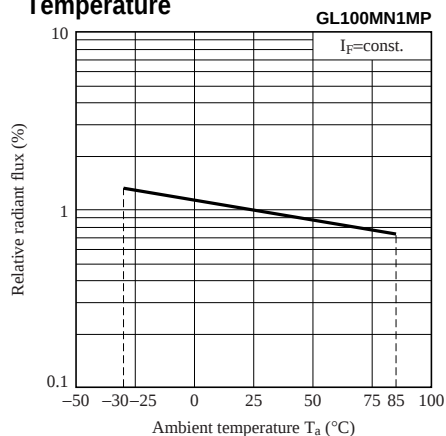


Fig.11 Radiant Flux vs. Forward

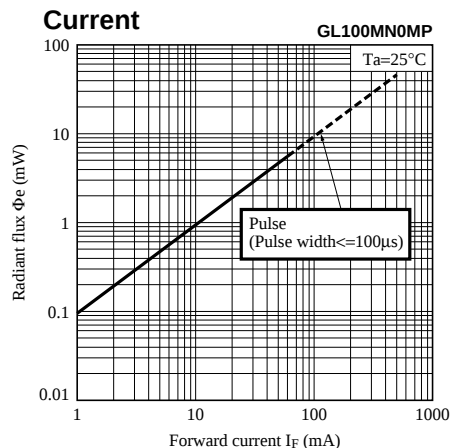


Fig.12 Radiant Flux vs. Forward

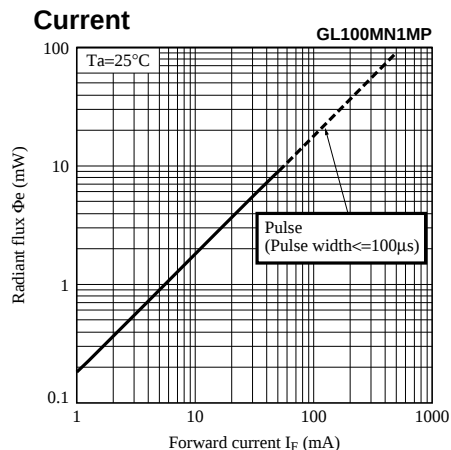


Fig.13 Relative Output vs. Distance To Detector

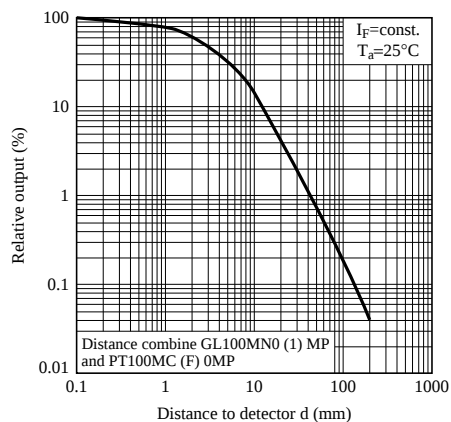


Fig.14 Radiation Diagram (Typical Value)

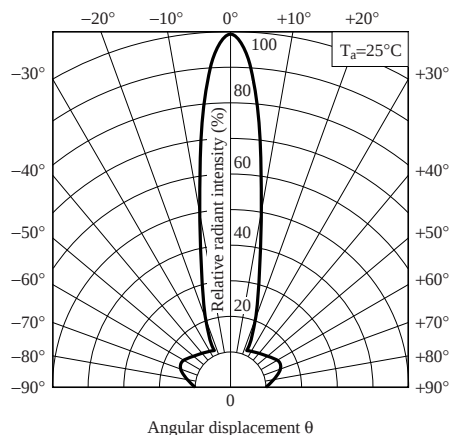
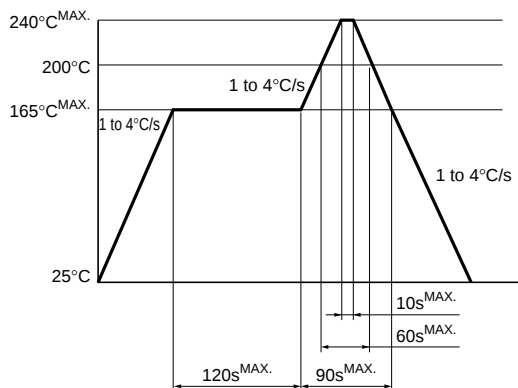


Fig.15 Reflow Soldering

Only one time soldering is recommended within the temperature profile shown below.



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