

DESCRIPTION

The QEE213 is a 940nm GaAs LED encapsulated in a medium angle, thin plastic sidelooker package.

FEATURES

- Wavelength = 940 nm, GaAs
- Package Type: Sidelooker
- Medium Beam Angle, 50°
- Clear Plastic Package
- Matched Photosensors: QSE213 and QSE243

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to + 100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to + 100	$^\circ\text{C}$
Soldering Temperature (Iron) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	$^\circ\text{C}$
Continuous Forward Current	I_F	100	mA
Reverse Voltage	V_R	5	V
Peak Forward Current ⁽⁵⁾	I_{FP}	1	A
Power Dissipation ⁽¹⁾	P_D	100	mW

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Parameter	Test Conditions	Symbol	Min	Typ	Max	Units
Peak Emission Wavelength	$I_F = 100\text{ mA}$	λ_p	—	940	—	nm
Emission Angle	$I_F = 100\text{ mA}$	U	—	± 25	—	Deg.
Forward Voltage	$I_F = 100\text{ mA}$, $t_p = 20\text{ ms}$	V_F	—	—	1.5	V
Reverse Current	$V_R = 5\text{ V}$	I_R	—	—	10	μA
Radiant Intensity	$I_F = 100\text{ mA}$, $t_p = 20\text{ ms}$	I_e	2	—	—	mW/sr
Rise Time	$I_F = 100\text{ mA}$	t_r	—	1	—	μs
Fall Time	$t_p = 100\text{ }\mu\text{s}$, $T = 10\text{ mS}$	t_f	—	1	—	

NOTES

1. Derate power dissipation linearly 2.67 mW/ $^\circ\text{C}$ above 25 $^\circ\text{C}$.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron 1/16" (1.6 mm) minimum from housing.
5. Pulse conditions: $t_p = 100\text{ }\mu\text{s}$, $T = 10\text{ ms}$.

TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

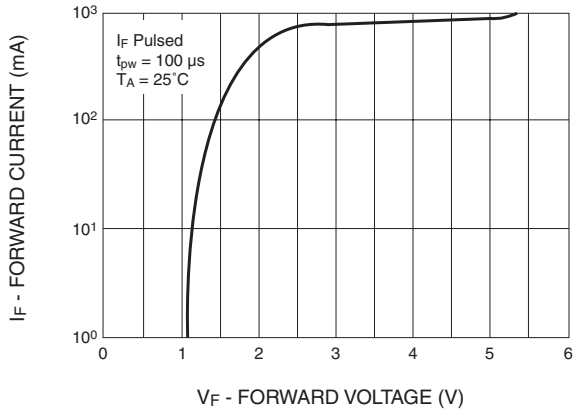


Fig. 2 Forward Voltage vs. Ambient Temperature

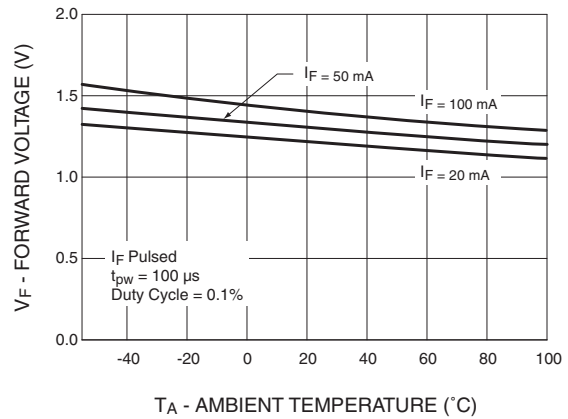


Fig. 3 Normalized Radiant Intensity vs. Forward Current

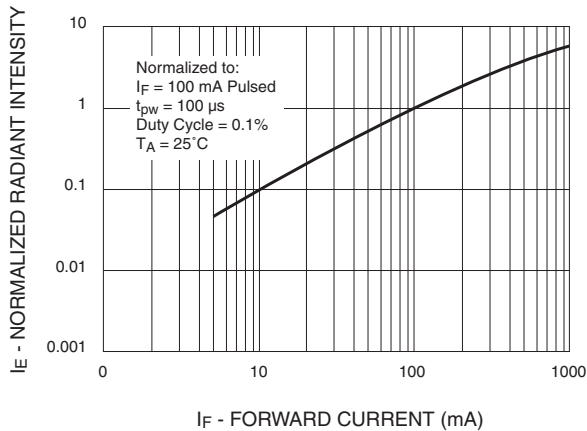
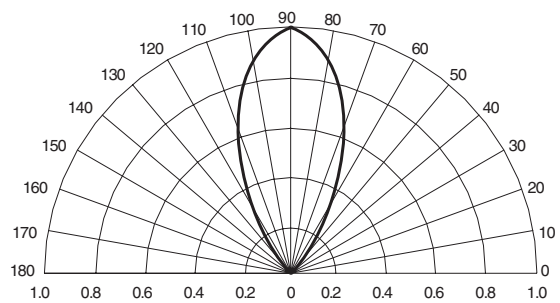


Fig. 4 Radiation Diagram



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