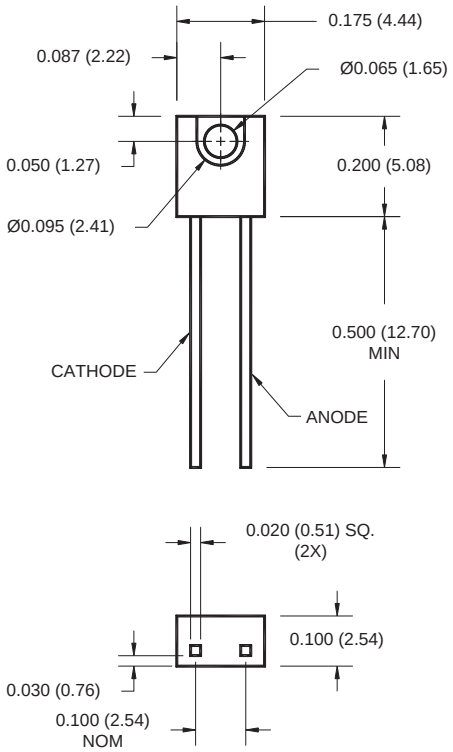
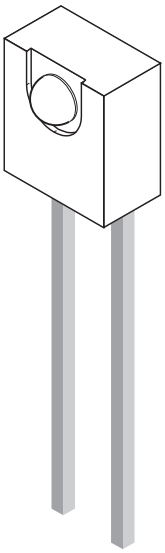
# PLASTIC INFRARED LIGHT EMITTING DIODE

## QEE122 QEE123

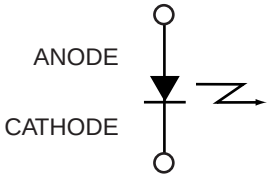
### PACKAGE DIMENSIONS




NOTES:
1. Dimensions for all drawings are in inches (mm).
2. Tolerance of ± .010 (.25) on all non-nominal dimensions unless otherwise specified.



### SCHEMATIC




## DESCRIPTION

The QEE12X is a 880 nm AlGaAs LED encapsulated in a medium wide angle, plastic sidelooker package.

## FEATURES

- λ= 880 nm
- Package Type = Sidelooker
- Chip Material = AlGaAs
- Matched Photosensor: QSE113
- Medium Wide Emission Angle, 50°
- Package Material: Clear Epoxy
- High Output Power
- Orange stripe on the top side

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# PLASTIC INFRARED LIGHT EMITTING DIODE

## QEE122 QEE123

| **ABSOLUTE MAXIMUM RATINGS** ($T_A$ = 25°C unless otherwise specified) | | | |
|---|---|---|---|
| **Parameter** | **Symbol** | **Rating** | **Unit** |
| Operating Temperature | $T_{OPR}$ | -40 to + 100 | °C |
| Storage Temperature | $T_{STG}$ | -40 to + 100 | °C |
| Soldering Temperature (Iron)(2,3,4) | $T_{SOL-I}$ | 240 for 5 sec | °C |
| Soldering Temperature (Flow)(2,3) | $T_{SOL-F}$ | 260 for 10 sec | °C |
| Continuous Forward Current | $I_F$ | 50 | mA |
| Reverse Voltage | $V_R$ | 5 | V |
| Power Dissipation(1) | $P_D$ | 100 | mW |

**NOTES:**
1. Derate power dissipation linearly 1.33 mW/°C above 25°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

| **ELECTRICAL / OPTICAL CHARACTERISTICS** ($T_A$ =25°C) | | | | | | |
|---|---|---|---|---|---|---|
| **Parameter** | **Test Conditions** | **Symbol** | **Min** | **Typ** | **Max** | **Units** |
| Peak Emission Wavelength | $I_F$ = 100 mA | $\lambda_{PE}$ | — | 880 | — | nm |
| Emission Angle | $I_F$ = 100 mA | 2Θ1/2 | — | 50 | — | Deg. |
| Forward Voltage | $I_F$ = 100 mA, tp = 20 ms | $V_F$ | — | — | 1.7 | V |
| Reverse Current | $V_R$ = 5 V | $I_R$ | — | — | 10 | µA |
| Radiant Intensity QEE122 | $I_F$ = 100 mA, tp = 20 ms | $I_E$ | 4 | — | 16 | mW/sr |
| Radiant Intensity QEE123 | $I_F$ = 100 mA, tp = 20 ms | $I_E$ | 8 | — | — | mW/sr |
| Rise Time | $I_F$ = 100 mA | $t_r$ | — | 800 | — | ns |
| Fall Time | | $t_f$ | — | 800 | — | ns |

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# PLASTIC INFRARED LIGHT EMITTING DIODE

## QEE122 QEE123

**Fig.1 Normalized Radiant Intensity vs. Forward Current**

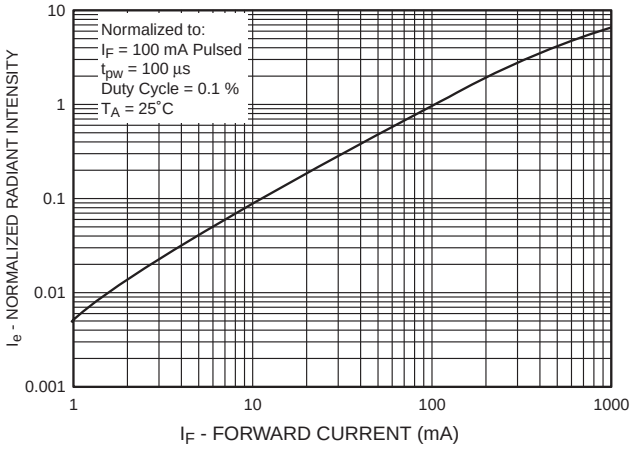



**Fig.2 Coupling Characteristics of QEE123 And QSE113**

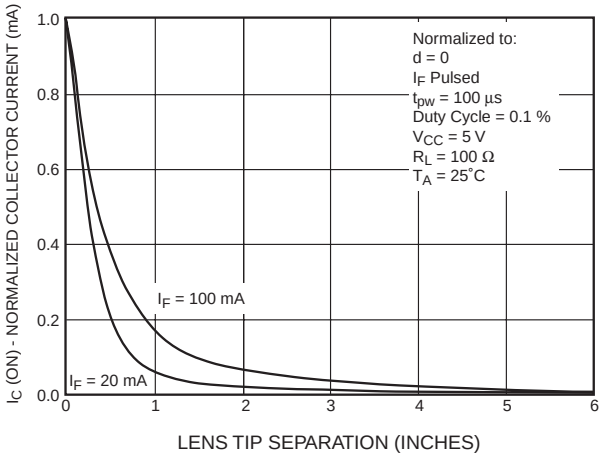



**Fig.3 Forward Voltage vs. Ambient Temperature**

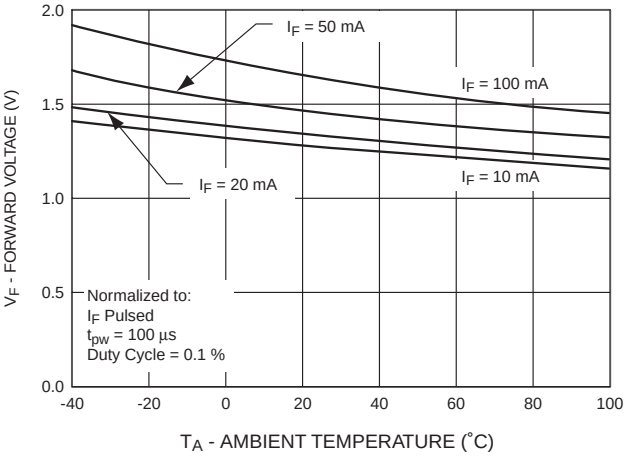



**Fig. 4 Normalized Intensity vs. Wavelength**

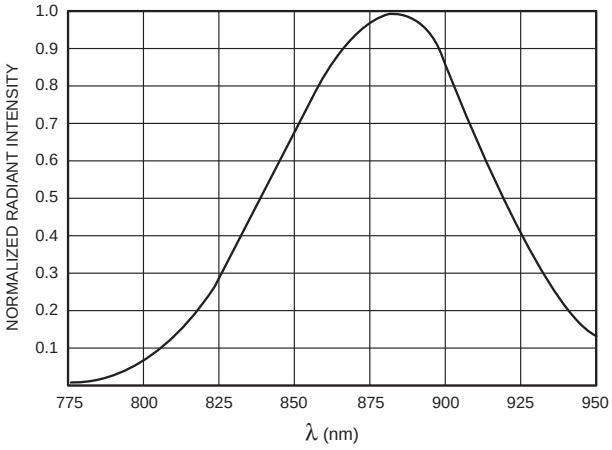
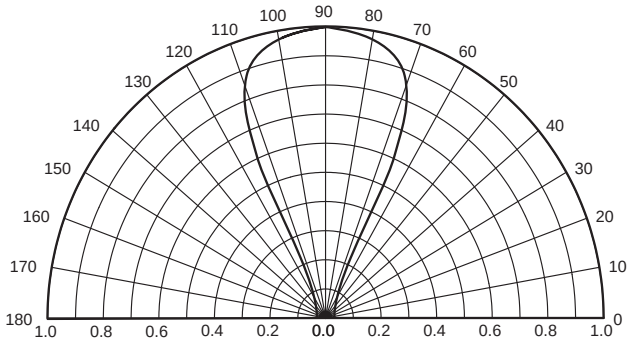



**Fig. 5 Radiation Diagram**




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# PLASTIC INFRARED LIGHT EMITTING DIODE

## QEE122 QEE123

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