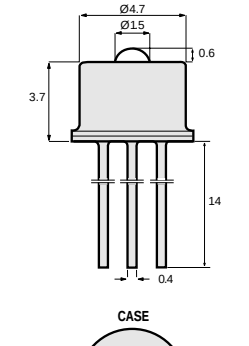
740nm **1A334** High-Performance LED

**Sensors**

The 740 nm wavelength is ideal for certain sensors and other applications where light visibility is needed. It is packaged in a hermetically sealed can for high reliability and maximum resistance to harsh operating environments.




The anode is in electrical contact with the case.

**TO-46 Package With Lens**

## Optical and Electrical Characteristics (25° C Case Temperature)

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION | |
|---|---|---|---|---|---|---|---|
| Fiber-Coupled Power | $P_{fiber}$ | 15 | 25 | | µW | $I_F$=80 mA (Note 1) | Fiber: 50/125µm Graded Index NA=0.20 |
| Rise and Fall Time (10-90%) | $t_r, t_f$ | | 10 | 15 | ns | $I_F$=80 mA (no bias) | |
| Bandwidth ($3dB_{el}$) | $f_c$ | | 35 | | MHz | $I_F$=80 mA | |
| Peak Wavelength | $\lambda_p$ | 720 | 740 | 760 | nm | $I_F$=80 mA | |
| Spectral Width (FWHM) | $\Delta\lambda$ | | 50 | | nm | $I_F$=80 mA | |
| Forward Voltage | $V_F$ | | 2.6 | 3.0 | V | $I_F$=80 mA | |
| Reverse Current | $I_R$ | | | 20 | µA | $V_R$=1V | |
| Capacitance | $C$ | | 250 | | pF | $V_R$=0V, f=1 MHz | |

**Note 1:** Measured at the exit of 100 meters of fiber.

## Absolute Maximum Ratings

| PARAMETER | SYMBOL | LIMIT |
|---|---|---|
| Storage Temperature | $T_{stg}$ | -55 to +125° C |
| Operating Temperature | $T_{op}$ | -55 to +125° C |
| Electrical Power Dissipation | $P_{tot}$ | 250 mW |
| Continuous Forward Current (f≤10 kHz) | $I_F$ | 80 mA |
| Peak Forward Current (duty cycle≤50%, f≥1 MHz) | $I_{FRM}$ | 130 mA |
| Reverse Voltage | $V_R$ | 1.5 V |
| Soldering Temperature (2mm from the case for 10 sec) | $T_{sld}$ | 260° C |

## Thermal Characteristics

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|
| Thermal Resistance - Infinite Heat Sink | $R_{thjc}$ | | | 100 | °C/W |
| Thermal Resistance - No Heat Sink | $R_{thja}$ | | | 400 | °C/W |
| Temperature Coefficient - Optical Power | $dP/dT_j$ | | -0.5 | | %/°C |
| Temperature Coefficient - Wavelength | $d\lambda/dT_j$ | | 0.3 | | nm/°C |

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