# OIL4

*TO-18 metal-glass packaged IR LED*

## General Description

High quality GaAlAs IR LED with high intensity parallel beam of light.

Special glass lens allows parallel beam with a medium divergence of ±5°.

The metal can covered with glass lens guarantees the high quality for this IR LED.

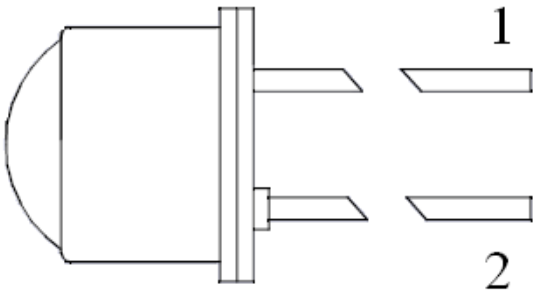
The high optical output power allows the use of this LED to get high photocurrent output from the photo sensors.

## Applications

IR Emitter for Encoder

Optical measurements

General Purpose




SIDE VIEW

## Features

- **GaAlAs LED**
- **Parallel Light Beam**
- **TO-18 Metal-Glass Case Enclosure**
- **Infrared Light Emitting at 880 nm**
- **RoHS Compliant**
- **Compatible with OIL10S04**

## Pin Functions

| No. | Name | Function |
|---|---|---|
| 1 | K | Cathode |
| 2 | A | Anode |

## Ordering information

| | |
|---|---|
| **OIL4** | GaAlAs IR Led in TO-18 Metal-Glass Case Emitting at 880 nm with a Medium Divergence of ±5° |

## ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Min | Max | Unit |
|---|---|---|---|---|
| $T_A$ | Operating Temperature Range | -30 | 100 | °C |
| $T_S$ | Storage Temperature | -30 | 100 | °C |
| $T_{Sol}$ | Lead Temperature (solder) 5s | | 260 | °C |
| $I_{F(max)}$ | Forward Current (DC) | | 100 | mA |
| $V_{R(BR)}$ | Reverse Voltage | | 5 | V |
| $I_{PEAK}$ | Pulse Current (duty cicle=0.001) | | 1 | A |
| $P_D$ | Power Dissipation @ $T_A$=25°C | | 180 | mW |

*Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rated conditions for extended periods may affect device reliability.*

## ELECTRICAL CHARACTERISTICS

*$T_A$ = 25°C unless otherwise noted.*

| Symbol | Parameter | Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| $V_F$ | Forward Voltage | $I_F$=50mA | | 1.45 | 1.8 | V |
| $I_R$ | Reverse Current | $V_R$=5V | | | 10 | µA |
| $P_0$ | Radiant Power | $I_F$=50mA | | 5 | | mW |
| $\lambda_P$ | Peak Emission Wavelength | $I_F$=50mA | | 880 | | nm |
| $\Delta\lambda$ | Spectral Bandwidth @ 50% | $I_F$=50mA | | 60 | | nm |
| $\theta$ | Half Width Beam Angle | | | ±5 | | deg |

## MECHANICAL DIMENSIONS

Units=mm  Mechanical tolerance=+/-0.2m