

General Description

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

Special glass lens allows parallel beam with a medium divergence of $\pm 20^\circ$.

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 photosensors.



Applications

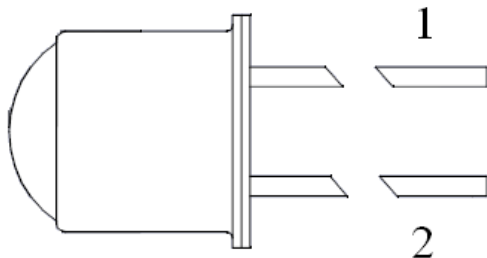
IR Emitter for Encoder

General Purpose

Features

- GaAIAs LED
- Parallel Light Beam
- TO-18 Metal-Glass Case Enclosure
- Infrared Light Emitting at 880 nm

Pin Functions



No.	Name	Function
1	K	Cathode
2	A	Anode

Ordering Information

OIL10S20	GaAIAs IR Led in TO-18 Metal-Glass Case Emitting at 880 nm with a Medium Divergence of $\pm 20^\circ$
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OIL10S20

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Min	Max	Unit
T_A	Operating Temperature Range	-30	80	°C
T_S	Storage Temperature	-30	80	°C
T_{Sol}	Lead Temperature (solder) 5s		230	°C
$I_{F(max)}$	Forward Current (DC)		100	mA
$V_{R(BR)}$	Reverse Voltage		5	V
I_{PEAK}	Pulse Current (duty cycle=0.001)		1	A
P_D	Power Dissipation @ $T_A=25^\circ\text{C}$		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

$T_A = 25^\circ\text{C}$ unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_F	Forward Voltage	$I_F=50\text{mA}$		1.4	1.7	V
I_R	Reverse Current	$V_R=3\text{V}$			10	μA
P_0	Radiant Power	$I_F=50\text{mA}$		7.5		mW
λ_P	Peak Emission Wavelength	$I_F=50\text{mA}$		880		nm
$\Delta\lambda$	Spectral Bandwidth @ 50%	$I_F=50\text{mA}$		60		nm
θ	Half Width Beam Angle			± 20		deg

MECHANICAL DIMENSIONS

Units=mm Mechanical tolerance= $\pm 0.2\text{mm}$

