OKI electronic components

OLD2202

GaAlAs Infrared Light Emitting Diode

GENERAL DESCRIPTION

The OLD2202 is a very high-output GaAlAs infrared light emitting diode sealed with an achromatic transparent epoxy resin. Its light emission wavelength peaks at 910 nm. The OLD2202 can be the most suitable combination with Si photodetectors.

FEATURES

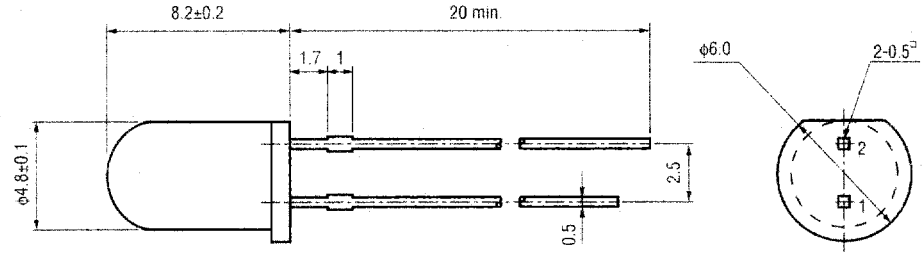
- Transparent resin sealed package
- Peak-emission wavelength : 910 nm
- Very high output power: 25 mW Typ. (I_F=100 mA)
- Compact and light-weighted

APPLICATIONS

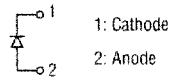
- Light source for optical readers and control equipment

PIN CONFIGURATION

(Unit: mm)



• Pin Connection Diagram



1: Cathode
2: Anode

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Test Condition	Rating	Unit
Forward Current	I_F	Ta=25°C	100	mA
Forward Current Derating Factor *1	—		1.82	mA/°C
Pulse Forward Current *2	I_{FRM}		1	A
Reverse Voltage	V_R		6	V
Power Dissipation	P_{tot}		200	mW
Operating Temperature	T_{opr}	—	−30 to +80	°C
Storage Temperature	T_{stg}	—	−30 to +80	°C
Lead Soldering Temperature *3	T_{sld}	—	260	°C

*1 Ta ≥ 25°C
*2 Pulse width tw=100 μs, cycle T=10,000 μs
*3 Within 5 seconds, at least 2 mm from base of lead

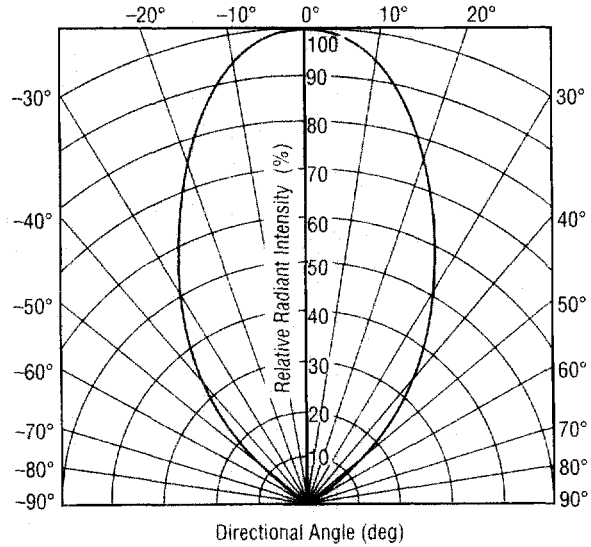
ELECTRICAL AND OPTICAL CHARACTERISTICS

(Ambient Temperature Ta=25°C)

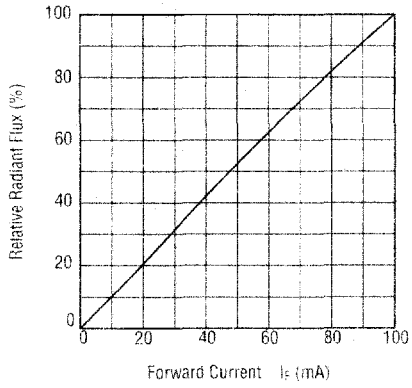
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=100 mA	—	1.55	2.0	V
Reverse Current	I_R	V_R=6 V	—	—	10	μA
Radiant Flux	ϕ_e	I_F=100 mA	15	25	—	mW
Peak-emission Wavelength	λp	I_F=100 mA	—	910	—	nm
Spectral Bandwidth	Δλ	I_F=100 mA	—	80	—	nm

TYPICAL CHARACTERISTICS

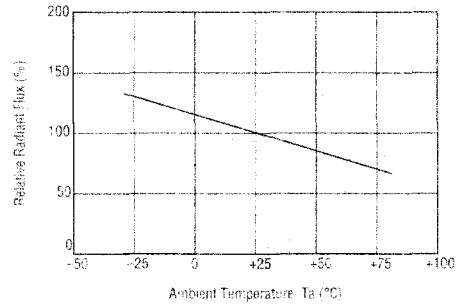
- **Directional Characteristic**



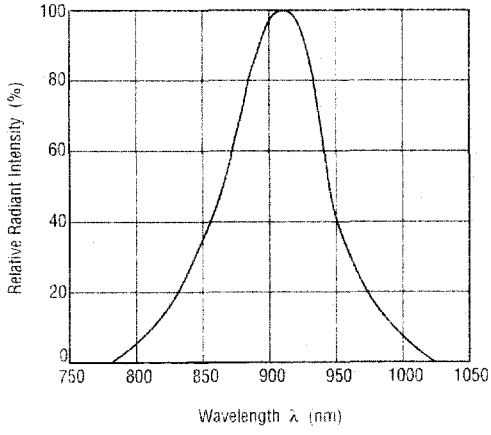
- **Radiant Flux vs. Forward Current (Ta=25°C)**



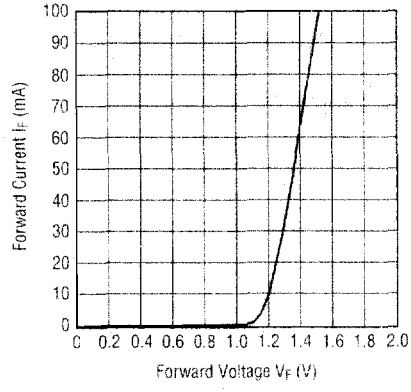
- **Radiant Flux vs. Ambient Temperature**



- **Spectral Distribution (Ta=25°C)**



- **DC Forward Current vs. Forward Voltage (Ta=25°C)**



- **Maximum Pulse Forward Current Tolerance**