OLD222

GaAs Infrared Light Emitting Diode

GENERAL DESCRIPTION

The OLD222 is a high-output GaAlAs infrared light emission diode sealed with a glass lens in a To-18 case. Its light emission wave is peaks at 910 nm. Because of its sharp directivity, multiple units can be mounted in close proximity and still maintain output isolation.

FEATURES

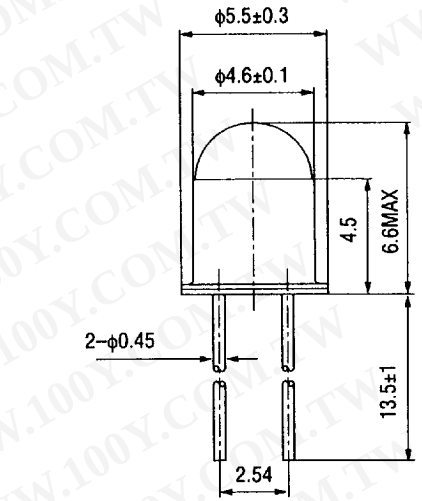
- Metal can package (with lens)
- 910 nm wavelength at peak emission
- Very high power: 14 mW_{TYP} (I_F=100 mA)
- Highly directional output
- Compact and light-weighted
- Long life

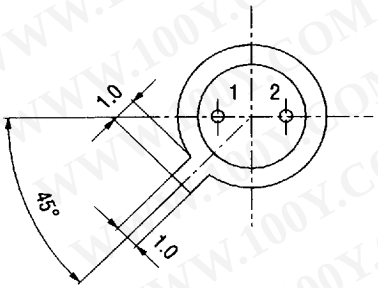
APPLICATIONS

- Light source for optical readers and control equipment

PIN CONFIGURATION

(Unit: mm)





• Pin Connection Diagram

1: Cathode
2: Anode

ABSOLUTE MAXIMUM RATINGS

(Ambient Temperature Ta=25°C)

Parameter	Symbol	Rating	Unit
Forward Current	I_F	100	mA
Forward Current Reduction Factor *1	—	1	mA/°C
Pulse Forward Current *2	I_{FM}	1	A
Reverse Voltage	V_R	6	V
Power Dissipation	P	200	mW
Operating Temperature	T_{opr}	−40 to +125	°C
Storage Temperature	T_{stg}	−55 to +125	°C
Lead Soldering Temperature *3	T_{sold}	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

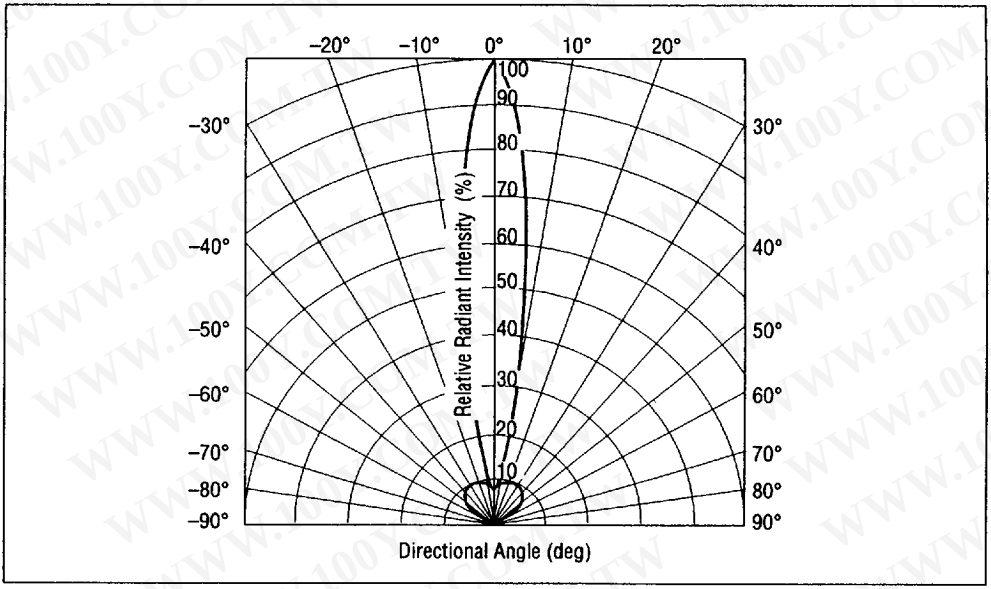
ELECTRICAL CHARACTERISTICS

(Ambient Temperature Ta=25°C)

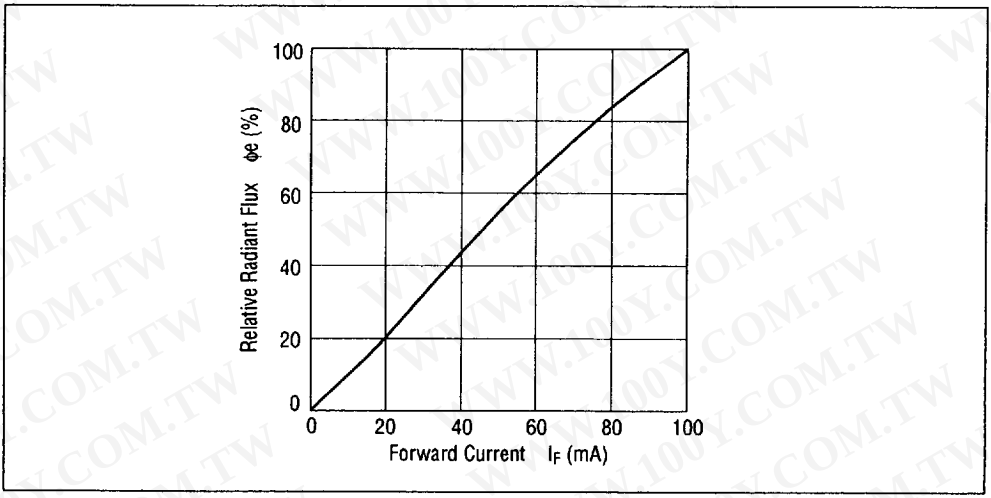
Parameter	Symbol	Text Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=100 mA	—	1.55	2.0	V
Reverse Current	I_R	V_R=6 V	—	—	10	μA
Radiant Flux	φe	I_F=100 mA	8	14	—	mW
Wavelength at Peak Emission	λp	I_F=100 mA	—	910	—	nm
Spectral Half Bandwidth	Δλ	I_F=100 mA	—	80	—	nm

TYPICAL CHARACTERISTICS

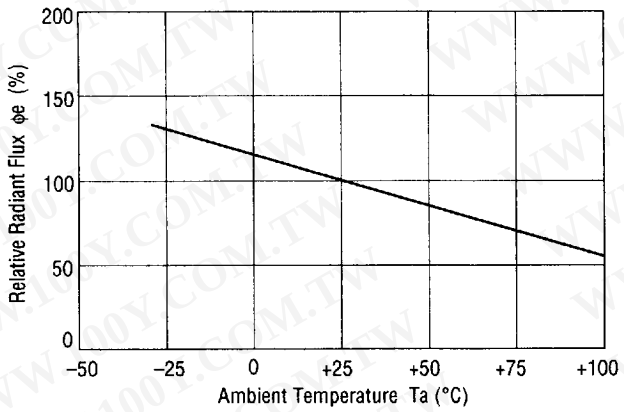
- **Directional Characteristic**



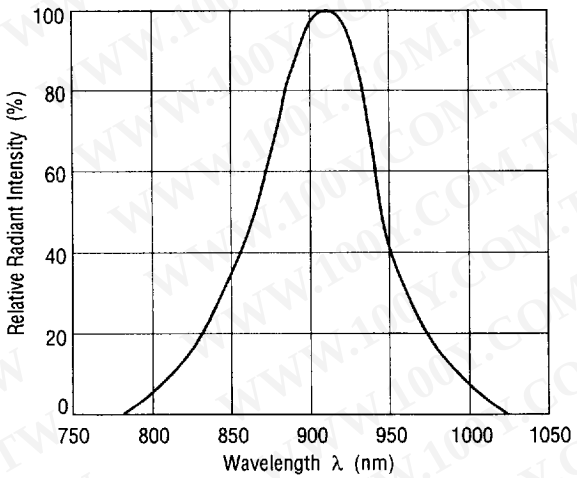
- **Radiant Flux vs. Forward Current (Ta=25°C)**



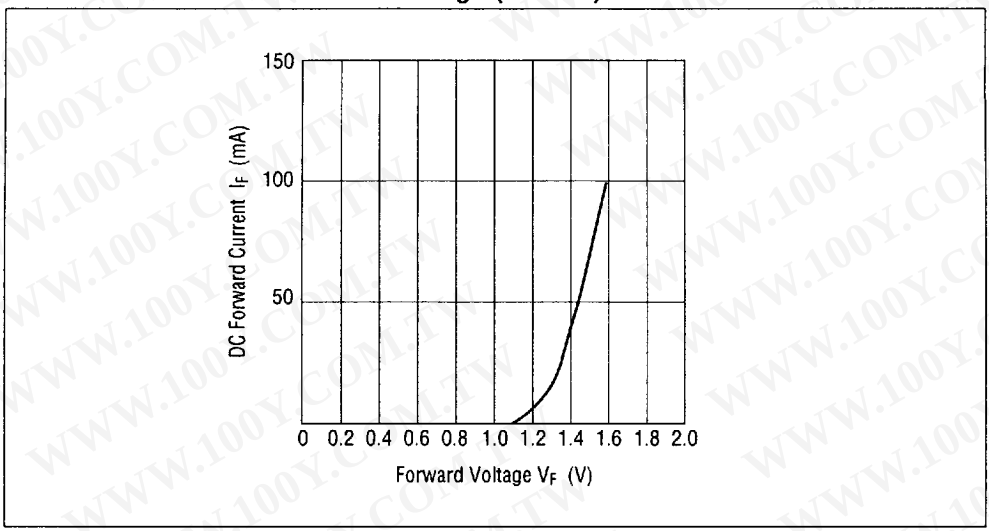
- **Radiant Flux vs. Ambient Temperature**



- **Spectral Distribution (Ta=25°C)**



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



- **Maximum Pulse Forward Current Tolerance**