Features

- High infrared radiant intensity
- Peak emission wavelength of 1220 nm
- Compact surface-mount package
- High reliability and stable optical performance
- Compatible with automated placement and reflow soldering processes

Applications

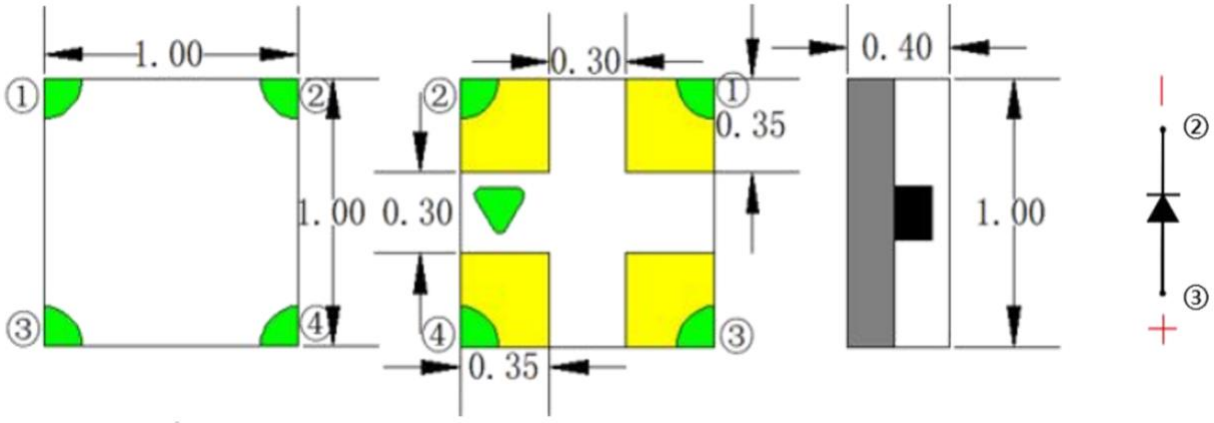
- Infrared sensing systems
- Optical detection modules
- Industrial automation sensors
- Optical measurement equipment
- Infrared communication systems

Description

The IN-S11TZTKUSWIR.1220 is a short-wave infrared emitting diode designed to provide high radiant output with a peak emission wavelength of 1220 nm.

The device is packaged in a compact surface-mount package suitable for automated assembly processes. It delivers stable optical performance and high reliability, making it suitable for a wide range of infrared sensing and detection applications

Package Dimensions in mm



Notes
1. All dimensions are in millimeters.
2. Tolerance is ± 0.1 mm unless otherwise noted

Absolute Maximum Rating T_A=25℃

Parameter	Symbol	Ratings	Unit
Power Dissipation	Pd	100	mW
Reverse Voltage	V_R	5	V
Forward Current	I_F	≤50	mA
Peak Forward Current*1	I_{FP}	100	mA
Operating Temperature	Topr	-40~+85	℃
Storage Temperature	Tstg	-40~+85	℃
Soldering Temperature*2	Tsol	245	℃

Notes
1. Pulse width≦100μs, Duty cycle= 10%.
2. 2mm from body for 5 seconds.

ESD Precaution

ATTENTION: Electrostatic Discharge (ESD) protection

The symbol above denotes that ESD precaution is needed. ESD protection for GaP and AlGaAs based chips is necessary even though they are relatively safe in the presence of low static-electric discharge. Parts built with AlInGaP, GaN, or/and InGaN based chips are STATIC SENSITIVE devices. ESD precaution must be taken during design and assembly.
If manual work or processing is needed, please ensure the device is adequately protected from ESD during the process.

Please be advised that normal static precautions should be taken in the handling and assembly of this device to prevent damage or degradation which may be induced by electrostatic discharge (ESD).

Electro-Optical Characteristics T_A=25℃

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Luminous intensity	Ie	IF=20mA	--	1.6	--	mW/sr
Peak Wavelength	λp	IF=20mA	--	1220	--	nm
Dominant Wavelength	λd	IF=20mA	1200	--	1300	nm
Forward Voltage	VF	IF=20mA	0.5	--	1.8	V
Reverse Current	IR	VR=5V	--	--	10	μA
View Angle	2θ1/2	IF=20mA	--	120	--	deg

Revision History

Changes since last revision	Page	Version No.	Revision Date
Preliminary version		0.1	03-11-2026

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