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I2CA3111A

- **IR Light Emitting Diode**
- **780 nm, 50 mW**
- **3 mm UV-resistant clear epoxy resin**
- **Beam Half Angle: ± 7.5°**

RoHS COMPLIANT Pb-Free

Description

I2CA3111A is an infrared LED, typically emitting at **780 nm** with an optical output power of **50 mW @ 50 mA**. It comes in a hermetically sealed clear 3 mm **UV-resistant** clear epoxy resin with a beam angle of 15°

Maximum Rating (T_{CASE} = 25°C)

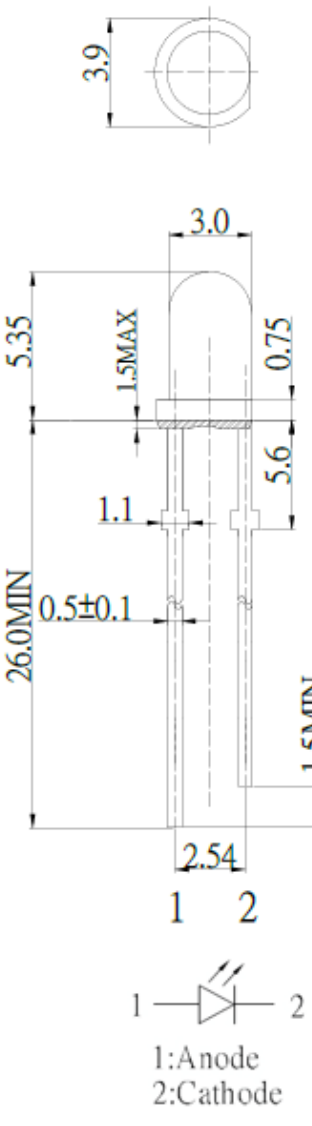
Parameter	Symbol	Values Min.	Values Max.	Unit
Power Dissipation, DC	P_D		150	mW
DC Forward Current*	I_F		70	mA
Pulse Forward Current*	I_{FP}		300	mA
Reverse Voltage	V_R		5	V
Operating Temperature	T_{OPR}	- 30	+ 85	°C
Storage Temperature	T_{STG}	- 40	+ 100	°C
Soldering Temperature (max 5s)	T_{SOL}		+ 260	°C

***** ***Duty cycle max. 10%, Pulse width max 10ms***

Electro-Optical Characteristics (T_{CASE} = 25°C, I_F = 50 mA)

Parameter	Symbol	Values Min.	Values Typ.	Values Max.	Unit
Peak Wavelength	λ_P	765	780	795	nm
Forward Voltage	V_F		1.8	2.2	V
Reverse Current (V_R = 5V)	V_R			10	µA
Radiant Flux	Φ_E	40	50		mW
Radiant Intensity	I_E	180	220		mW/Sr
Beam Half Angle	$\Theta_{1/2}$		7.5		deg.

mm



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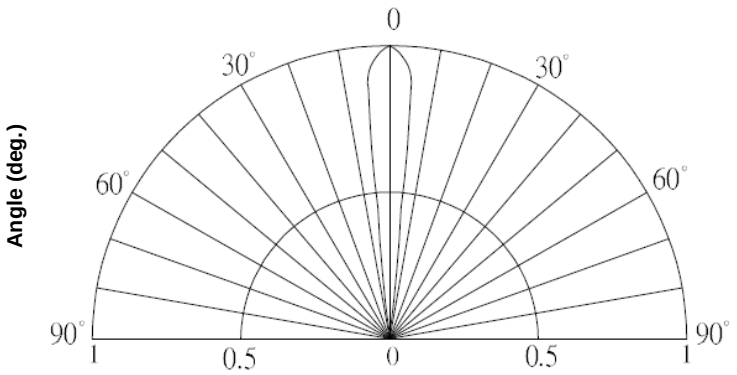
Performance Characteristics

Radiation Characteristics



General Notes

Soldering

- Do avoid overheating of the LED
- Do avoid electrostatic discharge (ESD)
- Do avoid mechanical stress, shock, and vibration
- Do only use non-corrosive flux
- Do not apply current to the LED until it has cooled down to room temperature after soldering

Cleaning

- **Cleaning with isopropyl alcohol, propanol, or ethyl alcohol is recommended**
- DO NOT USE acetone, chloroseen, trichloroethylene, or MKS
- DO NOT USE ultrasonic cleaners

Static Electricity

- **LEDs are sensitive to electrostatic discharge (ESD)**.
- Precautions against ESD must be taken when handling or operating these LEDs
- Surge voltage or electrostatic discharge can result in complete failure of the LED.

Radiation

- During operation these LEDs do emit light, which **could be hazardous to skin and eyes**
- Do avoid exposure to the emitted light. Protective glasses if needed
- It is further advised to attach a warning label on products/systems.

Operation

- **Do *only* operate LEDs with a current source.**
- Running these LEDs from a voltage source will result in complete failure of the device.
- Usage of current regulated drive circuits is mandatory.