



05CA5111P

- Orange LED
- 605 nm, 40-55 cd
- 5 mm Clear Epoxy Resin
- Viewing Angle: 15°



Description



05CA5111P contains one LED chip die mounted on a lead frame hermetically sealed with a clear epoxy lens. On forward bias, the typical intensity is **55 cd** at a dominant wavelength at **605 nm**.

Maximum Ratings $(T_{CASE}=25^{\circ}C)$

Parameter	Symbol	Values		Unit
		Min.	Max.	
Power Dissipation	P_D		182	mW
Forward Current	I_F		70	mA
Pulse Forward Current *1	I_{FP}		120	mA
Reverse Voltage	V_F		5	V
Operating Temperature	T_{CASE}	- 30	+ 85	°C
Storage Temperature	T_{STG}	- 40	+ 100	°C
Lead Solder Temperature *2	T_{SLD}		+ 260	°C

*1 duty=1%, pulse width = 10 μ s

*2 must be completed within 3 seconds

Electro-Optical Characteristics $(T_{CASE}=25^{\circ}C)$

Parameter	Symbol	Conditions	Values			Unit
			Min.	Typ.	Max.	
Dominant Wavelength *1	λ_D	$I_F=70mA$	600	605	610	nm
Forward Voltage *2	V_F	$I_F=70mA$	2.0	2.3	2.6	V
Reverse Current	I_R	$V_R=5V$			10	μ A
Luminous Intensity *3	I_V	$I_F=70mA$	40	55		cd
Viewing Angle	φ	$I_F=70mA$		15		deg.

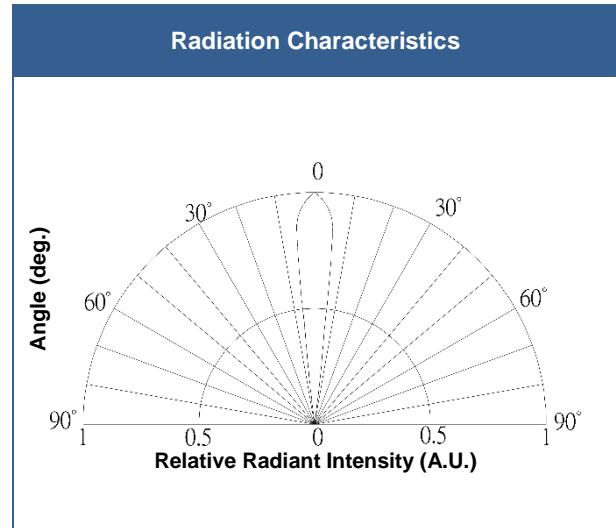
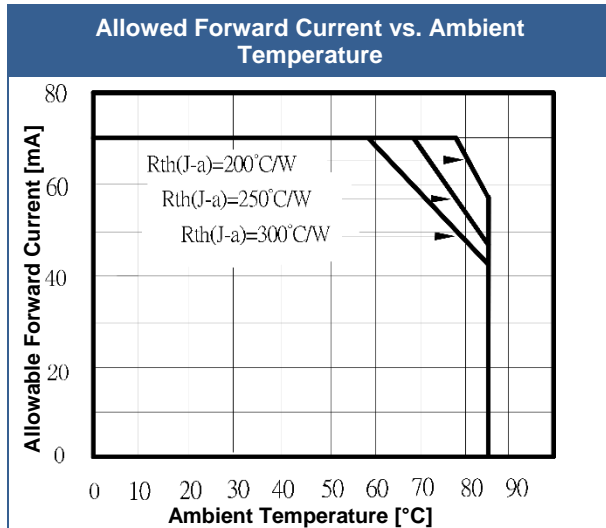
*1 tolerance: ± 1 nm

*2 tolerance: $\pm 15\%$

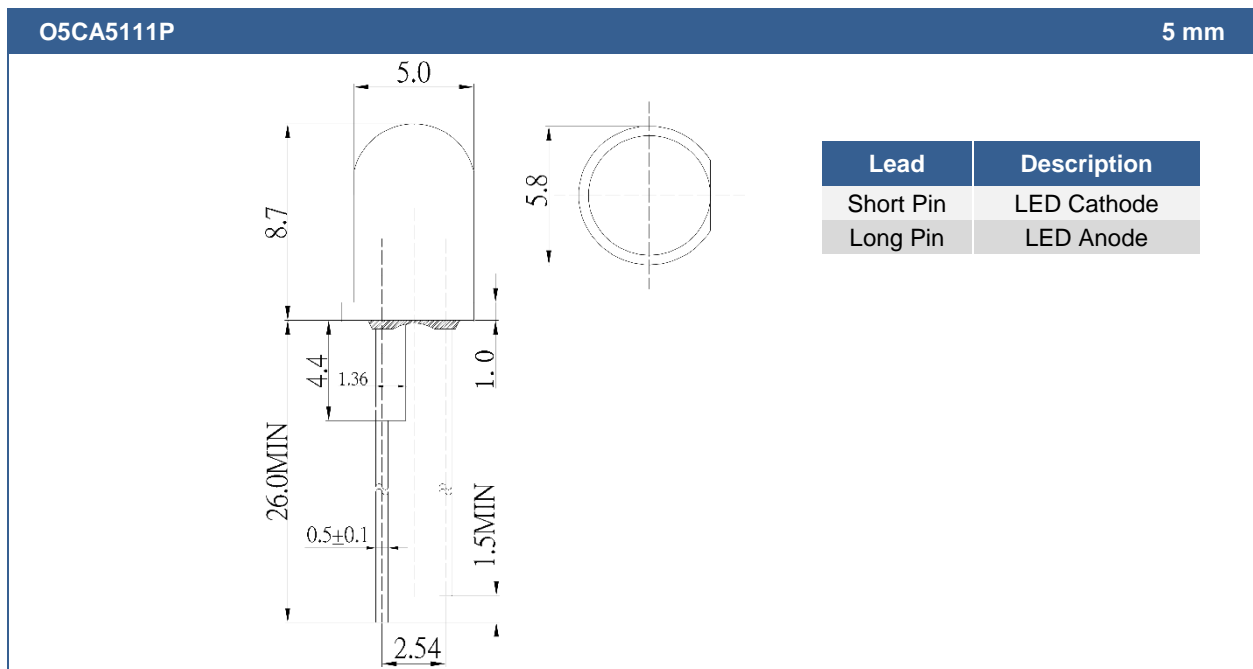
*3 tolerance: ± 0.1 V



Typical Performance Curves



Outline Dimensions



All Dimensions in mm
Tolerance: ± 0.3 mm

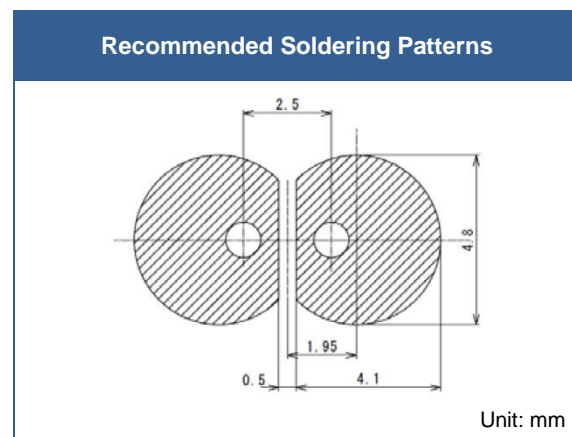
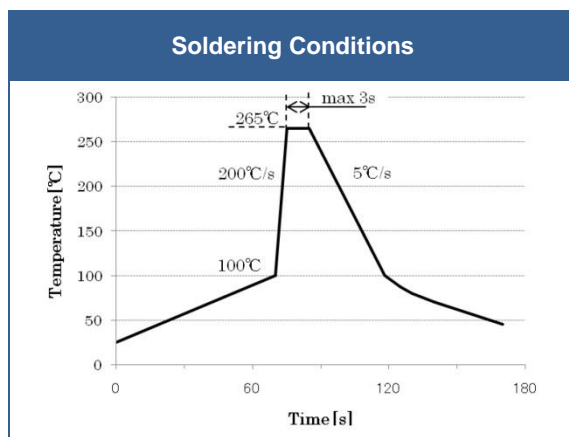


Precautions

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
- Do not solder the LED closer than 3 mm from the base of the lead.

Recommended soldering conditions:



Above table specifies the maximum allowed duration and temperature during soldering. It is strongly advised to perform soldering at the shortest time and lowest temperature possible.

Cleaning:

Cleaning with isopropyl alcohol, propanol, or ethyl alcohol is recommended

DO NOT USE acetone, chloroform, 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 device.

Radiation:

During operation LEDs do emit light, which could be hazardous to skin and eyes, and may cause cancer. Do avoid exposure to the emitted light wear 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.

Current of a LED is an exponential function of the voltage across it. Usage of current regulated drive circuits is mandatory.