

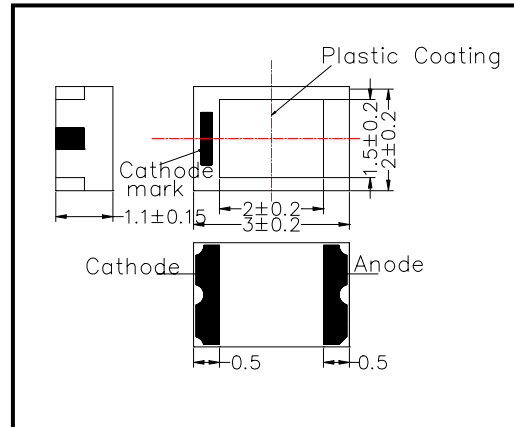
SMC870 (SMC870N) High Performance infrared SMD LED on ceramics

SMC870 consists of an AlGaAs LED mounted on the ceramics package and is sealed with silicone or epoxy resin.

◆ Specifications

1) Product Name	SMD type infrared LED
2) Type No.	SMC870
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	870nm typ.
4) Package	
(1) Package	Ceramics
(2) Lens	Silicone or Epoxy resin

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Rating

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	160	mW	T _a =25°C
Forward Current	I _F	100	mA	T _a =25°C
Pulse Forward Current	I _{FP}	500	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-20 ~ +85	°C	
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	240	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 3 seconds at 240°C

◆ Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA		1.50	1.70	V
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =50mA	5.0	12.0		mW
Radiant Intensity	I _E	I _F =50mA	2.5	6.0		mW/sr
Peak Wavelength	λ _P	I _F =50mA	860	870	880	nm
Half Width	Δλ	I _F =50mA		35		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±55		deg.
Rise Time	t _r	I _F =50mA		15		ns
Fall Time	t _f	I _F =50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.