

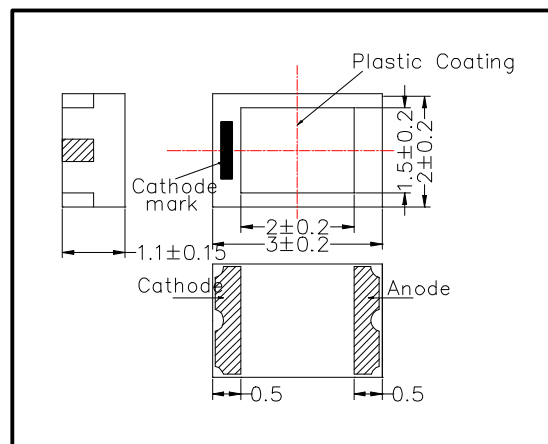
SMC850 (SMC850N) High Performance infrared SMD LED on ceramics

SMC850 consists of an AlGaAs LED mounted on the ceramics package and is sealed with silicone or epoxy resin.
It emits a spectral band of radiation at 850nm.

Specifications

- 1) Product Name SMD type infrared LED
- 2) Type No. SMC850
- 3) Chip
 - (1) Chip Material AlGaAs
 - (2) Peak Wavelength 850nm 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	$T_a=25^{\circ}\text{C}$
Forward Current	I_F	100	mA	$T_a=25^{\circ}\text{C}$
Pulse Forward Current	I_{FP}	500	mA	$T_a=25^{\circ}\text{C}$
Reverse Voltage	V_R	5	V	$T_a=25^{\circ}\text{C}$
Operating Temperature	T_{OPR}	$-20 \sim +85$	$^{\circ}\text{C}$	
Storage Temperature	T_{STG}	$-30 \sim +100$	$^{\circ}\text{C}$	
Soldering Temperature	T_{SOL}	240	$^{\circ}\text{C}$	

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

‡Soldering condition : Soldering condition must be completed within 3 seconds at 260°C

Electro-Optical Characteristics [$T_a=25^{\circ}\text{C}$]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F=50\text{mA}$		1.50	1.70	V
Reverse Current	I_R	$V_R=5\text{V}$			10	μA
Total Radiated Power	P_O	$I_F=50\text{mA}$	5.0	12.0		mW
Radiant Intensity	I_E	$I_F=50\text{mA}$	3.0	6.0		mW/sr
Peak Wavelength	λ_P	$I_F=50\text{mA}$		850		nm
Half Width	$\Delta\lambda$	$I_F=50\text{mA}$		35		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F=50\text{mA}$		± 55		deg.
Rise Time	t_r	$I_F=50\text{mA}$		30		ns
Fall Time	t_f	$I_F=50\text{mA}$		25		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.