

SMT870N High Performance Infrared TOP IR LED

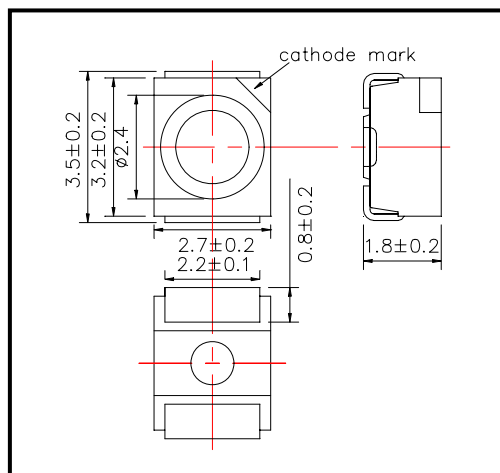
SMT870N consists of an AlGaAs LED mounted on the lead frame as TOP LED package and is 20mW typical of output power.

It emits a spectral band of radiation at 870nm.

◆ Outer dimension (Unit: mm)

◆ Specifications

- | | |
|---------------------|---------------|
| 1) Product Name | TOP IR LED |
| 2) Type No. | SMT870N |
| 3) Chip | |
| (1) Chip Material | AlGaAs |
| (2) Chip Dimension | 0.4mm*0.4mm |
| (3) Peak Wavelength | 870nm typ. |
| 4) Package | |
| (1) Lead Frame Die | Silver Plated |
| (2) Package Resin | PPA Resin |
| (3) Lens | Epoxy Resin |



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

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	160	mW	Ta=25°C
Forward Current	IF	100	mA	Ta=25°C
Pulse Forward Current	IFP	1,000	mA	Ta=25°C
Reverse Voltage	VR	5	V	Ta=25°C
Operating Temperature	TOPR	-20 ~ +80	°C	
Storage Temperature	TSTG	-30 ~ +80	°C	
Soldering Temperature	TSOL	240	°C	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 230°C

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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.45	1.60	V
		IF=100mA, tp=20ms		1.50	1.8	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power	PO	IF=50mA DC	15.0	20.0		mW
		IF=100mA, tp=20ms		40.0		
Radiant Intensity	IE	IF=50mA DC		10		mW/sr
		IF=100mA, tp=20ms		20		
Peak Wavelength	λP	IF=50mA DC	860	870	880	nm
Half Width	Δλ	IF=50mA DC		40		nm
Viewing Half Angle	θ 1/2	IF=50mA DC		±63		deg.
Rise Time	tr	IF=50mA DC		15		ns
Fall Time	tf	IF=50mA DC		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.