

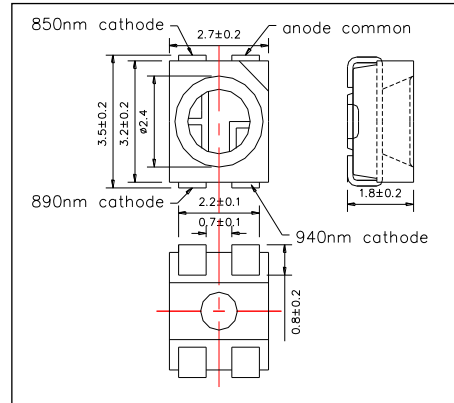
**SMT850/890/940a**

Tri-Color TOP LED

SMT850/890/940a consists of an AlGaAs LEDs mounted on the lead frame as TOP LED package and is sealed with epoxy resin.

It emits a spectral band of radiation at 850, 890 and 940nm at anode common.

Outer Dimension (Unit:mm)



<Specifications>

1. Product Name: Tri-Color TOP LED
2. Type Number: SMT850/890/940a
3. Chip:
  - Chip Material: AlGaAs
  - Peak Wavelength: 850,890,940nm
4. Package
  - Lead Frame Die: Silver Plated
  - Package Resin: PPA Resin
  - Lens: Epoxy Resin

Absolute Maximum Ratings [Ta=25°C]					
Item	Symbol	Maximum Rated Value			Unit
		850nm	890nm	940nm	
Power Dissipation	PD	160	190	210	mW
Forward Current	IF	100	75	100	mA
Pulse Forward Current*	IFP	500			mA
Reverse Voltage	VR	5			V
Junction Temperature	Tj	100			°C
Thermal Resistance	Rthja	190			K/W
Operating Temperature	TOPR	-30 ~ +80			°C
Storage Temperature	TSTG	-40 ~ +80			°C
Soldering Temperature**	TSOL	250			°C

\* Duty=1% and Pulse width=10µs

\*\* Soldering condition must be completed within 5 second at 250°C.

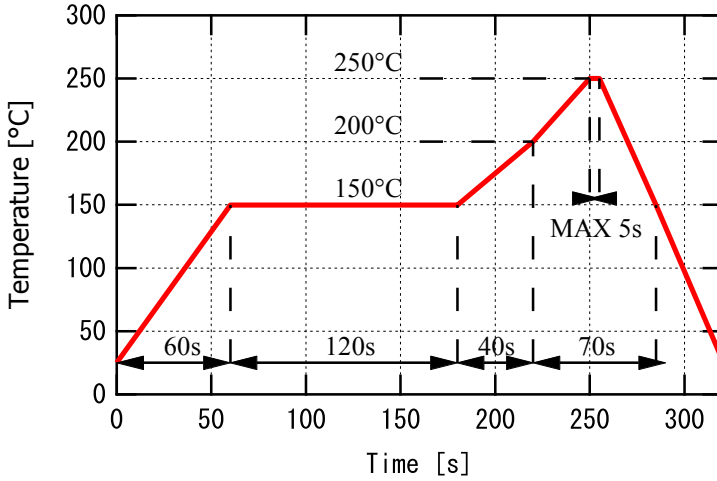
Electro-Optical Characteristics [Ta=25°C ]												
Item	Symbol	Condition	Minimum			Typical			Maximum			Unit
			850	890	940	850	890	940	850	890	940	
Forward Voltage	VF	IF=50mA				1.6	1.4	1.3	1.8	1.7	1.4	V
Reverse Current	IR	VR=5V							10			µA
Total Radiated Power*	PO	IF=50mA	8	6	4	14	10	8				mW
Radiant Intensity	IE	IF=50mA	4	3	2	8	6	4				mcd
Peak wavelength	λP	IF=50mA				850	890	940				nm
Half Width	Δλ	IF=50mA				40	50	50				nm
Viewing Half Angle	θ1/2	IF=50mA				±55						deg

\* Measured by Photodyne #500

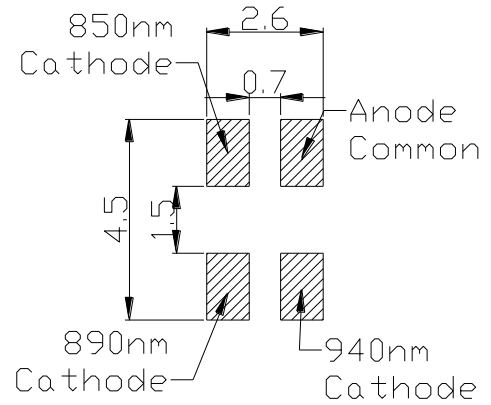


◆ SMD Application

Recommended reflow soldering profile



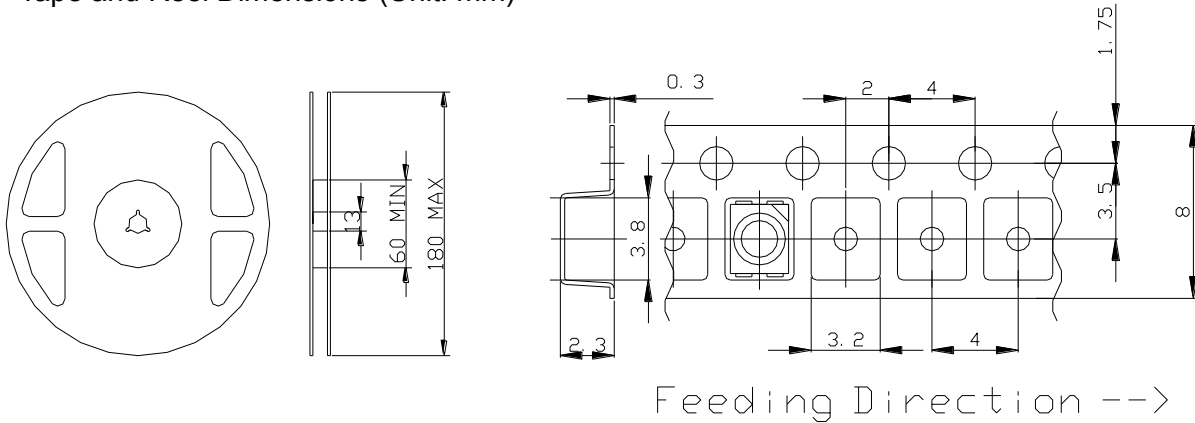
Recommended Land Layout (Unit: mm)



Don't put stress on SMD and a circuit board after soldering.

◆ SMD Packing

Tape and Reel Dimensions (Unit: mm)



◆ Wrapping

Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.