

SMT735/780/810a

Tri-Color TOP LED

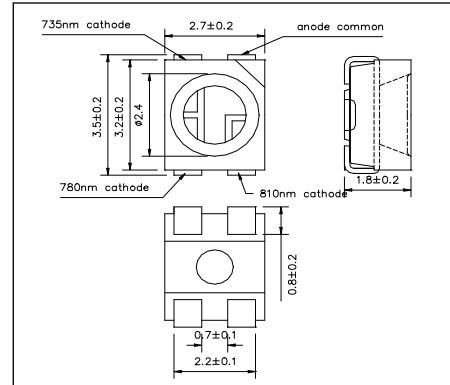
SMT735/780/810a consists of DDH AlGaAs LEDs mounted on the lead frame as TOP LED package and is sealed with epoxy resin.

It emits a spectral band of radiation at 735, 780 and 810nm at anode common.

<Specifications>

1. Product Name: Tri-Color TOP LED
2. Type Number: SMT735/780/810
3. Chip:
 - Chip Material: AlGaAs
 - Peak Wavelength: 735,780,810nm
4. Package
 - Lead Frame Die: Silver Plated
 - Package Resin: PPA Resin
 - Lens: Epoxy Resin

Outer Dimension (Unit:mm)



Absolute Maximum Ratings [Ta=25°C]					
Item	Symbol	Maximum Rated Value			Unit
		735nm	780nm	810nm	
Power Dissipation	PD	165	190	210	mW
Forward Current	IF	75	75	100	mA
Pulse Forward Current*	IFP	300	500	500	mA
Reverse Voltage	VR	5			V
Junction Temperature	Tj	100			°C
Thermal Resistance	Rthja	190			K/W
Operating Temperature	TOPR	-20 ~ +80			°C
Storage Temperature	TSTG	-30 ~ +80			°C
Soldering Temperature**	TSOL	255			°C

* Duty=1% and Pulse width=10μs

** Soldering condition must be completed within 10 second at 255°C.

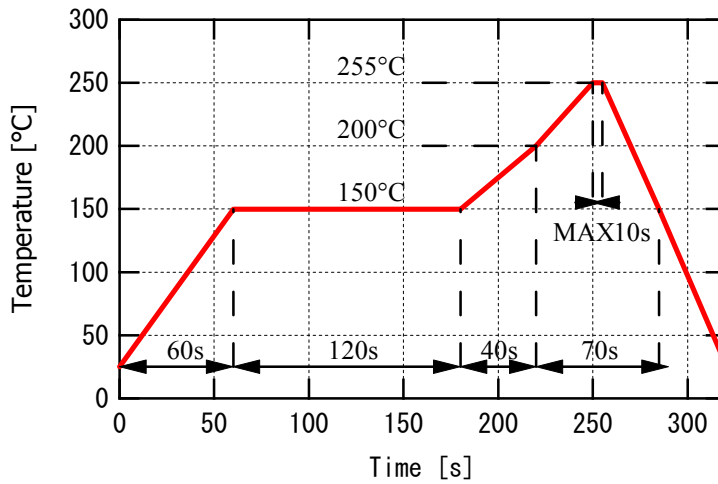
Electro-Optical Characteristics [Ta=25°C]												
Item	Symbol	Condition	Minimum			Typical			Maximum			Unit
			735	780	810	735	780	810	735	780	810	
Forward Voltage	VF	IF=50mA				1.8	1.7	1.6	2.1	2.0	2.0	V
Reverse Current	IR	VR=5V							10			uA
Total Radiated Power*	PO	IF=50mA	8	10	10	12	16	17				mW
Radiant Intensity	IE	IF=50mA	3	4	4	6	8	8				mcd
Peak wavelength	λP	IF=50mA	725	770	800	735	780	810	745	790	820	nm
Half Width	Δλ	IF=50mA				25	30	30				nm
Viewing Half Angle	θ1/2	IF=50mA				±55						deg

* Measured by Photodyne #500

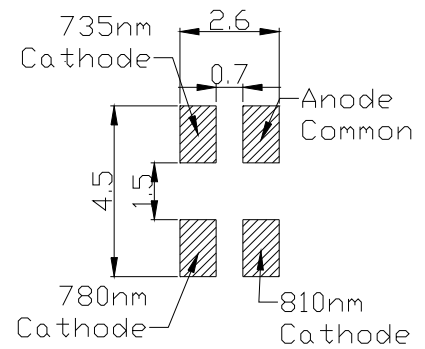


SMD Application

Recommended reflow soldering profile



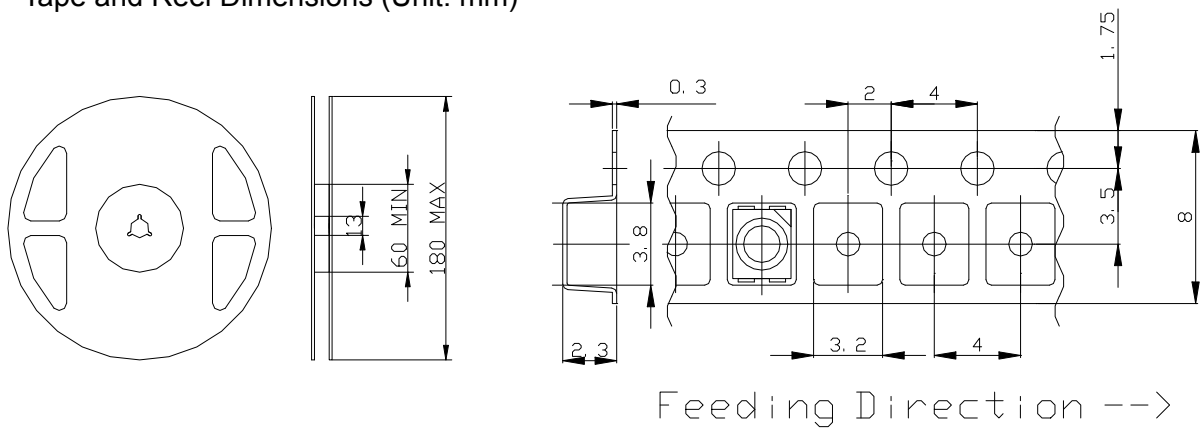
Recommended Land Layout (Unit: mm)



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.