

SMT850D-50-27

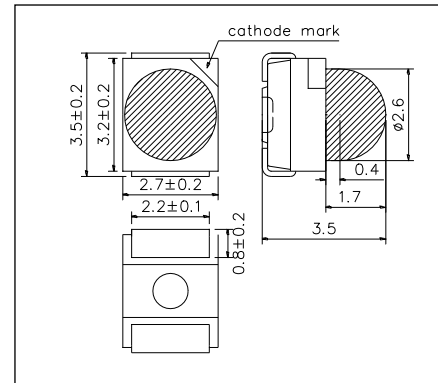
High Performance Infrared TOP IR LED with Lens

SMT850D-50-27 consists of a large AlGaAs LED mounted on the lead frame as TOP LED package with plastic ball lens. It is 24mW typical of output power and 25mW/sr of radiant intensity. This is suitable for strobe flash light and able to emit 1W/sr light operating at pulsed current 2A under 3.2V type. It emits a spectral band of radiation at 850nm.

<Specifications>

1. Product Name: TOP IR LED
2. Type Number: SMT850D-50-27
3. Chip:
 - Chip Material: AlGaAs
 - Dimension: 500um x 500nm
 - Peak Wavelength: 850nm
4. Package
 - Lead Frame Die: Silver Plated
 - Package Resin: PPA Resin
 - Lens: Epoxy Resin
 - Diameter: $\Phi 2.6$ mm

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25°C]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	160	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	2000	mA
Reverse Voltage	VR	5	V
Operating Temperature	TOPR	-20 ~ +80	°C
Storage Temperature	TSTG	-30 ~ +80	°C
Soldering Temperature**	TSOL	255	°C

* Duty=1% and Pulse Width=10us.

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

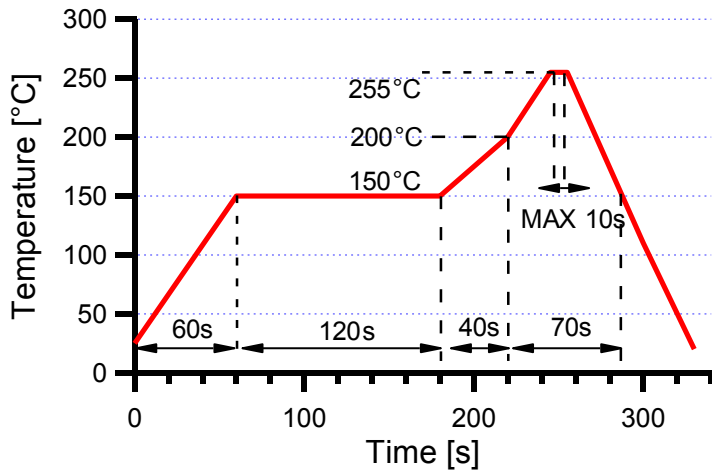
Electro-Optical Characteristics [Ta=25°C]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.45	1.60	V
		IFP=2A		3.3	4.0	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=50mA DC	17	24		mW
Radiant Intensity**	IE	IF=50mA DC		25		mW/sr
		IFP=2A		1000		
Peak Wavelength	λP	IF=50mA DC	835	850	865	nm
Half Width	$\Delta\lambda$	IF=50mA DC		28		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA DC		± 28		deg
Rise Time	tr	IF=50mA DC		15		ns
Fall Time	tf	IF=50mA DC		10		ns

* Measured by Photodyne #500

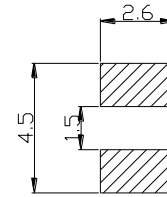
** Measured by Tektronix J-6512



◆ SMD Application
IR-Reflow Soldering Profile for lead free soldering

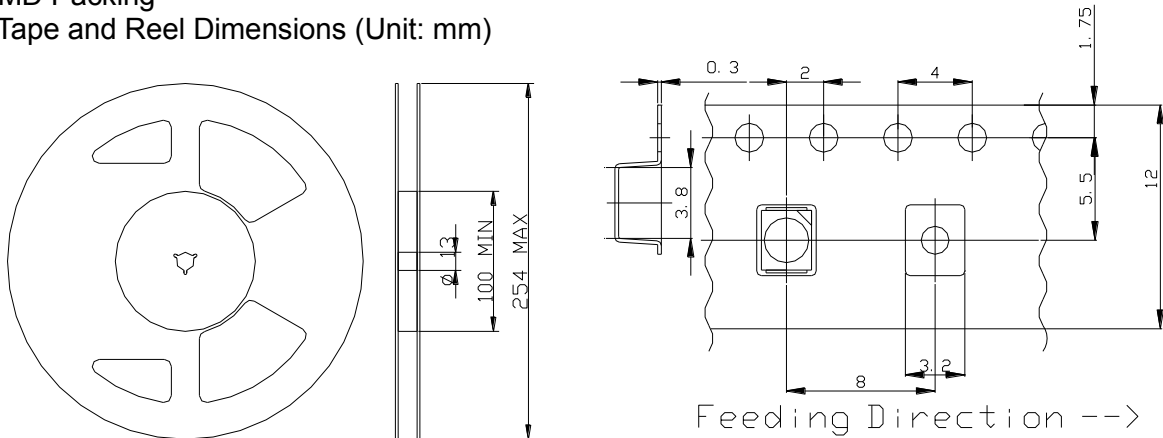


Recommended Land Layout (Unit: mm)



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.