SMT830N-23

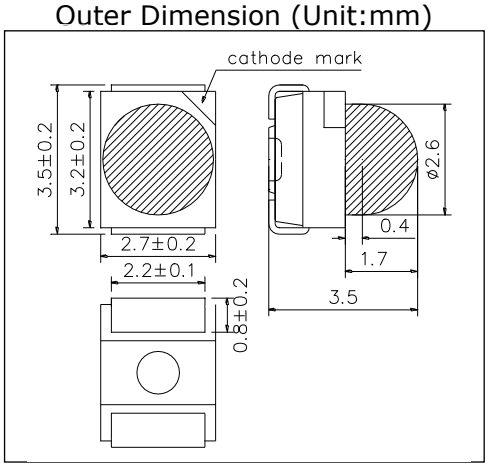
High Performance Infrared TOP IR LED with Lens

SMT830N-23 consists of an AlGaAs LED mounted on the lead frame as TOP LED package with plastic ball lens.It is 22mW typical of output power and 40mW/sr of radiant intensity. It emits a spectral band of radiation at 830nm.

<Specifications>

1. Product Name: TOP IR LED
2. Type Number: SMT830N-23
3. Chip:
   - Chip Material: AlGaAs
   - Dimension: 400um x 400nm
   - Peak Wavelength: 830nm
4. Package
   - Lead Frame Die: Silver Plated
   - Package Resin: PPA Resin
   - Lens: Epoxy Resin
   - Diameter: Φ2.6mm

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	160	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	200	K/W
Junction Temperature	Tj	100	℃
Operating Temperature	TOPR	-40 ~ +80	℃
Storage Temperature	TSTG	-40 ~ +80	℃
Soldering Temperature**	TSOL	250	℃

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

**Soldering condition must be completed within 5 second at 250℃.

Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.45	1.65	V
		IF=100mA, tp=20ms		1.50	1.90	
Reverse Current	IR	VR=5V			-	uA
Total Radiated Power*	PO	IF=50mA DC	18	22		mW
		IF=100mA, tp=20ms		44		
Radiant Intensity**	IE	IF=50mA DC		40		mW/sr
		IF=100mA, tp=20ms		80		
Peak Wavelength	λP	IF=50mA DC	820	830	840	nm
Half Width	Δλ	IF=50mA DC		40		nm
Viewing Half Angle	θ1/2	IF=50mA DC		±15		deg
Rise Time	tr	IF=50mA DC		25		ns
Fall TIme	tf	IF=50mA DC		20		ns

* Measured by Photodyne #500

** Measured by Tektronix J-6512

RoHS Compliant

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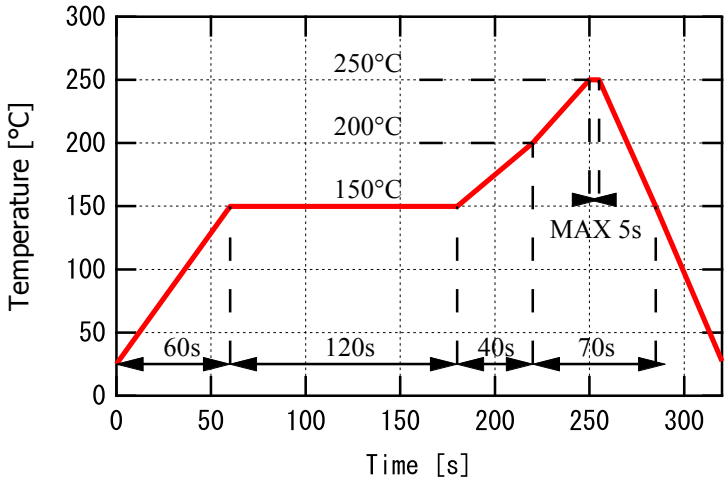
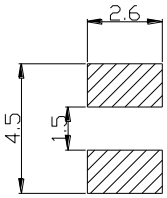
◆SMD Application

IR-Reflow Soldering Profile for lead free soldering



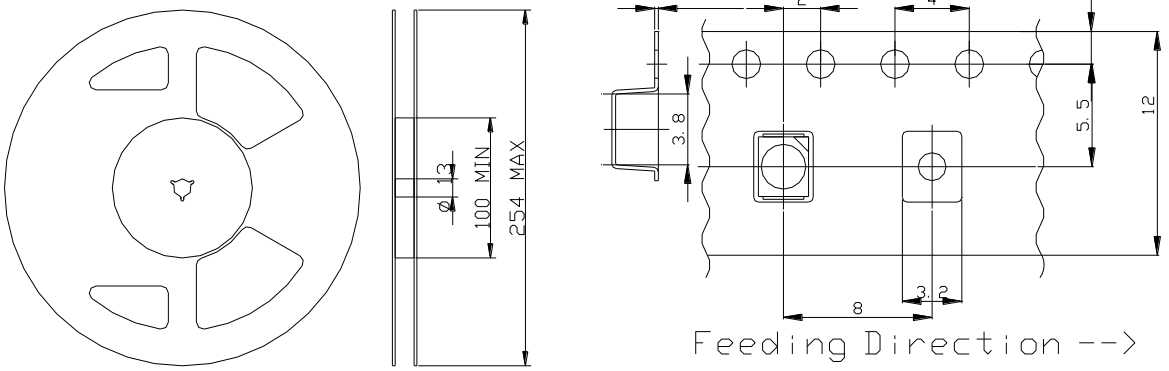
Recommended Land Layout (Unit: mm)



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.