

SMT1070-23

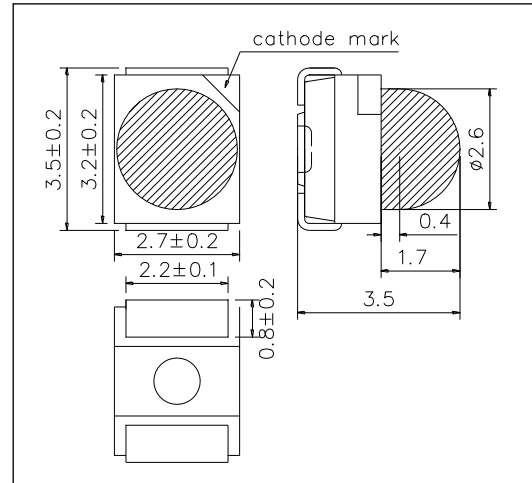
High Performance Infrared Top LED with Lens

SMT1070-23 consists of an InGaAsP LED mounted on the lead frame as Top LED package with plastic ball lens and is 6.0mW typical of output power and +/-15° of viewing half angle. It emits a spectral band of radiation at 1070nm.

<Specifications>

1. Product Name: Top IR LED
2. Type Number: SMT1070-23
3. Chip:
 - Material: InGaAsP
 - Dimension: 350um x 350nm
 - Peak Wavelength: 1070nm typ.
4. Package
 - Lead Frame Die: Silver Plated
 - Resin Material: 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	140	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	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=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
Forward Voltage	VF	IF=50mA		1.15	1.35	V
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power*	PO	IF=50mA		6.0		mW
Radiant Intensity	IE	IF=50mA				mW/sr
Peak Wavelength	λP	IF=50mA	1030	1070	1110	nm
Half Width	Δλ	IF=50mA		100		nm
Viewing Half Angle	θ1/2	IF=50mA		±15		deg
Rise Time	Tr	IF=50mA		20		Ns
Fall Time	tf	IF=50mA		20		ns

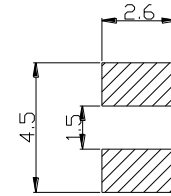
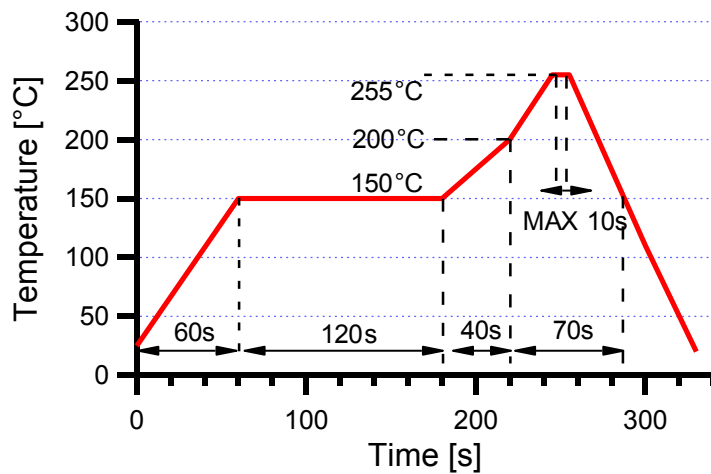
* Measured by Ando AQ2140/2742



SMD Application

IR-Reflow Soldering Profile for lead free soldering

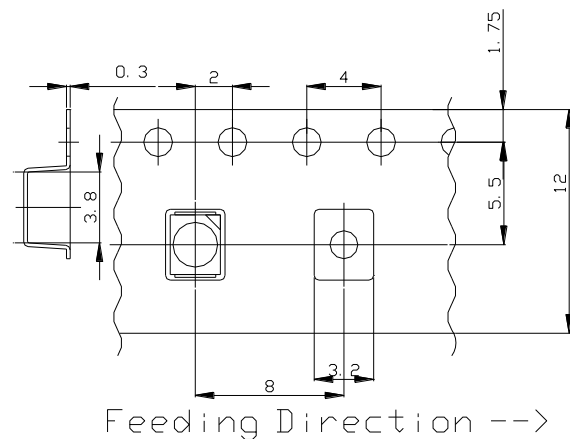
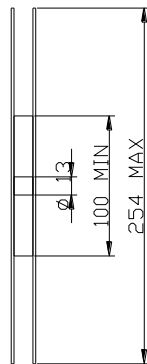
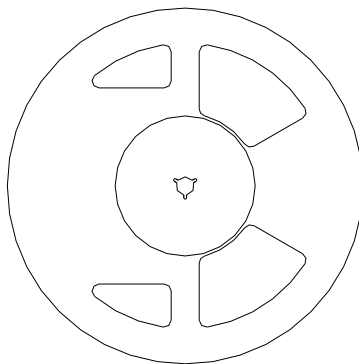
Recommended Land Layout
(Unit:mm)



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.