

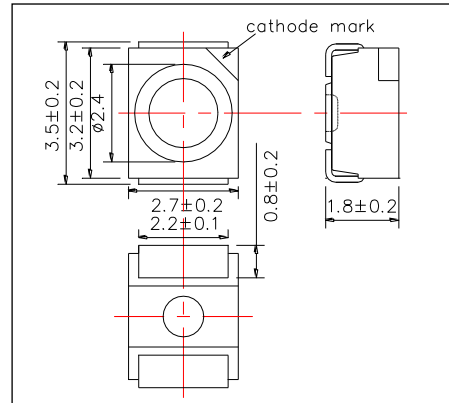
SMT1200**High Performance Infrared TOP NIR LED**

SMT1200 consists of an InGaAsP LED mounted on the lead frame as TOP LED package. It is sealed with epoxy resin. It emits a spectral band of radiation at 1200nm.

<Specifications>

1. Product Name: TOP NIR LED
2. Type Number: SMT1200
3. Chip:
 - Chip Material: InGaAsP
 - Peak Wavelength: 1200nm
4. Package
 - Lead Frame Die: Silver Plated
 - Package Resin: PA6T
 - Lens: Epoxy or Solicone Resin

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25°C]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	150	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	500	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	80	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	TOPR	-40 ~ +100	°C
Storage Temperature	TSTG	-40 ~ +100	°C
Soldering Temperature**	TSOL	250	°C

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

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

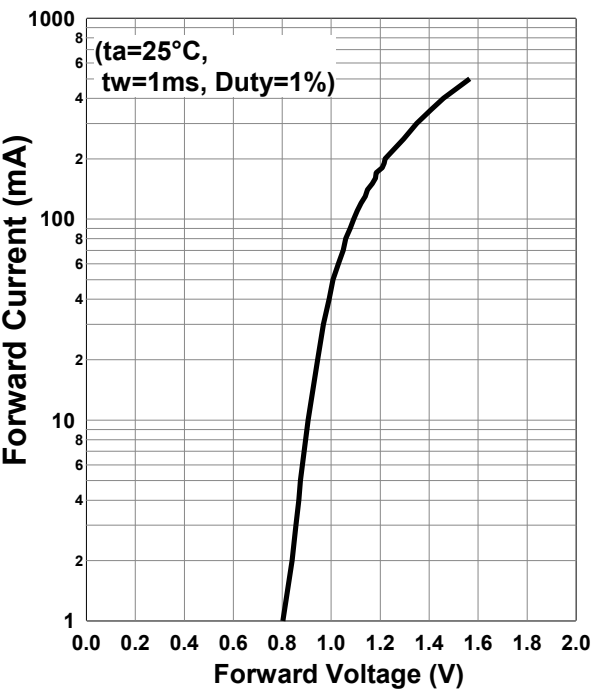
Electro-Optical Characteristics [Ta=25°C]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.0	1.5	V
	VFP	IFP=500mA		1.6		
Radiated Power*	PO	IF=50mA		5		mW
		IFP=500mA		22		
Radiant Intensity**	IE	IF=50mA		-		mW/sr
		IFP=500mA		-		
Peak Wavelength	λP	IF=50mA	1150	1200	1250	nm
Half Width	$\Delta\lambda$	IF=50mA		80		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA		± 65		deg
Rise Time	tr	IF=50mA		80		ns
Fall Time	tf	IF=50mA		80		ns

* Measured by S3584-08

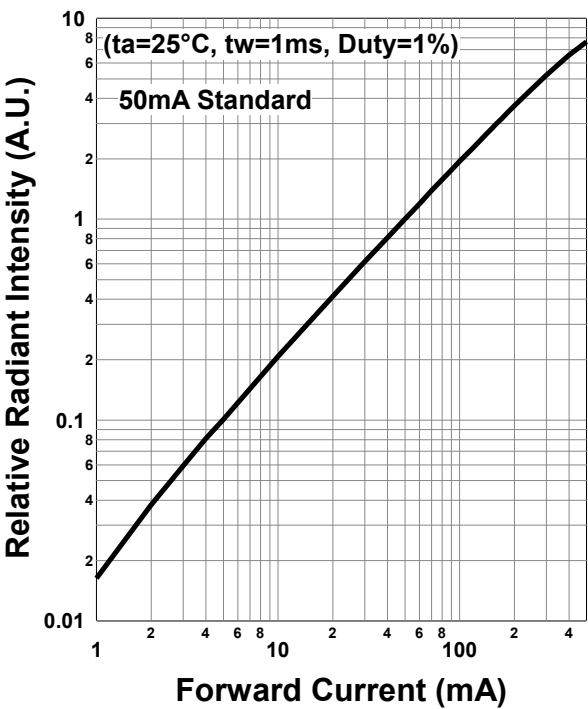
** Measured by Ando Optical Multi Meter AQ2140 & AQ2743



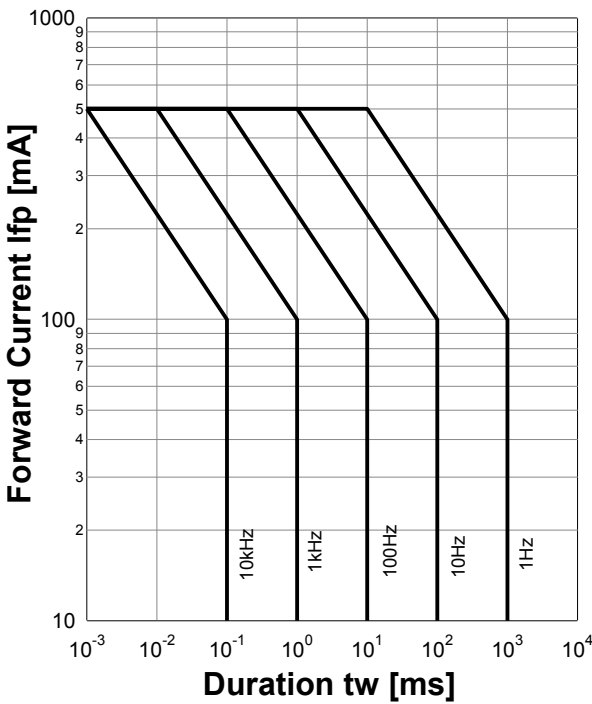
Forward Current - Forward Voltage



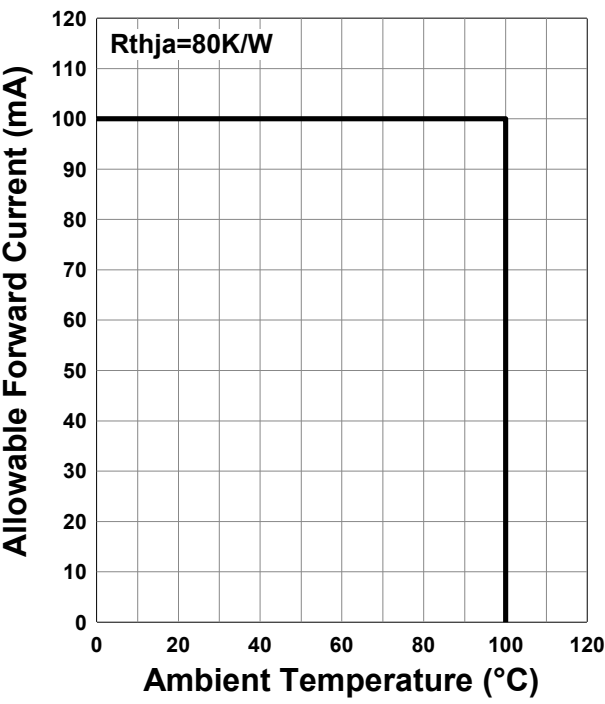
Relative Radiant Intensity - Forward Current

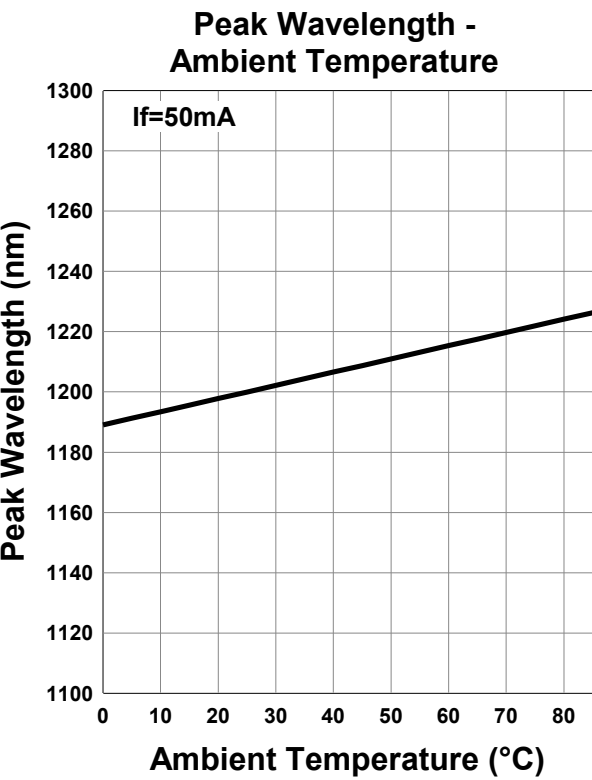
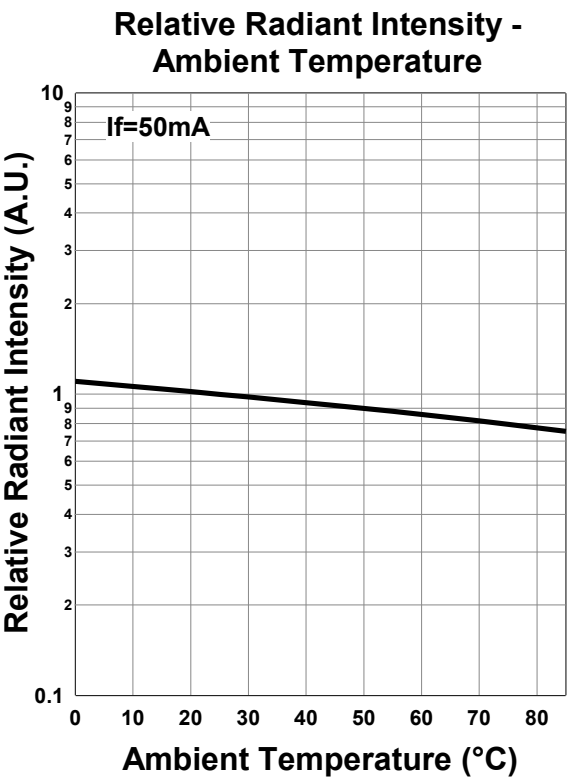
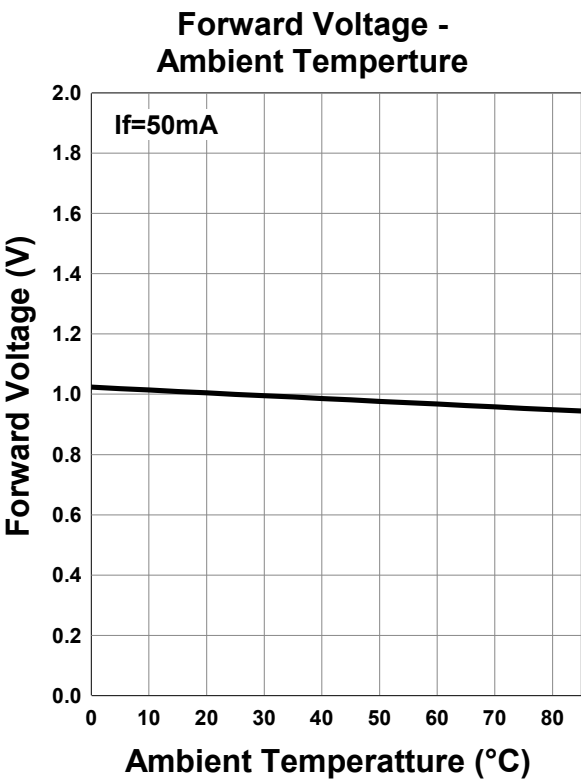


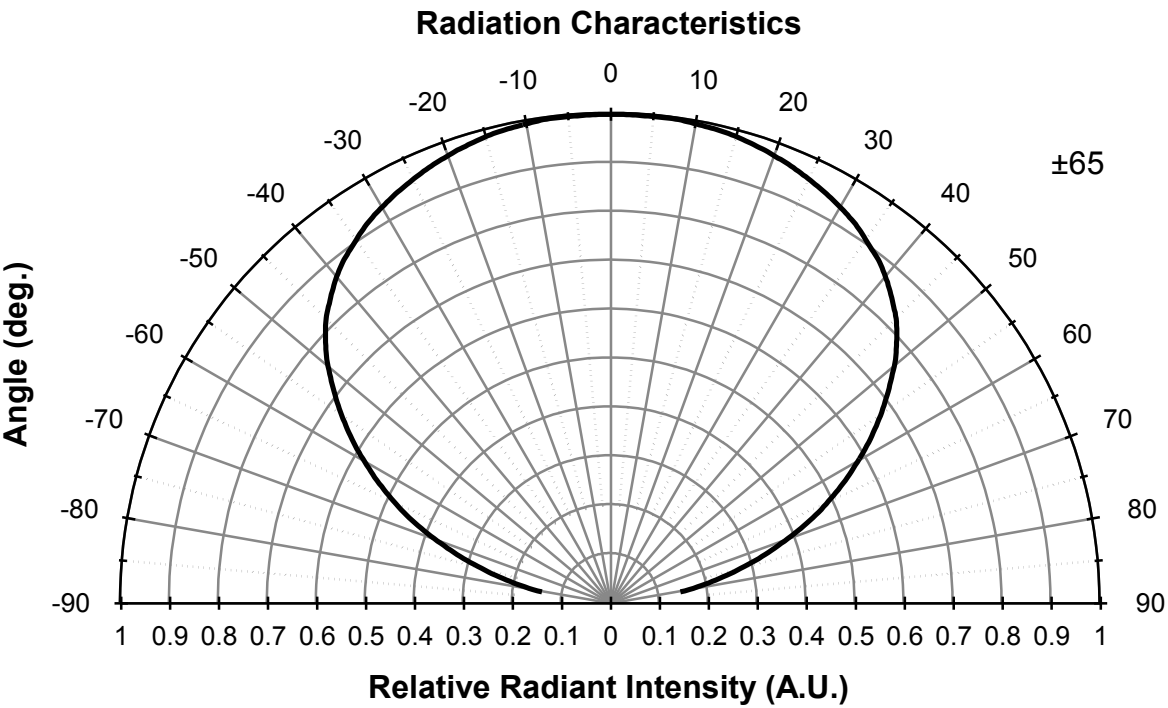
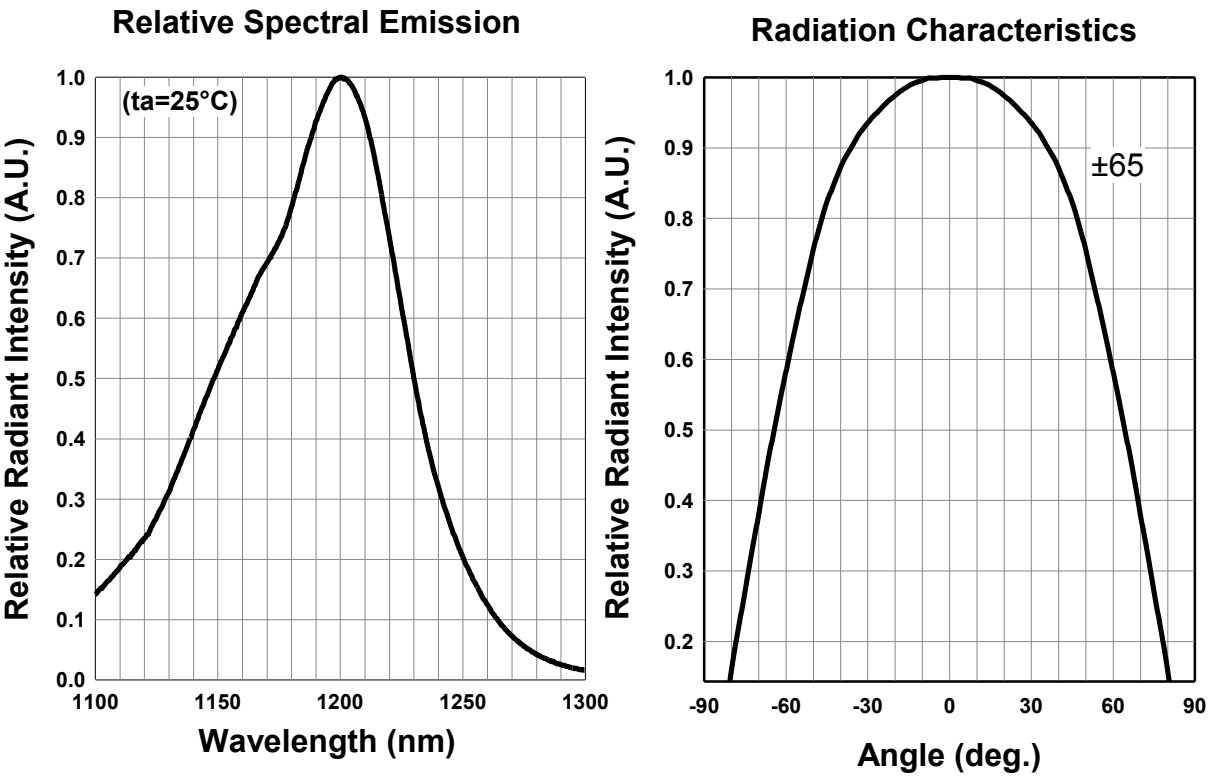
Forward Current - Pulse Duration



Allowable Forward Current - Ambient Temperature



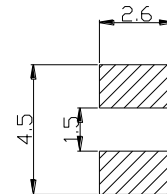
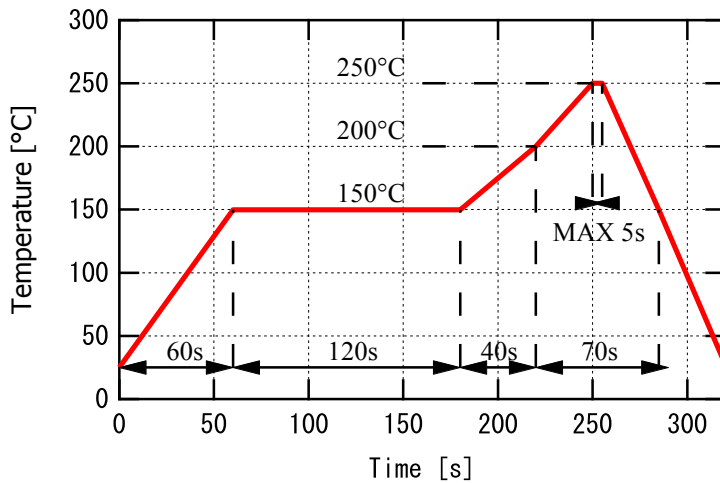




◆SMD Application

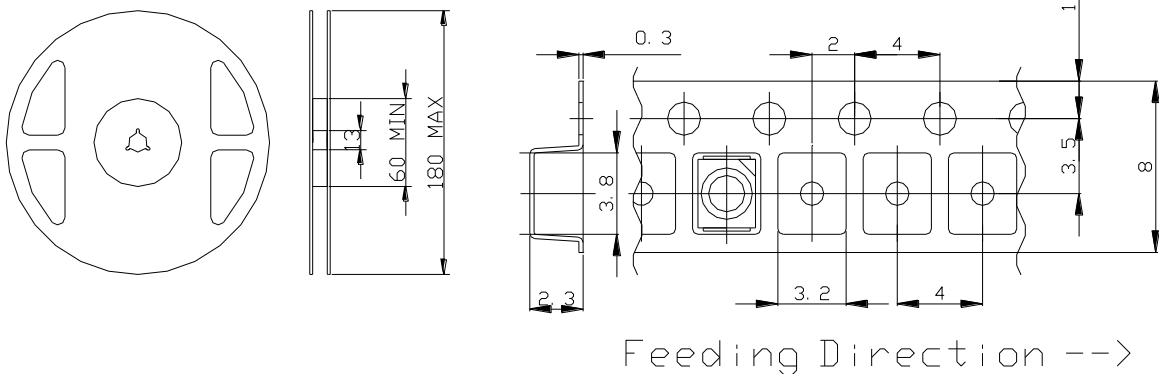
◆Recomended Lnd Layout (Unit : mm)

IR-Reflow Soldering Profile for lead free 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.

Disclaimer

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements. Product data and parameters may vary by user application and over time.

Products shown in this catalog are intended to be used for general electronic equipment. Products are not guaranteed for applications where product malfunction or failure may cause personal injury or death, including but not limited to life-supporting / saving devices, medical devices, safety devices, airplanes, aerospace equipment, automobiles, traffic control systems, and nuclear reactor control systems.

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