

**L1650-33**  
Infrared LED Lamp

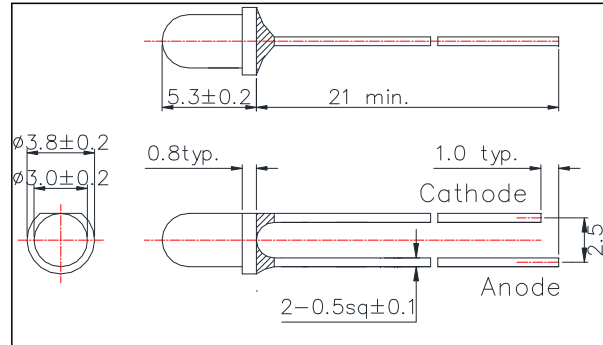
PRELIMINARY

L1650-33 is an InGaAsP LED mounted on a lead frame with a clear epoxy lens. On forward bias, it emits a spectral band of radiation that peaks at 1650nm.

<Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L1650-33
3. Chip:
  - Chip material: InGaAsP
  - Chip Dimension: 300um\*300um
  - Peak Wavelength: 1650nm typ.
4. Package
  - Type: Φ3mm Clear Molding
  - Resin Material: Epoxy Resin
  - Lead Frame: Soldered (Lead Free)

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25°C]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	130	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	3	V
Junction Temperature	Tj	120	°C
Thermal Resistance	Rthja	270	K/W
Operating Temperature	TOPR	-40 ~ +85	°C
Storage Temperature	TSTG	-40 ~ +100	°C
Soldering Temperature**	TSOL	265	°C

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

\*\* Soldering condition must be completed within 3 second at 265 °C.

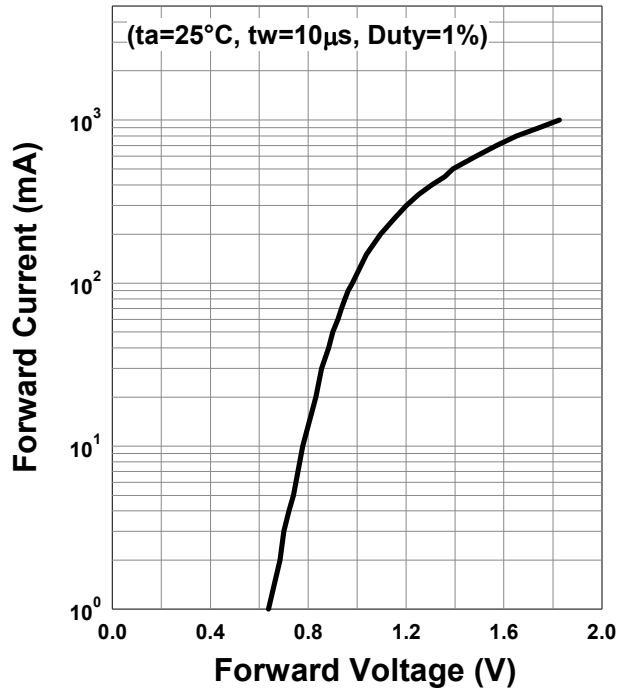
Electro-Optical Characteristics [Ta=25°C ]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		0.9	1.3	V
	VFP	IFP=1A		1.8		
Total Radiated Power*	PO	IF=50mA		2.0		mW
		IFP=1A		11		
Radiant Intensity**	IE	IF=50mA		16		mW/sr
		IFP=1A		88		
Peak wavelength	λP	IF=50mA	1600		1700	nm
Half Width	Δλ	IF=50mA		125		nm
Viewing Half Angle	θ1/2	IF=50mA		±21		deg
Rise Time	tr	IF=50mA		80		ns
Fall Time	tf	IF=50mA		30		ns

\* Measured by G8370-85.

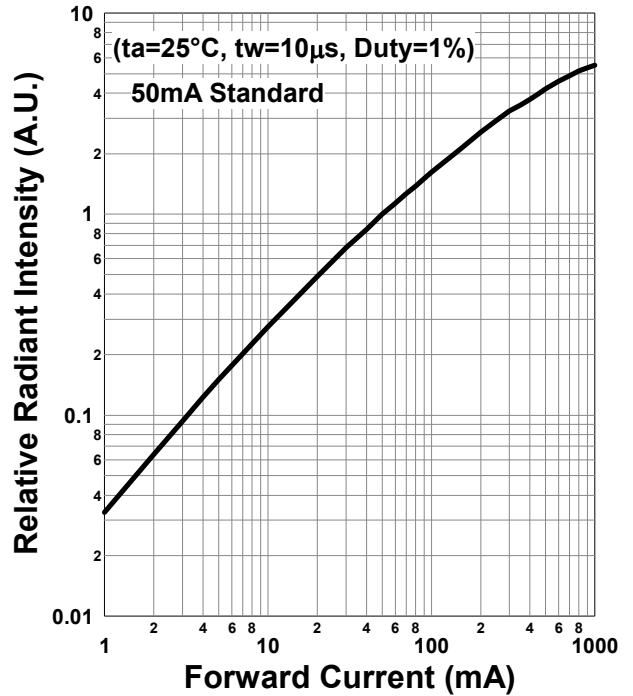
\*\* Measured by Ando Optical Multi Meter AQ2140 & AQ2742.



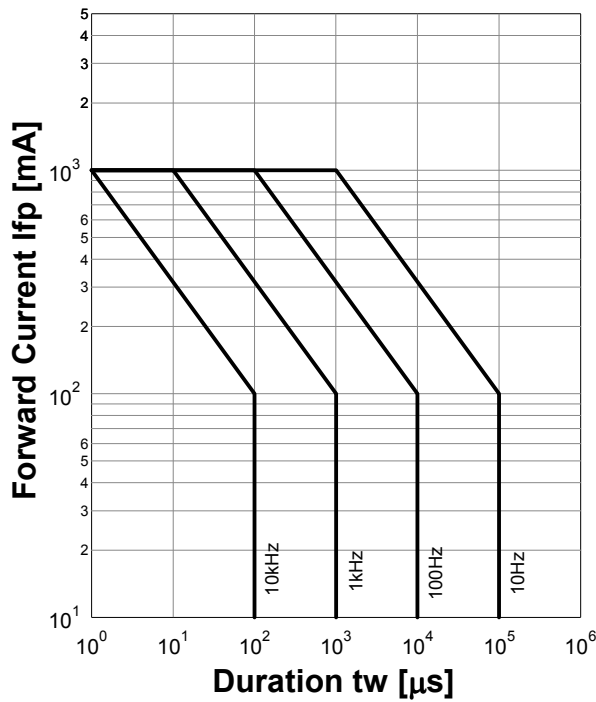
**Forward Current - Forward Voltage**



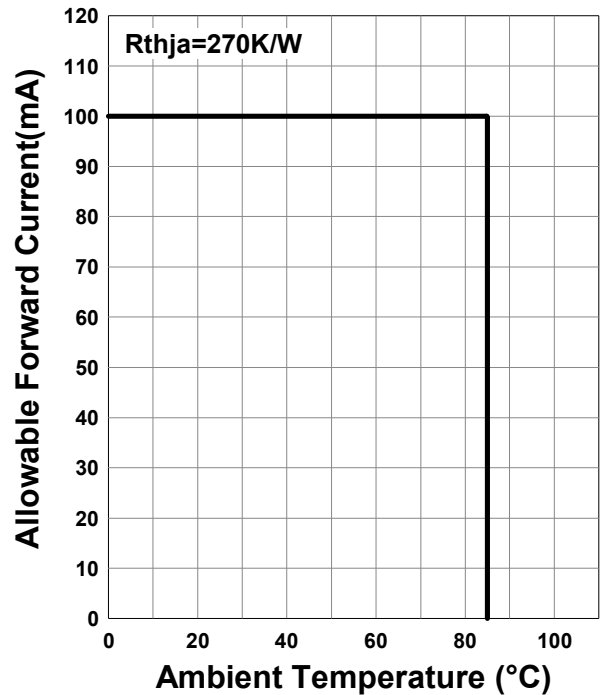
**Relative Radiant Intensity - Forward Current**



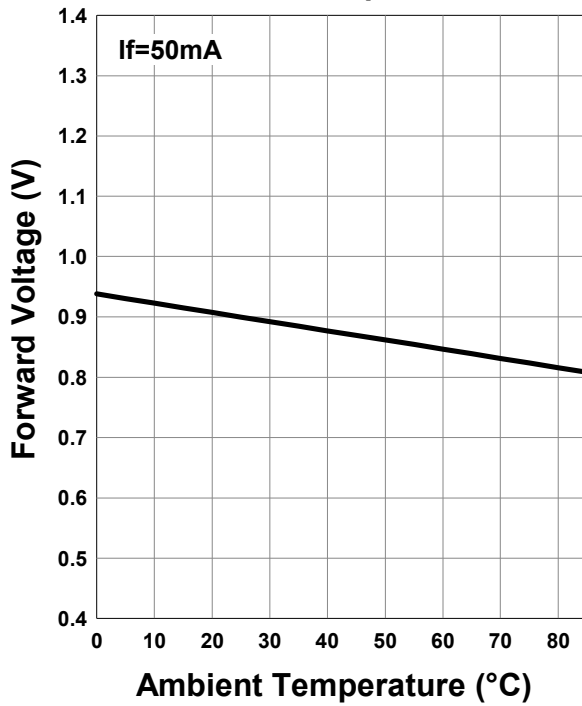
**Forward Current - Pulse Duration**



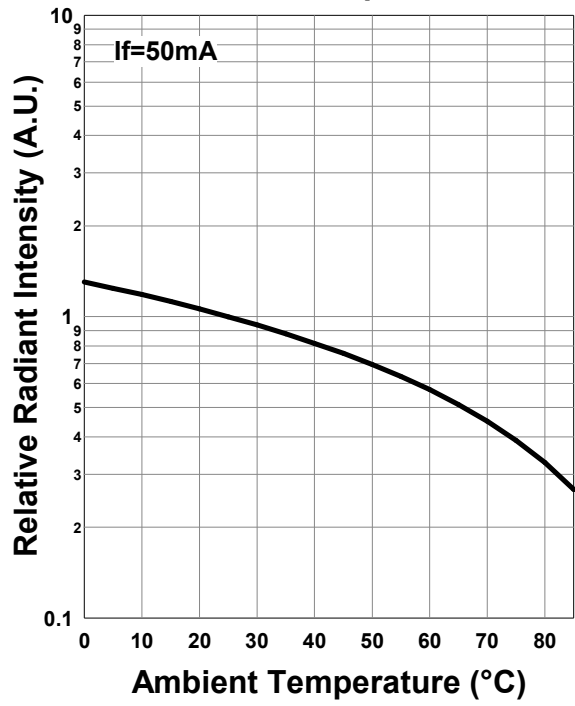
**Allowable Forward Current - Ambient Temperature**



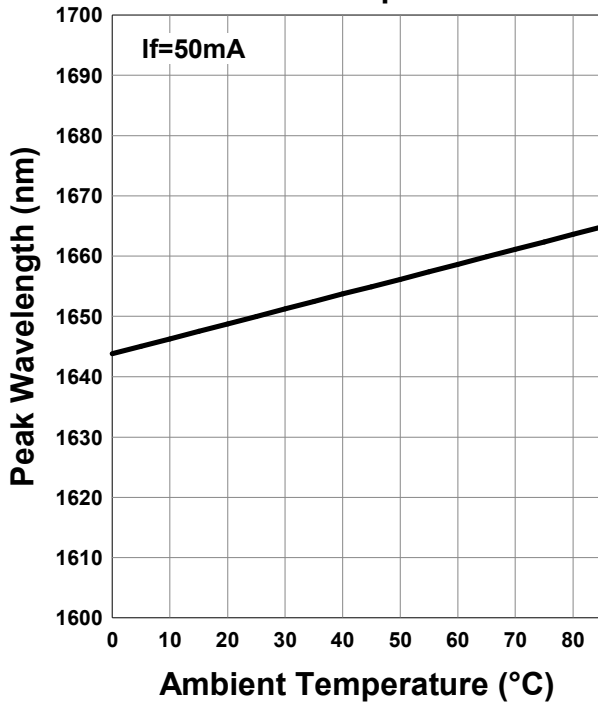
**Forward Voltage - Ambient Temperature**

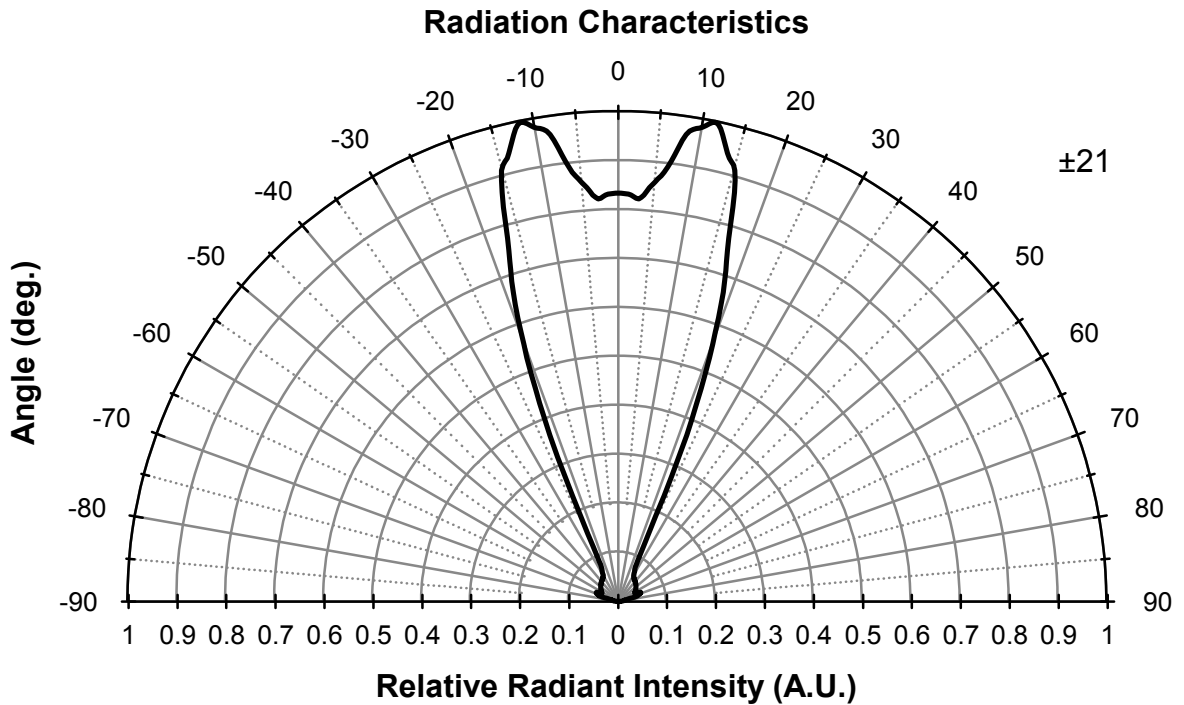
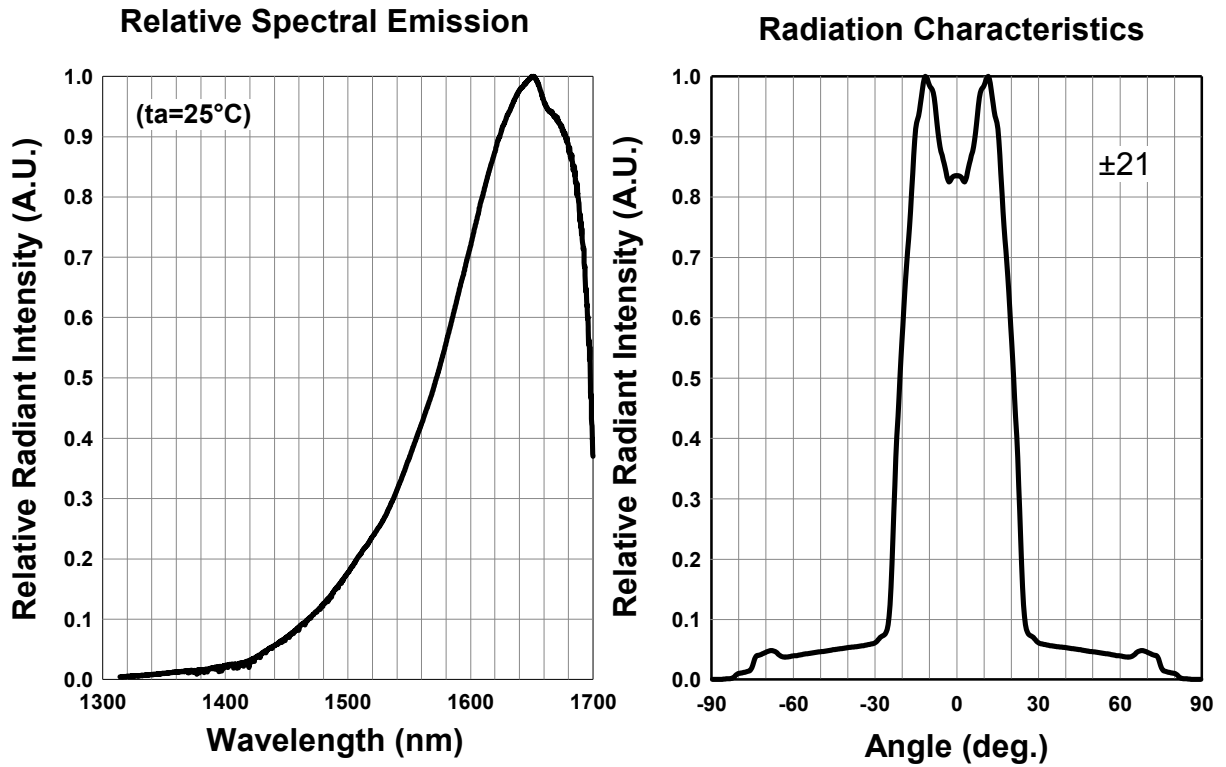


**Relative Radiant Intensity - Ambient Temperature**



**Peak Wavelength - Ambient Temperature**





**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.

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