

**L1650-01**  
Infrared LED Lamp

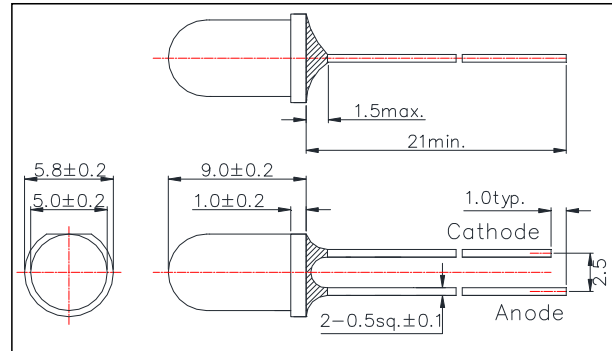
PRELIMINARY

L1650-01 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: L1650-01
3. Chip:
  - Chip material: InGaAsP
  - Chip Dimension: 300um\*300um
  - Peak Wavelength: 1650nm typ.
4. Package
  - Type: Φ5mm 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.

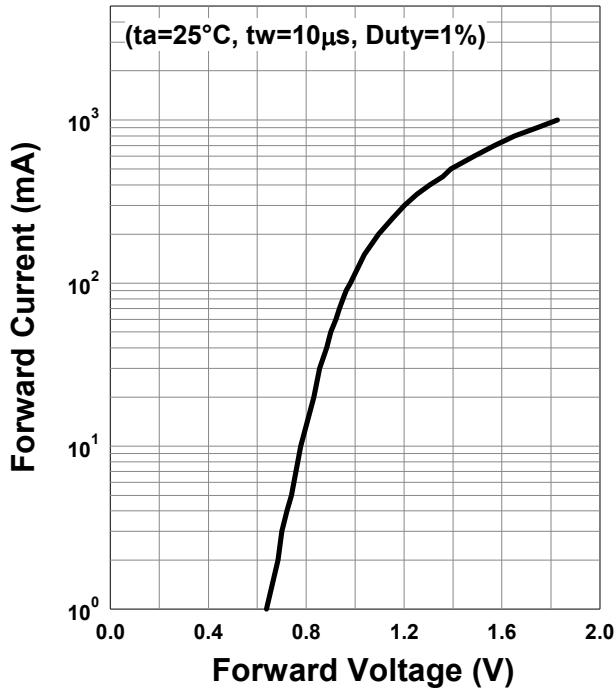
Electro-Optical Characteristics [Ta=25°C ]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		0.9	1.3	V
	VFP	IFP=1A		1.8		
Total Radiated Power*	PO	IF=50mA		2.0		mW
		IFP=1A		11		
Radiant Intensity**	IE	IF=50mA		30		mW/sr
		IFP=1A		160		
Peak wavelength	λP	IF=50mA	1600		1700	nm
Half Width	Δλ	IF=50mA		125		nm
Viewing Half Angle	θ1/2	IF=50mA		±9		deg
Rise Time	tr	IF=50mA		80		ns
Fall Time	tf	IF=50mA		30		ns

\* Measured by G8370-85.

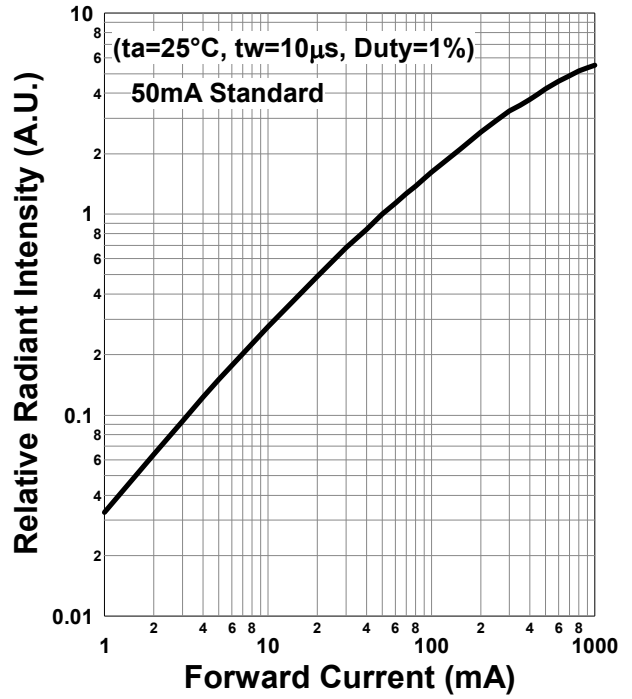
\*\* Measured by Ando Optical Multi Meter AQ2140 & AQ2742.



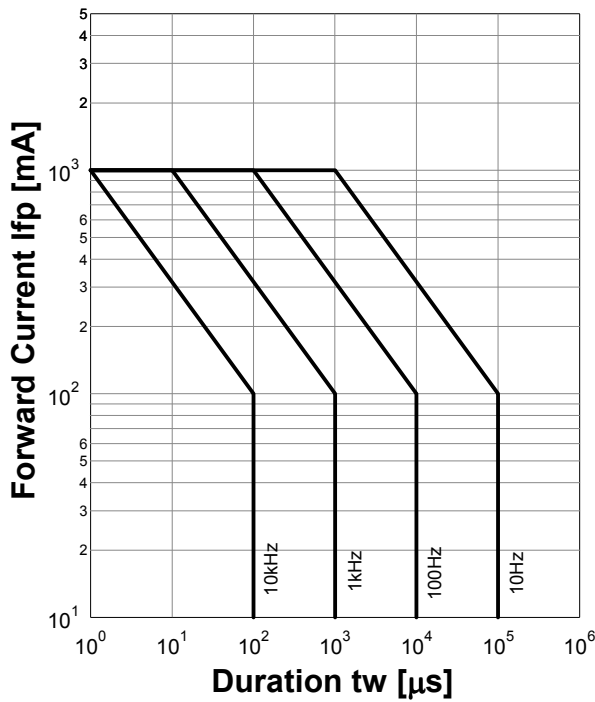
**Forward Current - Forward Voltage**



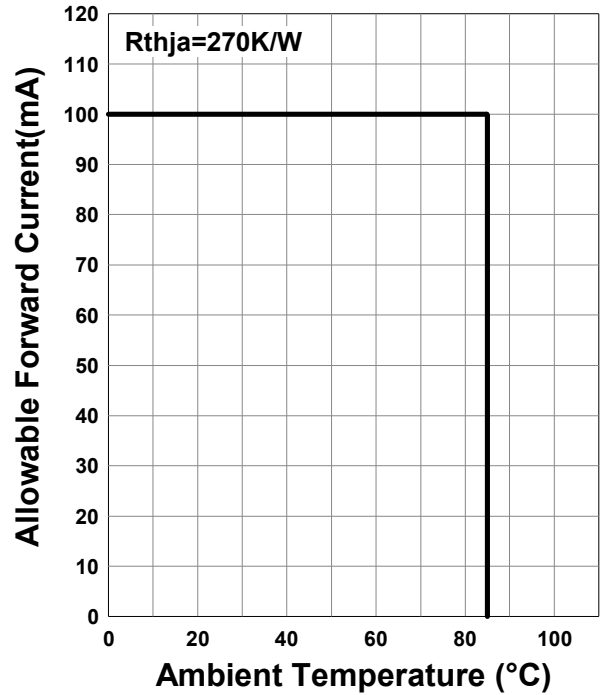
**Relative Radiant Intensity - Forward Current**

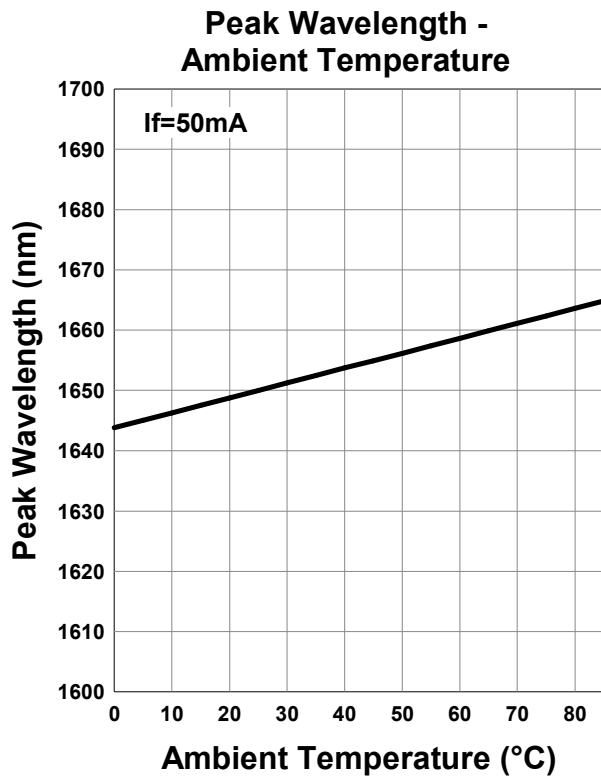
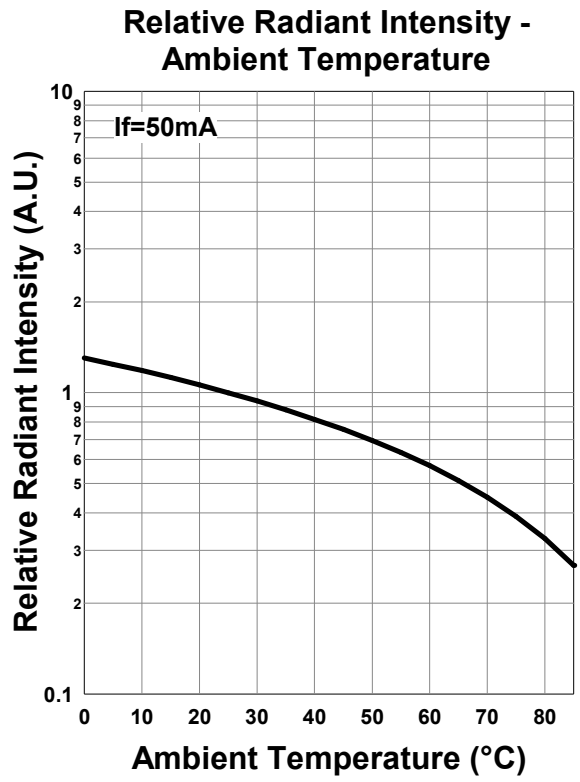
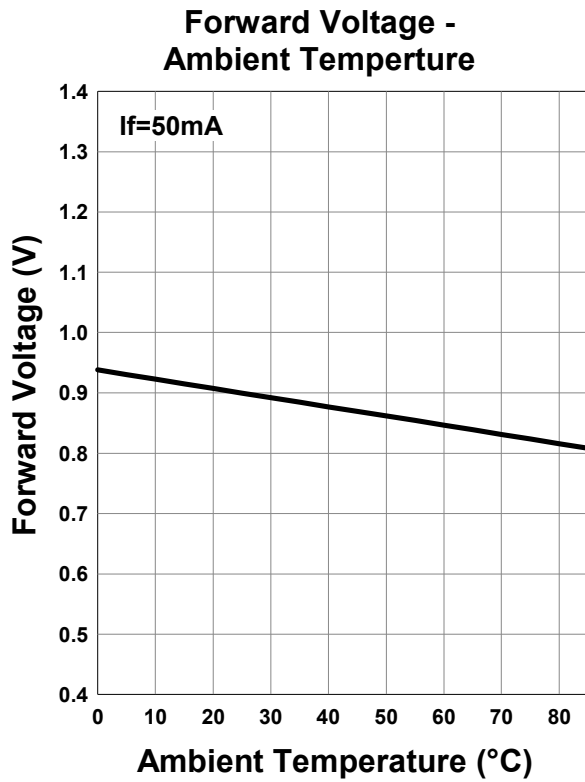


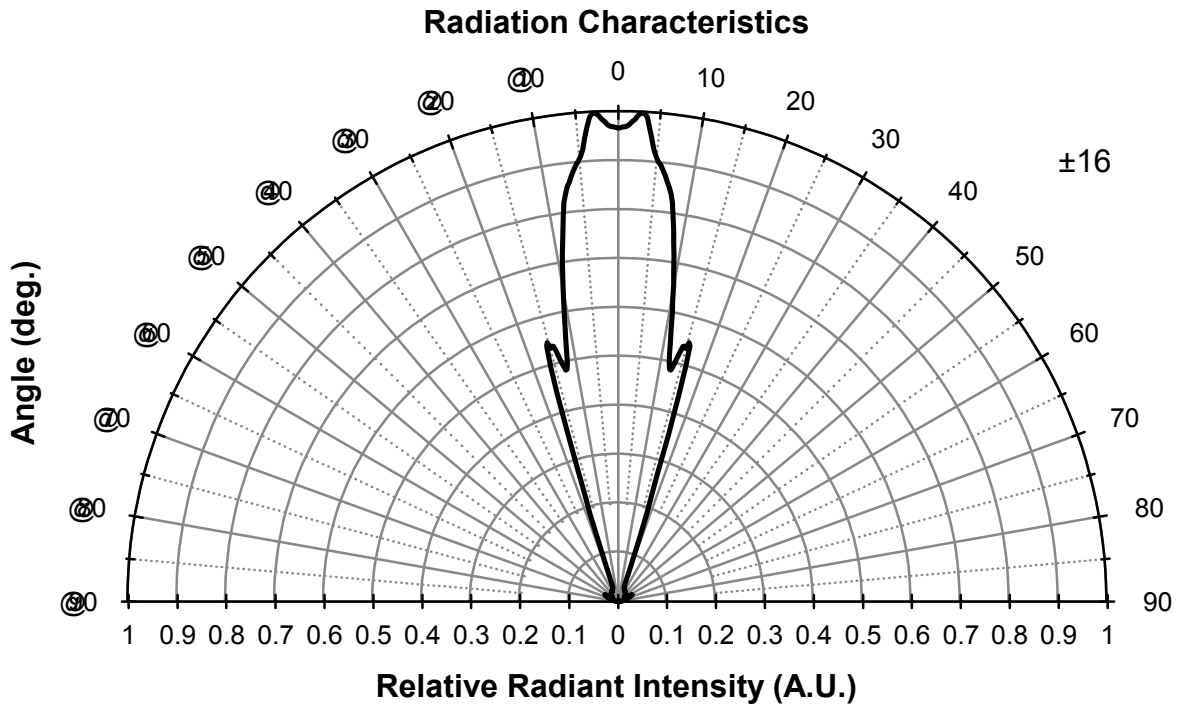
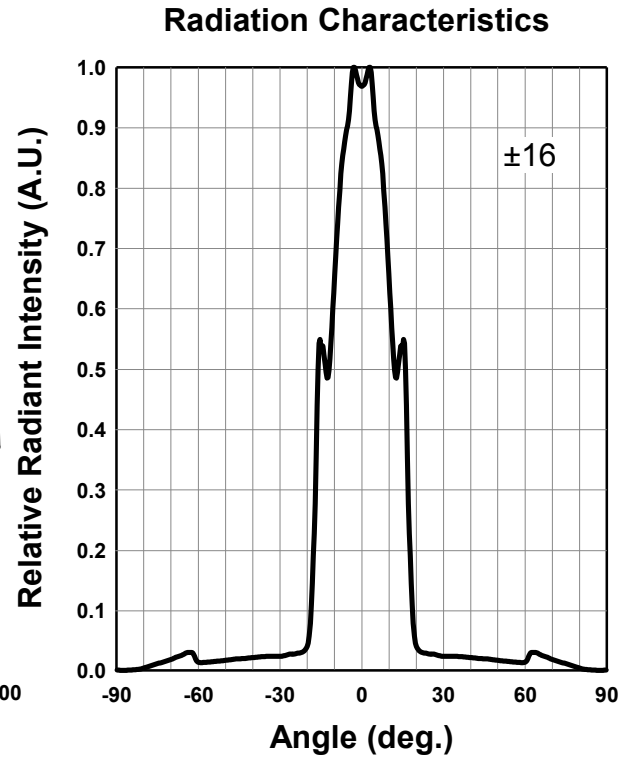
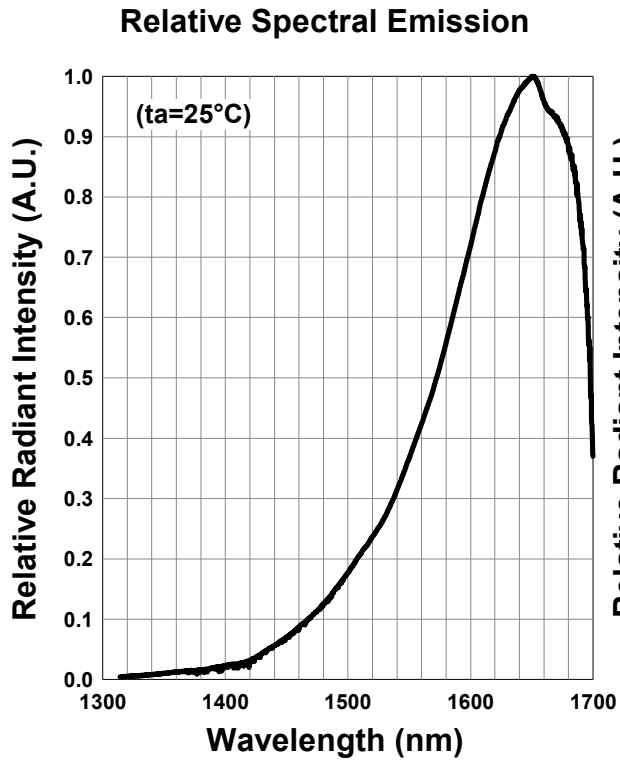
**Forward Current - Pulse Duration**



**Allowable Forward Current - Ambient Temperature**







**Disclaimer**

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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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