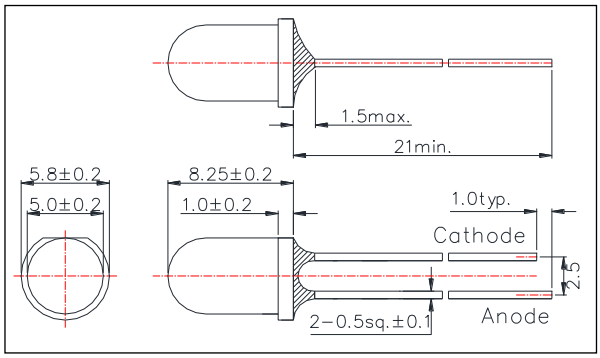
L680-03AU

Infrared LED Lamp

<Specifications>

- Chip Material: AlGaAs
- Chip Dimension: 350um x 350um
- Number of Chips: 1pcs
- Peak Wavelength: 680nm typ.
- Package Type: Φ5mm Clear Molding
- Lead Frame: Soldered (Lead Free)
- Lens: Epoxy Resin

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	120	mW
Forward Current	IF	50	mA
Pulse Forward Current*	IFP	200	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	120	℃
Thermal Resistance	Rthjp	220	K/W
Operating Temperature	TOPR	-40 ~ +100	℃
Storage Temperature	TSTG	-40 ~ +100	℃
Soldering Temperature**	TSOL	265	℃

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

** Soldering condition must be completed within 3 second at 265℃.

Electro-Optical Characteristics[Tc=25℃]						
Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	IF=20mA		1.8	2.3	V
		IF=50mA, T=20ms		2.0		
	VFP	IFP=200mA		2.8		
Total Radiated Power*	PO	IF=20mA		5.8		mW
		IF=50mA, T=20ms		16		
		IFP=200mA		67		
Radiant Intensity**	IE	IF=20mA		58		mW/sr
		IF=50mA, T=20ms		160		
		IFP=200mA		670		
Peak Wavelength	λp	IF=20mA	670		690	nm
Half Width	Δλ	IF=20mA		24		nm
Viewing Half Angle	θ1/2	IF=20mA		±9		deg
Rise Time	tr	IF=20mA		10		ns
Fall Time	tf	IF=20mA		10		ns

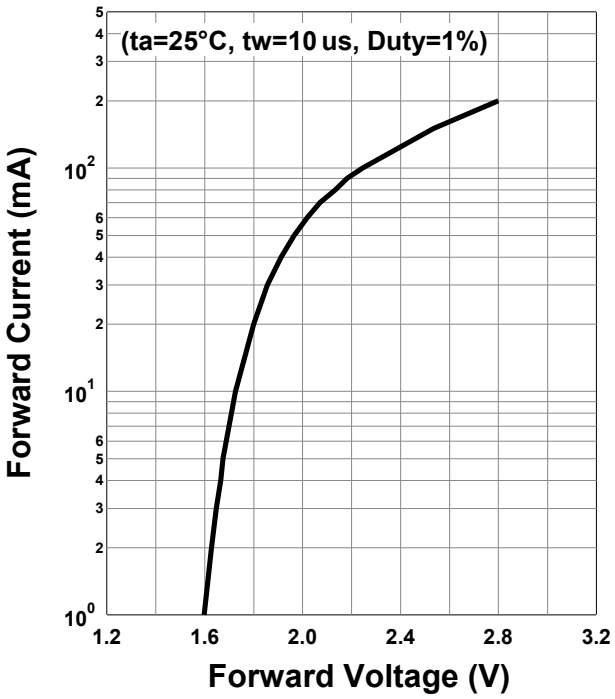
* Measured by S3584-08

** Measured by CIE127-2007 Condition B.

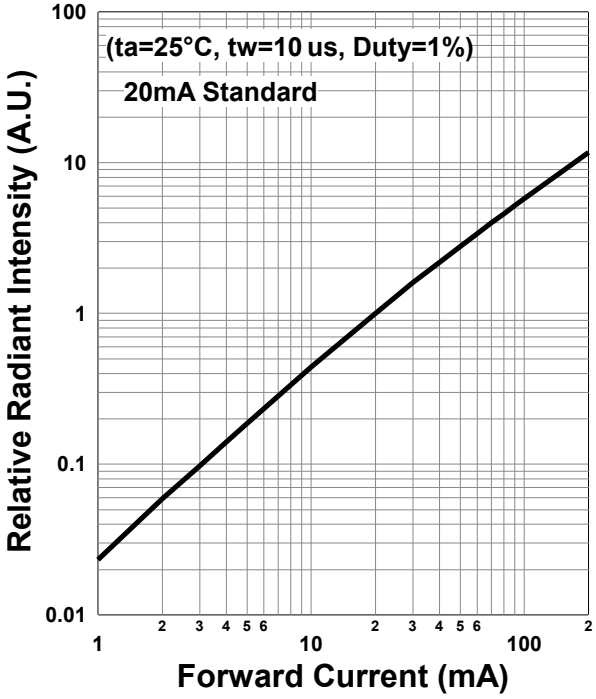
RoHS Compliant

Typical Characteristic Curves

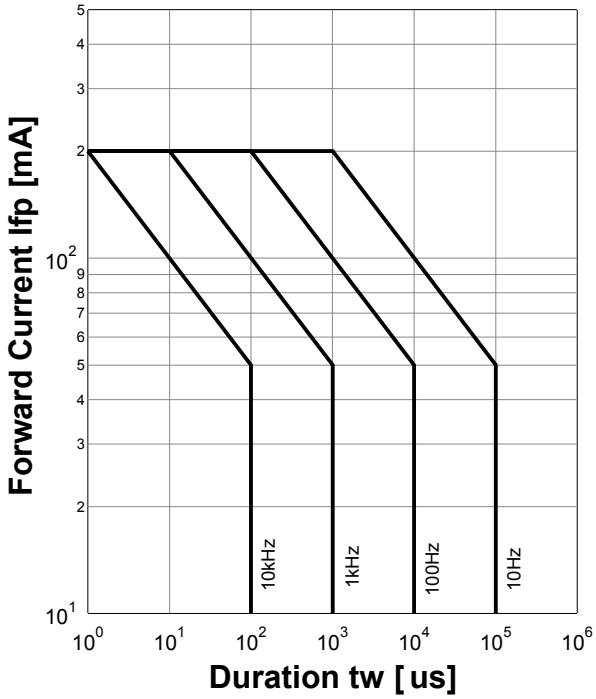
Forward Current - Forward Voltage



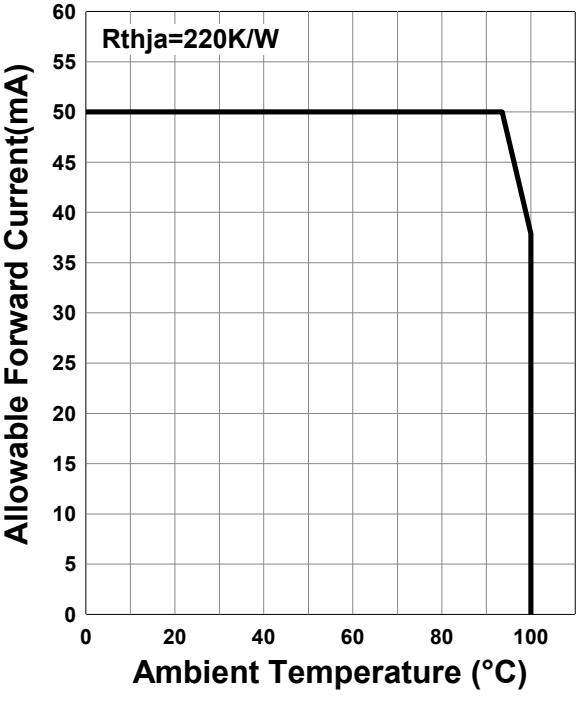
Relative Radiant Intensity - Forward Current

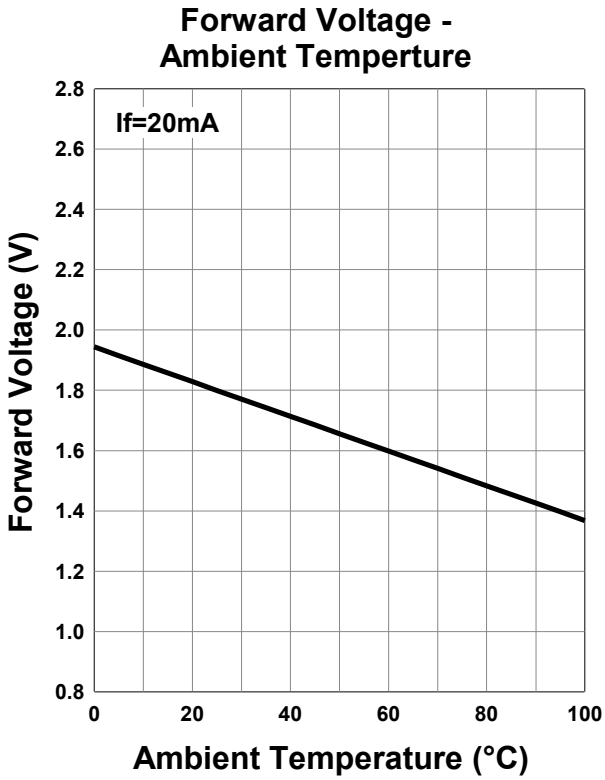


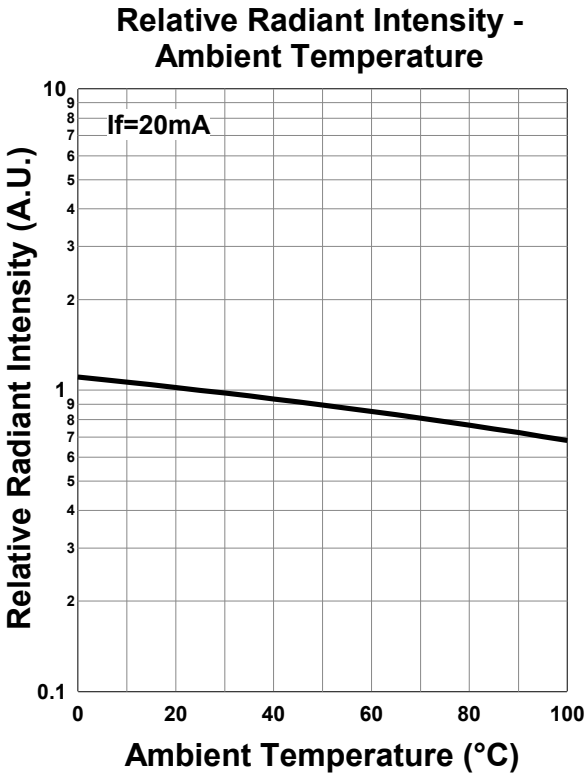
Forward Current - Pulse Duration

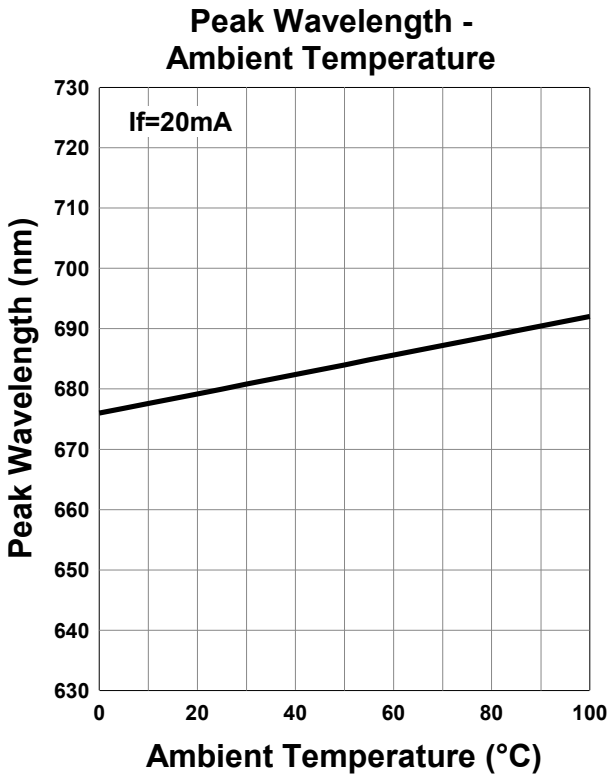


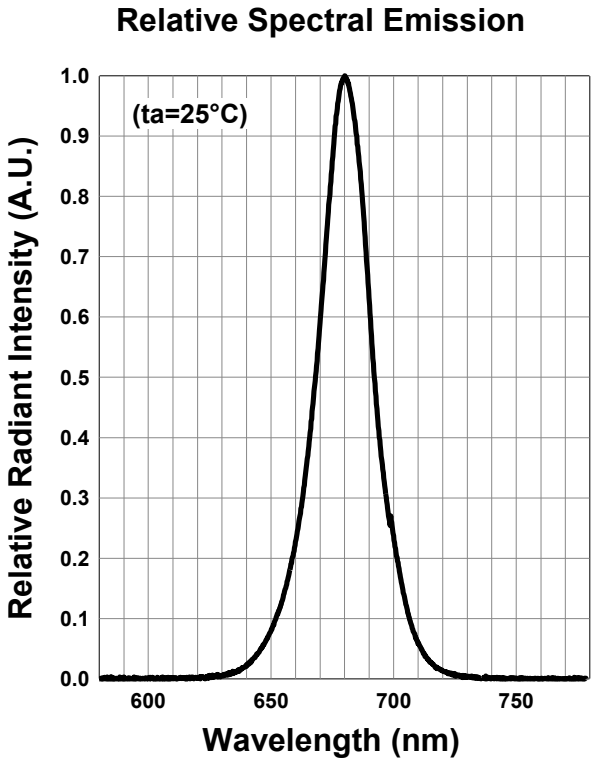
Allowable Forward Current - Ambient Temperature

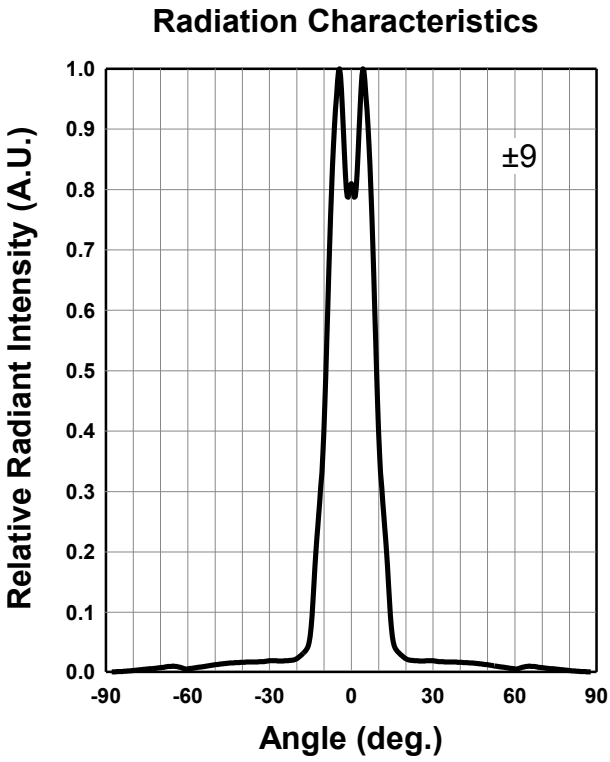


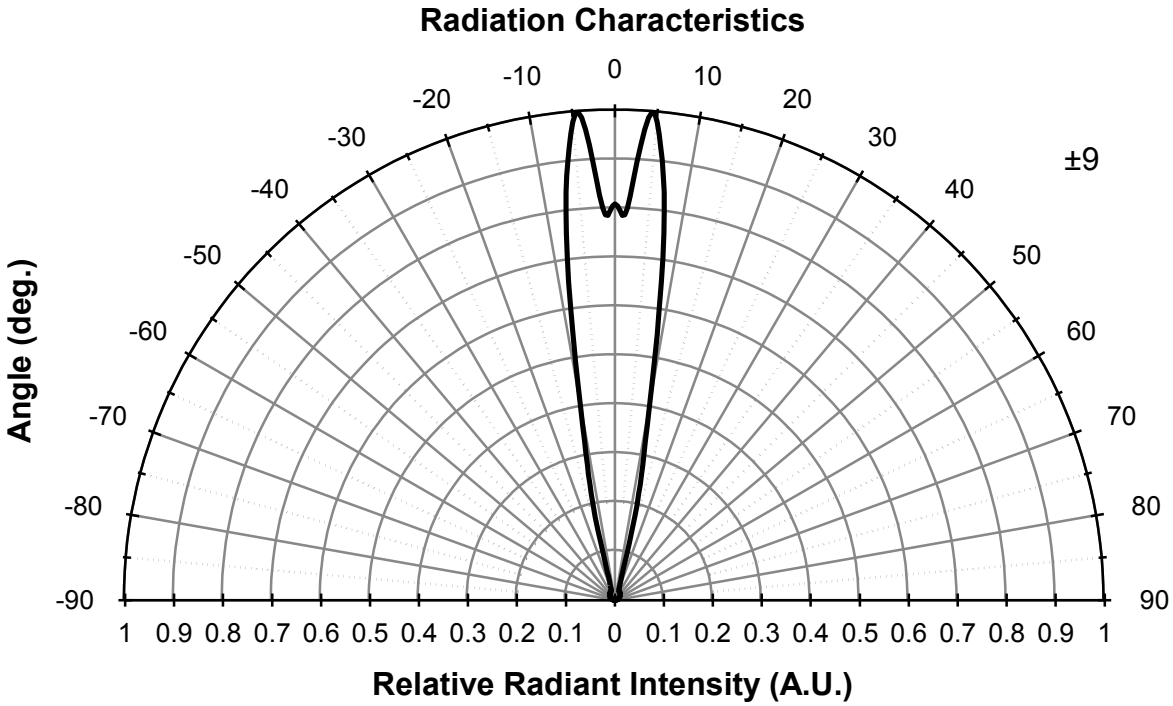

Forward Voltage -
Ambient Temperture
If=20mA
Forward Voltage (V)
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0
20
40
60
80
100
Ambient Temperature (°C)


Relative Radiant Intensity -
Ambient Temperature
If=20mA
Relative Radiant Intensity (A.U.)
10
9
8
7
6
5
4
3
2
1
0.1
0
20
40
60
80
100
Ambient Temperature (°C)


Peak Wavelength -
Ambient Temperature
If=20mA
Peak Wavelength (nm)
730
720
710
700
690
680
670
660
650
640
630
0
20
40
60
80
100
Ambient Temperature (°C)


Relative Spectral Emission
(ta=25°C)
Relative Radiant Intensity (A.U.)
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
600
650
700
750
Wavelength (nm)


Radiation Characteristics
Relative Radiant Intensity (A.U.)
±9
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
-90
-60
-30
0
30
60
90
Angle (deg.)


Radiation Characteristics
Angle (deg.)
0
-10
10
-20
20
-30
30
-40
40
-50
50
-60
60
-70
70
-80
80
-90
90
±9
1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
Relative Radiant Intensity (A.U.)

Disclaimer

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