L890-_ _AU Infrared LED Lamp

This series of L890-_ _AU is a GaAlAs LED mounted on a lead frame and encapsulated in various types of epoxy lens which offer different design settings.
On forward bias, it emits a high power radiation of typical 30mW with a peak wavelength at 880nm.

1) Specifications

(1) Chip material	AlGaAs	(4) Package	Clear epoxy resin
(2) Chip Size	0.4mm*0.4mm	(5) Lead frame	Soldered
(3) Peak wavelength	880nm		

2) Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	150	mW	Ta=25°C
Forward Current	IF	100	mA	Ta=25°C
Pulse Forward Current	IFP	500	mA	Ta=25°C
Reverse Voltage	VR	5	V	Ta=25°C
Operating Temperature	TOPR	-30 ~ +85	°C	Ta=25°C
Storage Temperature	TSTG	-30 ~ +100	°C	
Soldering Temperature	TSOL	260	°C	

3) Electro-Optical Characteristics [Ta=25°C]

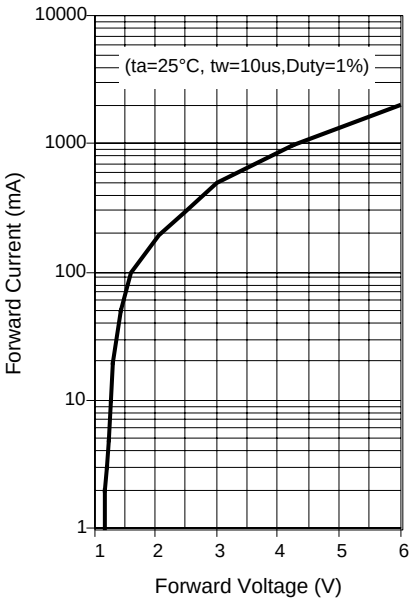
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA DC		1.45	1.7	V
		IF=100mA, tp=20ms		1.60	1.95	
Reverse Current	IR	VR=5V			10	uA
Total Radiated Power	PO	IF=50mA DC	10.0	15.0		mW
		IF=100mA, tp=20ms		30.0		
Peak Wavelength	λP	IF=50mA DC		880		nm
Half Width	Δλ	IF=50mA DC		75		nm
Rise Time	tr	IF=50mA DC		800		ns
Fall Time	tf	IF=50mA DC		400		ns

4) Characteristics of Radiant Intensity [Ta=25°C]

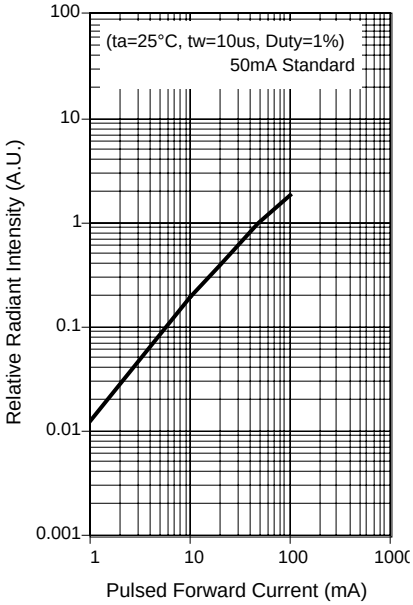
Type	Viewing Half Angle	Radiant Intensity IF=100mA,tp=20ms unit: mW/sr			Outer Dimension	
		Minimum	Typical	Maximum	Dimension	Figure
L890-01AU	±10°		120		Φ5	1
L890-02AU	±5°		140		Φ5	2
L890-03AU	±15°		100		Φ5	3
L890-04AU	±20°		60		Φ5	4
L890-05AU	±40°		16		Φ5	5
L890-06AU	±6°		160		Φ5	6
L890-09AU	±25°(Long)		100		Φ5	7
	±15°(Short)				Oval	
L890-33AU	±15°		40		Φ3	9
L890-36AU	±30°		30		Φ3	10

‡ Radiant Intensity is measured by Tektronix J-16.
‡ Total Radiated Power is measured by Photodyne #500.

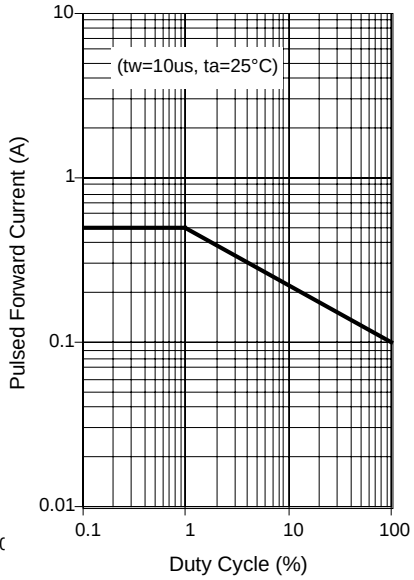
Forward Current - Forward Voltage



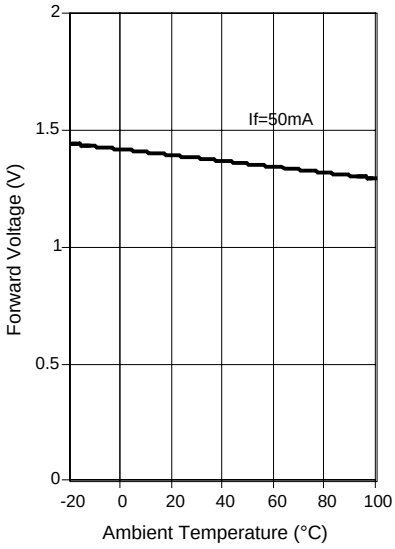
Relative Radiant Intensity - Pulsed Forward Current



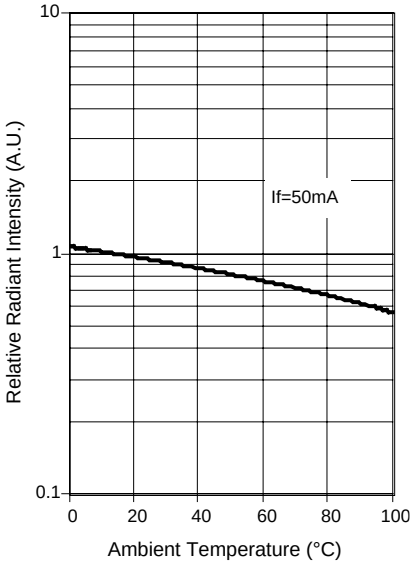
Pulsed Forward Current - Duty Cycle



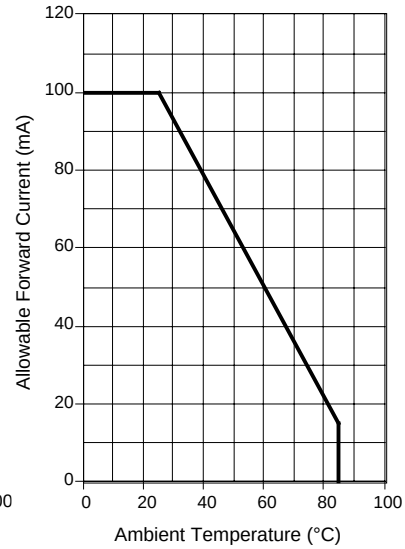
Forward Voltage - Ambient Temperature



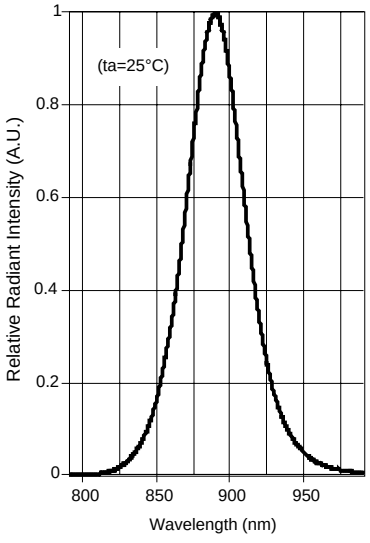
Relative Radiant Intensity - Ambient Temperature



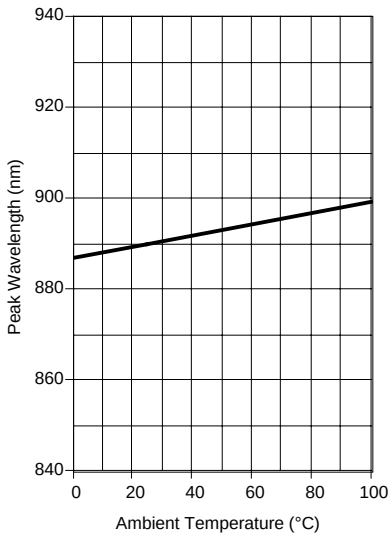
Allowable Forward Current - Ambient Temperature



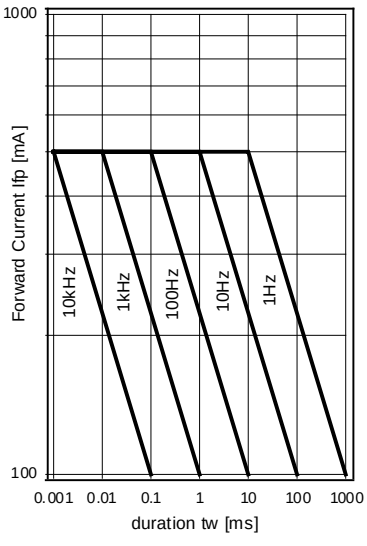
Peak Wavelength



Peak Wavelength - Ambient Temperature



Forward Current - Pulse Duration



Outer Dimension of LED Lamp

Figure-1 f5Mold(Type01)

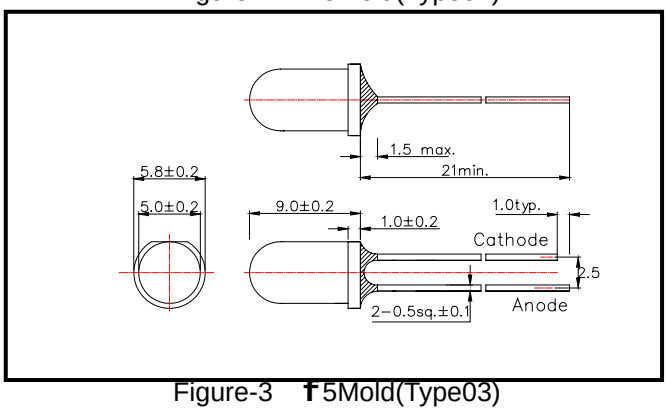


Figure-2 f5Mold(Type02)

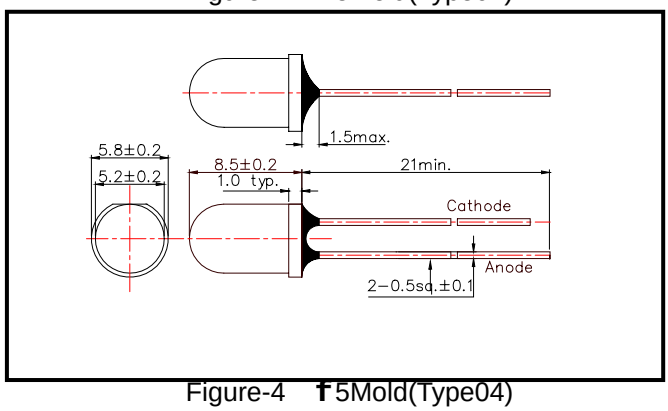


Figure-3 f5Mold(Type03)

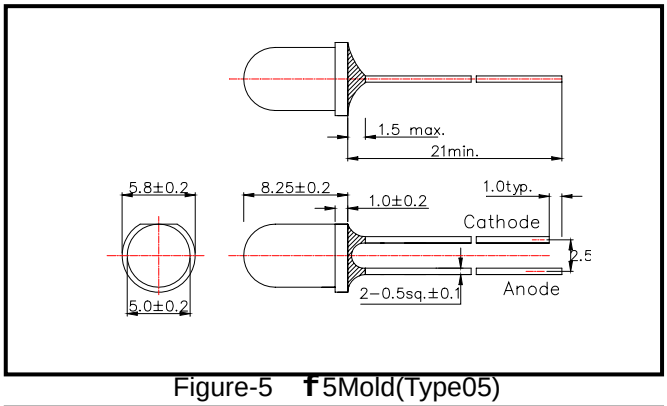


Figure-4 f5Mold(Type04)

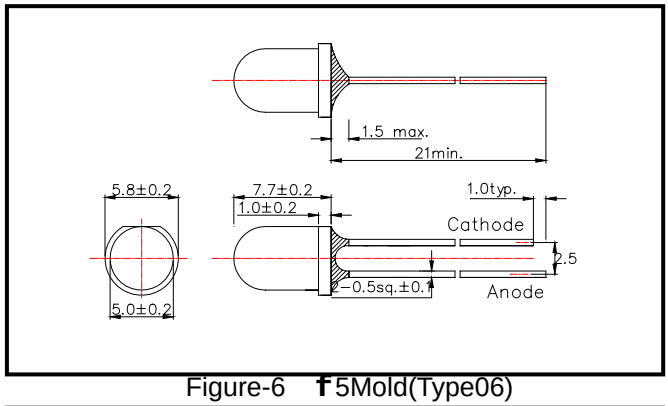


Figure-5 f5Mold(Type05)

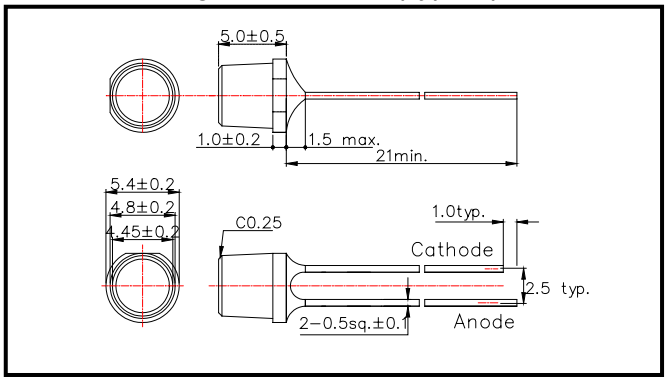


Figure-6 f5Mold(Type06)

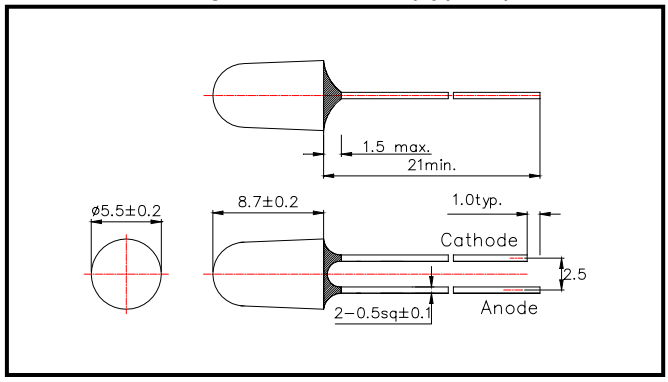


Figure-7 f5Mold(Type09)

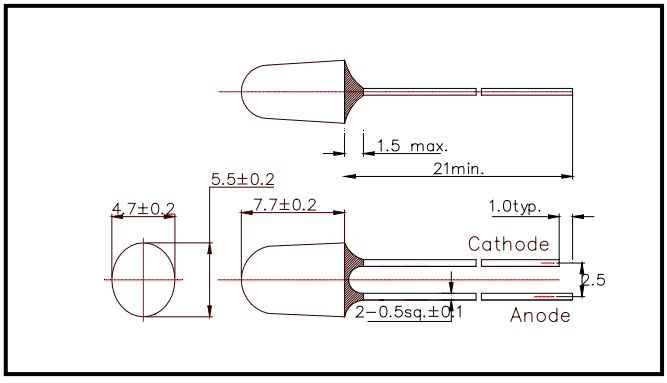


Figure-8 f5Mold(Type10)

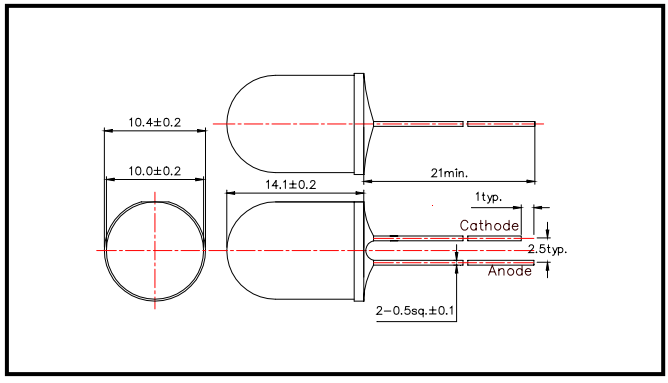


Figure-9 f3Mold(Type33)

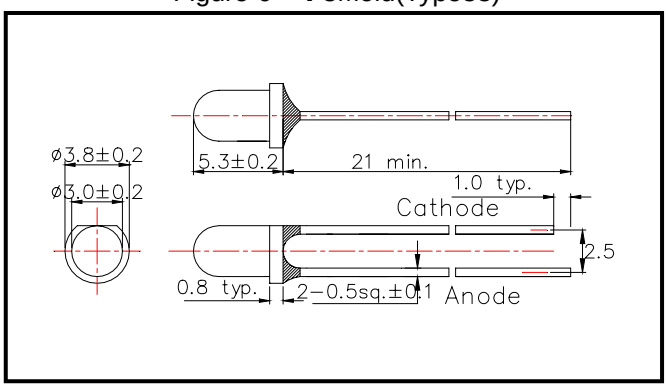
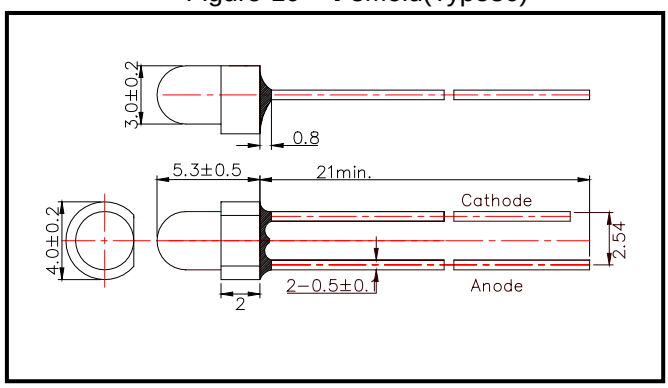
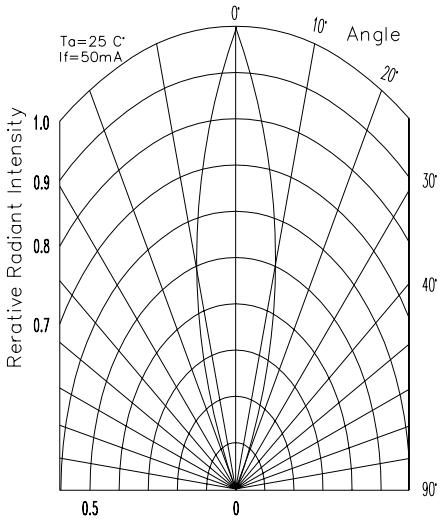


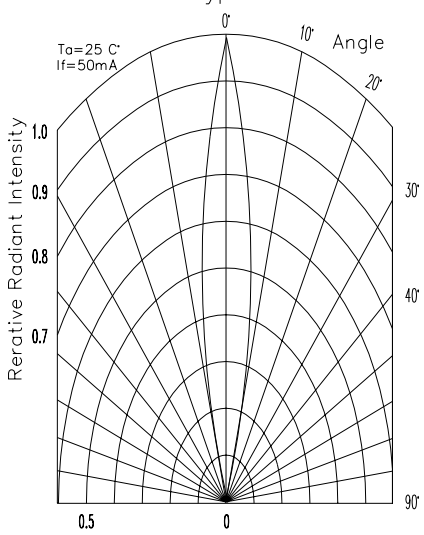
Figure-10 f3Mold(Type36)



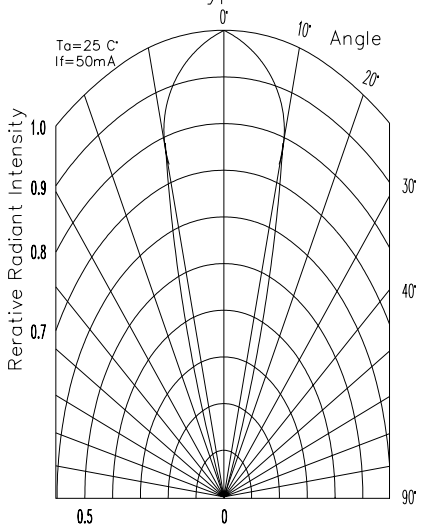
Radiation Pattern
Mold type 01



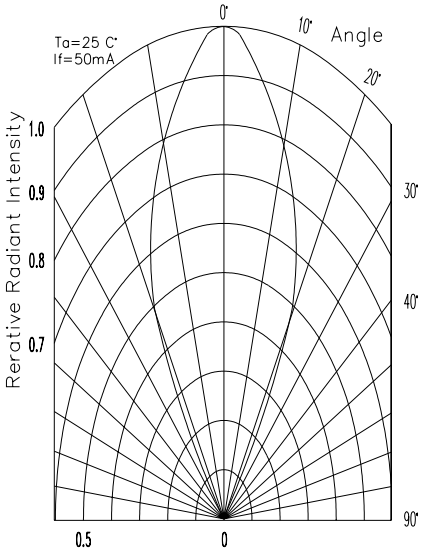
Radiation Pattern
Mold type 02



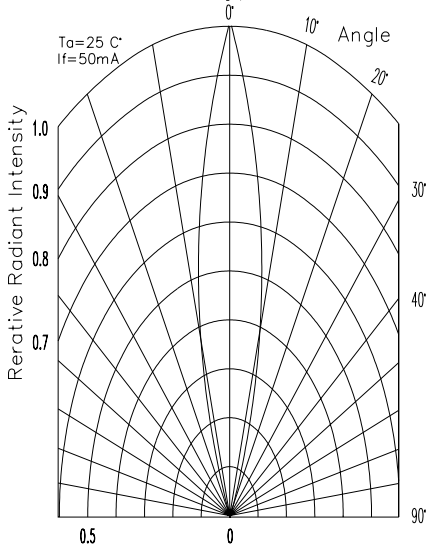
Radiation Pattern
Mold type 03



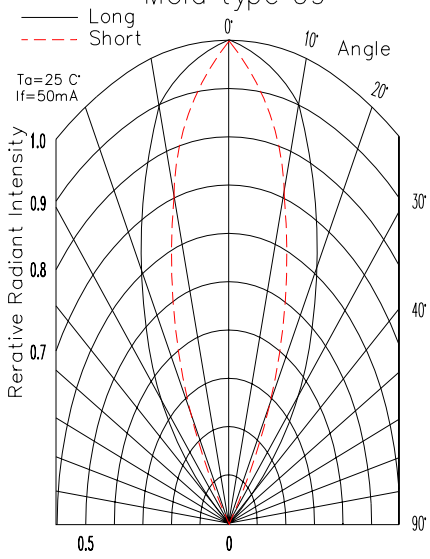
Radiation Pattern
Mold type 04



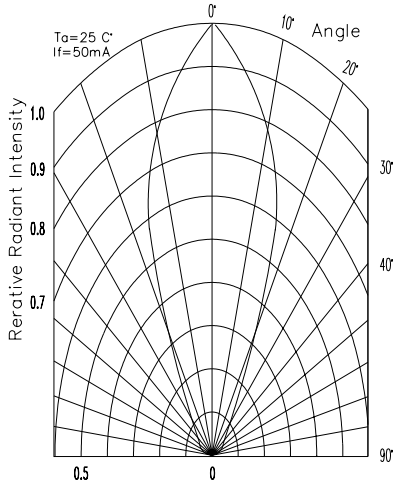
Radiation Pattern
Mold type 06



Radiation Rattern
Mold type 09



Radiation Pattern
Mold type 33



Radiation Pattern
Mold type 36