L870F-04-55

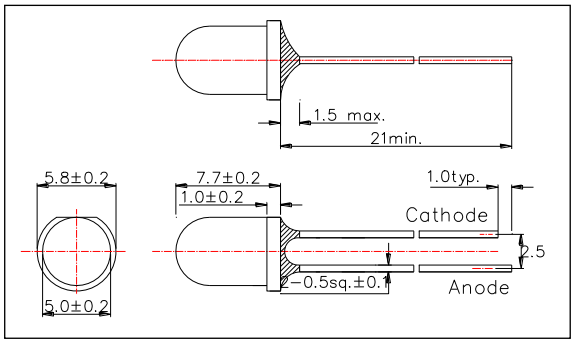
Infrared LED Lamp for High Current Drive

L870F-04-55 is an AlGaAs LED mounted on a lead frame with a clear epoxy lens,
On forward bias, it emits a spectral band of radiation that peaks at 870nm.
These devices are intended to be operated at pulsed current of 2A under max. 4.0V.

<Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L870F-04-55
3. Chip:
   - Chip material: AlGaAs
   - Dimension: 550um x 550um
   - Peak Wavelength: 870nm 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℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	150	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	100	℃
Thermal Resistance**	Rthja	240	K/W
Operating Temperature	TOPR	-30 ~ +85	℃
Storage Temperature	TSTG	-30 ~ +100	℃
Soldering Temperature***	TSOL	265	℃

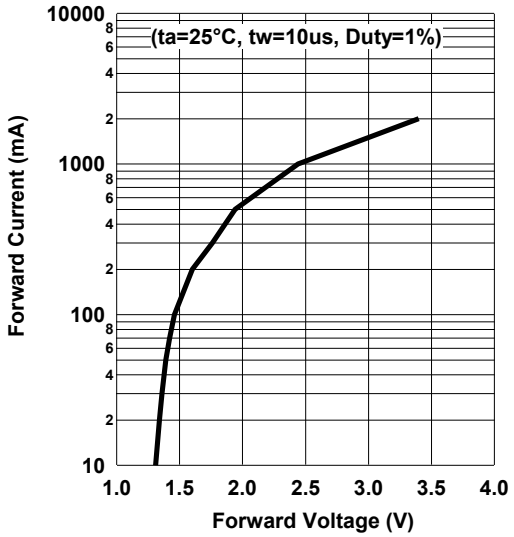
* Duty=1% and Pulse Width=10us.
** Junction - ambient, leads 7mm, soldered on PCB

Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.38	1.45	V
	VFP	IFP=2A		3.4	4.0	
Total Radiated Power*	PO	IF=50mA	20	25		mW
Radiant Intensity**	IE	IF=50mA	30	45		mW/sr
	IEP	IFP=2A		1800		
Peak wavelength	λP	IF=50mA	860	870	880	nm
Half Width	Δλ	IF=50mA		40		nm
Viewing Half Angle	θ1/2	IF=50mA		±22		deg
Rise Time	tr	IF=50mA		15		ns
Fall Time	tf	IF=50mA		10		ns

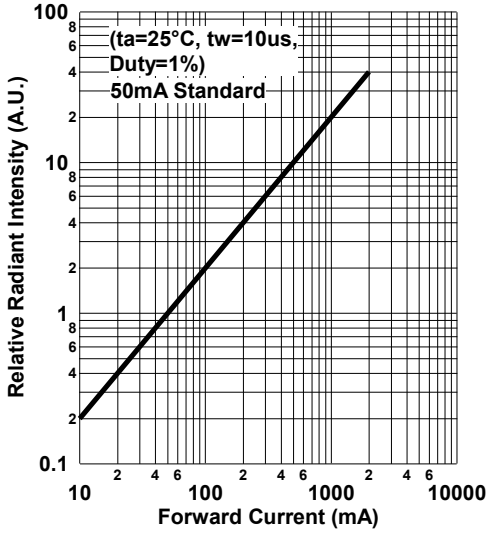
* Measured by Photodyne #500
** Measured by Tektronix J-6512

RoHS Compliant

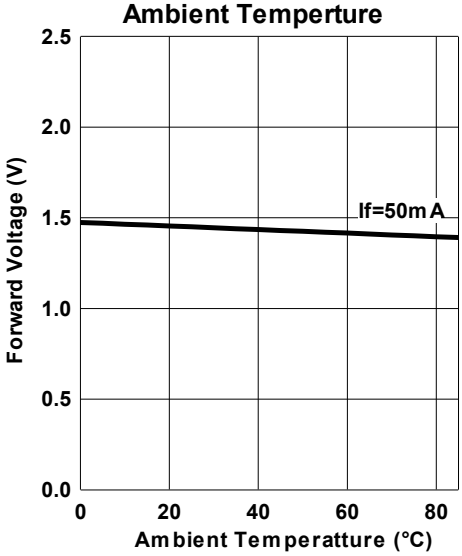
Forward Curent - Forward Voltage



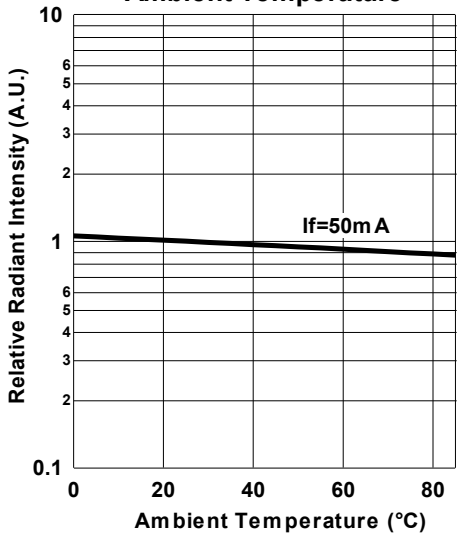
Relative Radiant Intensity - Forward Current



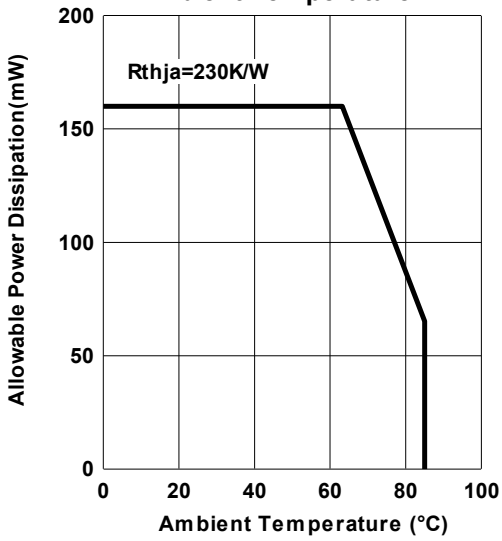
Forward Voltage - Ambient Temperture



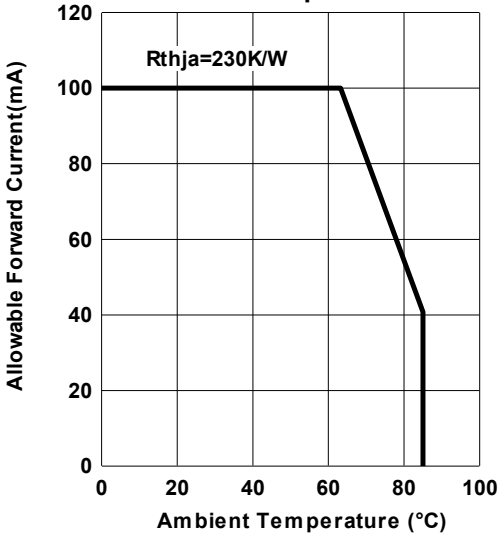
Relative Radiant Intensity - Ambient Temperature

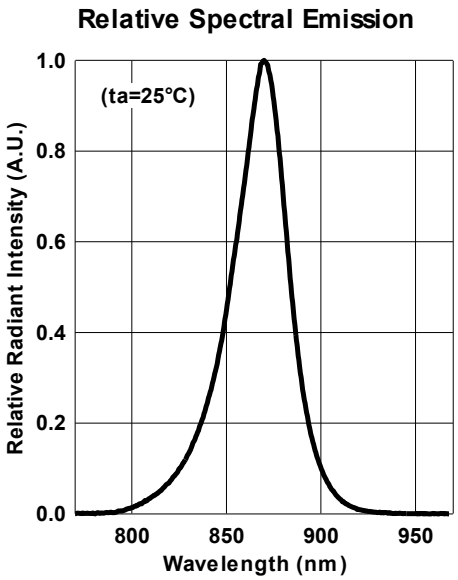


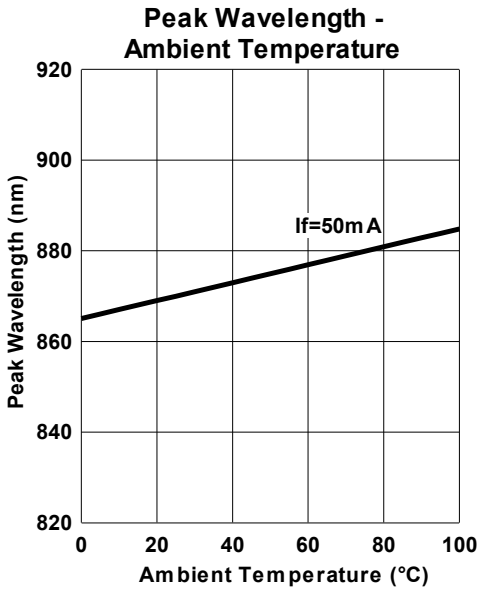
Allowable Power Dissipation - Ambient Temperature

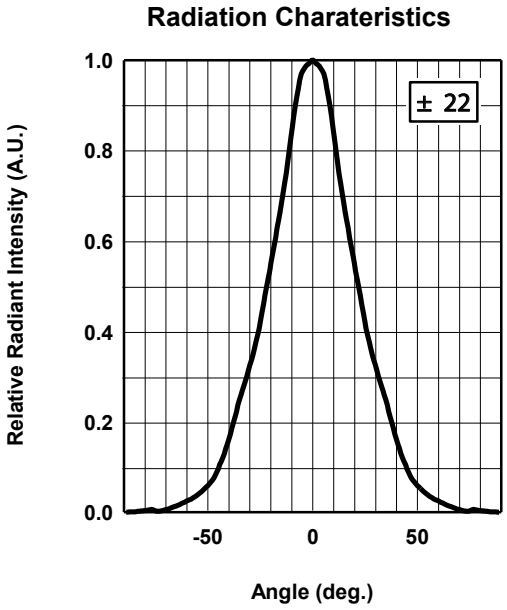


Allowable Forward Current - Ambient Temperature









The product is manufactured by USHIO Inc. and the spec information is also from USHIO Inc.