Marubeni

Data Sheet

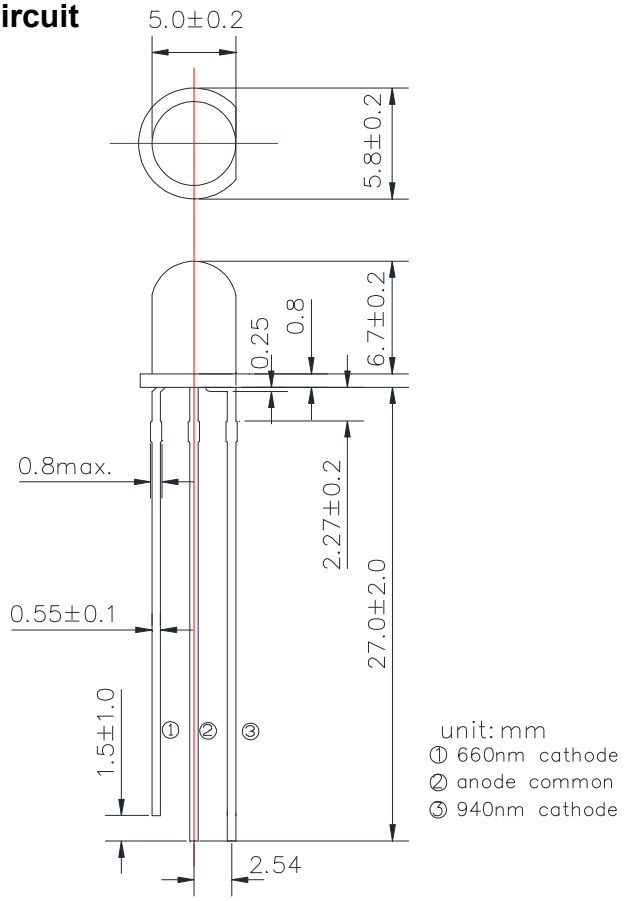
2021.05

PRELIMINARY

L660N/940D-04A

Multi Wavelength LED

Outline and Internal Circuit



Features

- Chip Material : AlGaInP(660nm) , AlGaAs(940nm)
- Chip Dimension : 350um * 350um
- Number of Chips : 2pcs
- Peak Wavelength : 660 / 940nm typ.
- Lead Frame Die : Silver Plated on Copper
- Package Resin : PA9T Resin
- Lens : Epoxy Resin

Application

660nm

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	120	mW
Forward Current	IF	50	mA
Pulse Forward Current	IFP	300	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthjs	300	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	265	°C

‡Pulse Forward Current condition : Duty 1% and Pulse Width=10us.

‡Soldering condition : Soldering condition must be completed with 3 seconds at 265°C.

Optical and Electrical Characteristics (Tc=25°C)

(*: 100% testing, **: reference value)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.9	2.3	V	IF=20mA*
	VFP		3.5			IFP=300mA**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO	8.0	12		mW	IF=20mA*
			150			IFP=300mA**
Luminous Flux	Φv		800		mlm	IF=20mA**
Peak Wavelength	λp	650		670	nm	IF=20mA*
Dominant Wavelength	λD		640		nm	IF=20mA**
Half Width	Δλ		16		nm	IF=20mA**
Rise Time	tr		10		ns	IF=20mA**
Fall Time	tf		10		ns	IF=20mA**

‡ Radiated Power is measured by S3584-08.

940nm

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	170	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthjs	300	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	265	°C

‡Pulse Forward Current condition : Duty 1% and Pulse Width=10us.

‡Soldering condition : Soldering condition must be completed with 3 seconds at 265°C.

Optical and Electrical Characteristics (Tc=25°C)

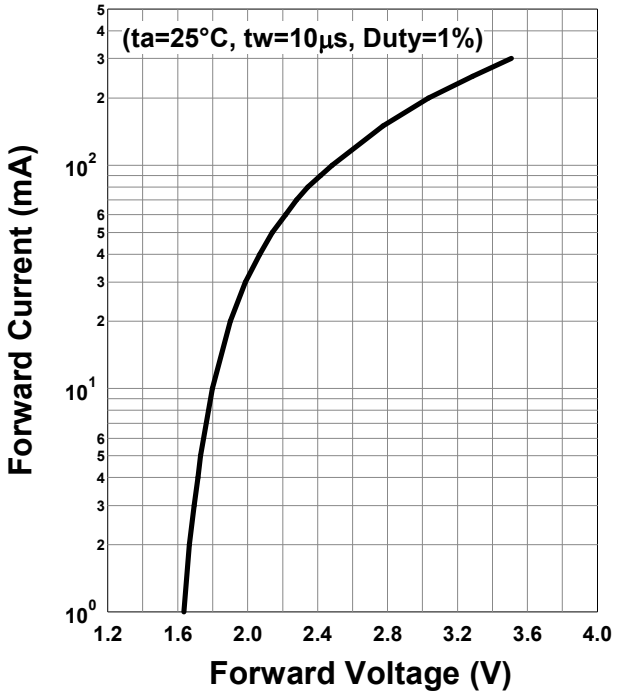
(*: 100% testing, **: reference value)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.3	1.7	V	IF=20mA*
	VFP		2.1			IFP=1A**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO	7.0	10		mW	IF=20mA*
			410			IFP=1A**
Peak Wavelength	λp	930		955	nm	IF=20mA*
Half Width	Δλ		40		nm	IF=20mA**
Rise Time	tr		10		ns	IF=20mA**
Fall Time	tf		15		ns	IF=20mA**

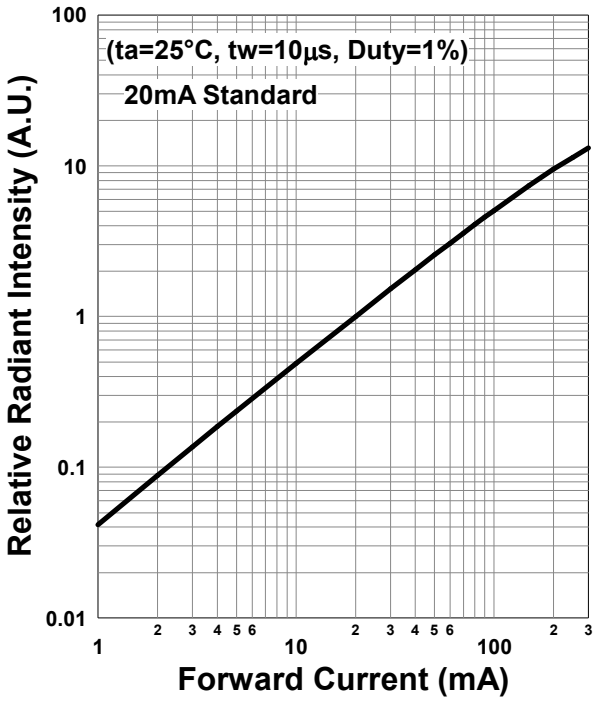
‡ Radiated Power is measured by S3584-08.

Typical Characteristic Curves 660nm

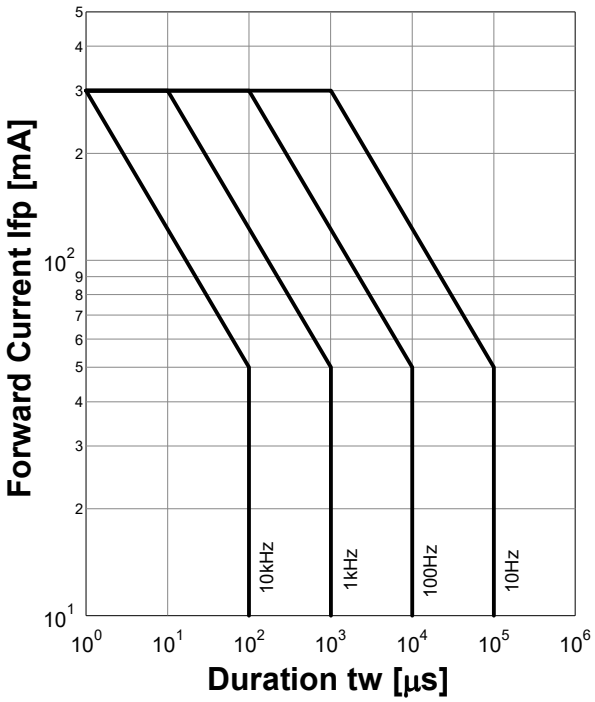
Forward Current - Forward Voltage



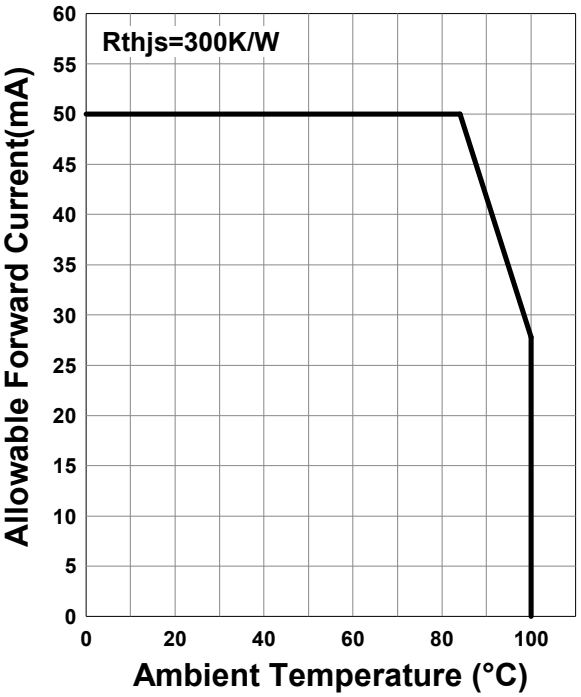
Relative Radiant Intensity - Forward Current



Forward Current - Pulse Duration

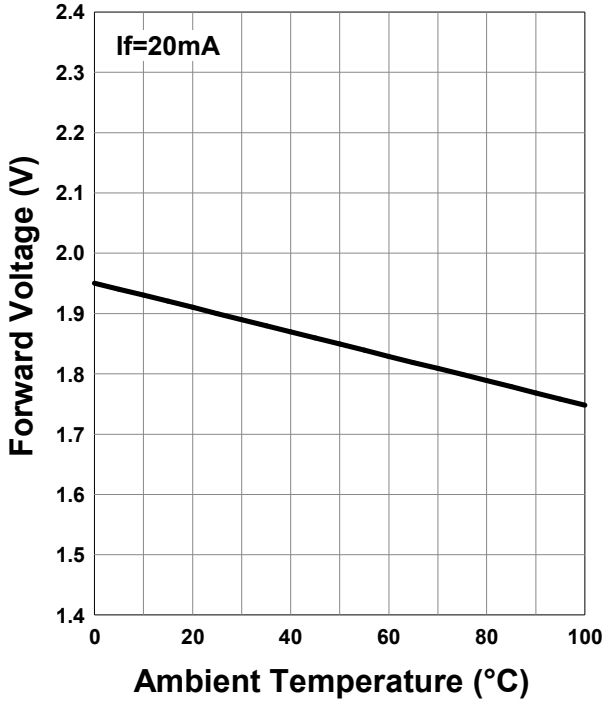


Allowable Forward Current - Ambient Temperature

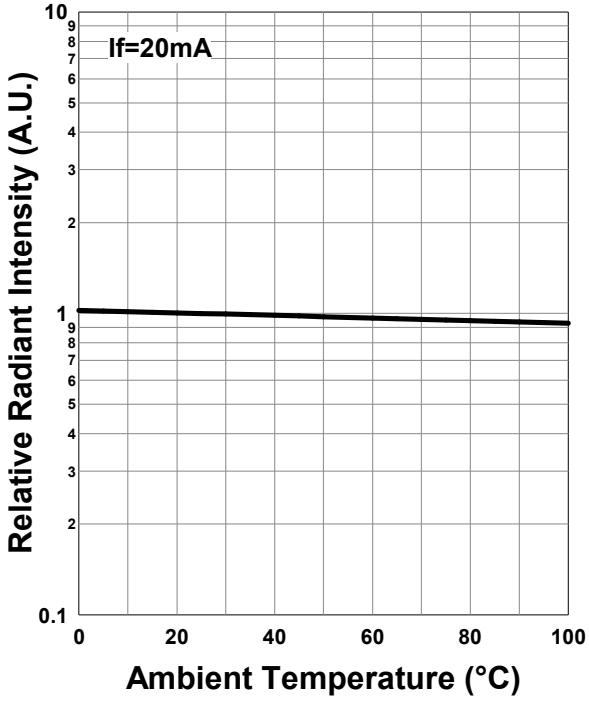


660nm

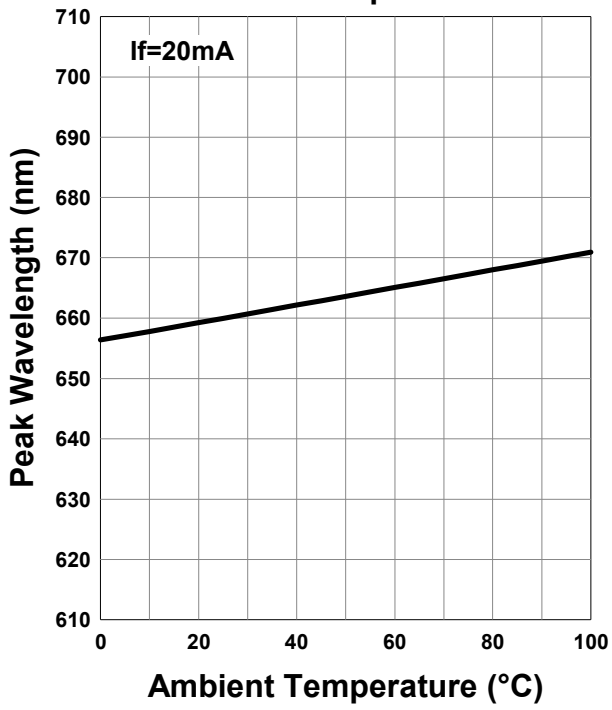
Forward Voltage - Ambient Temperature



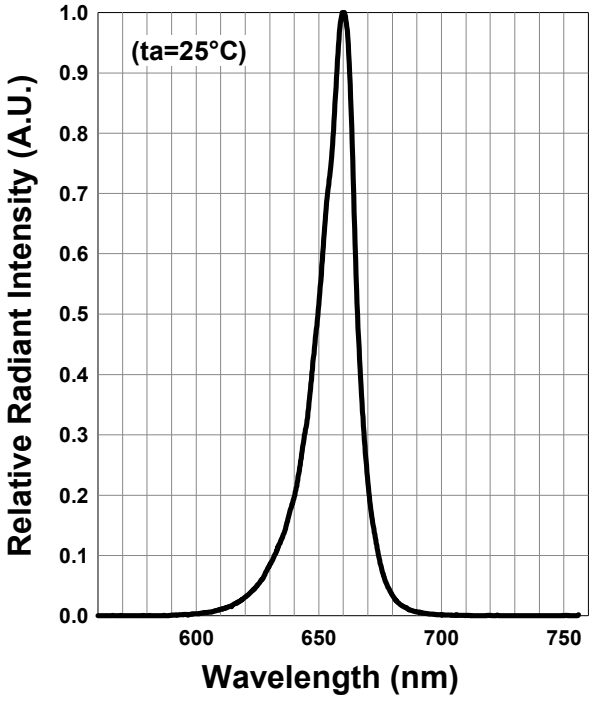
Relative Radiant Intensity - Ambient Temperature



Peak Wavelength - Ambient Temperature

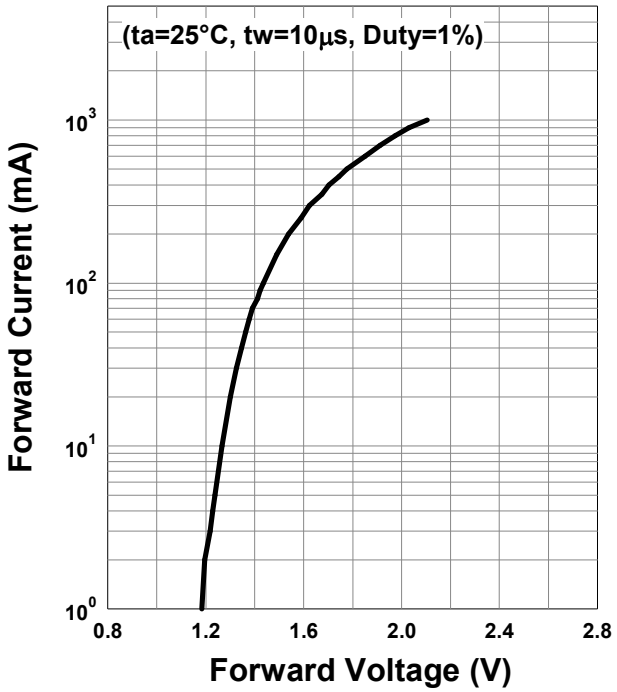


Relative Spectral Emission

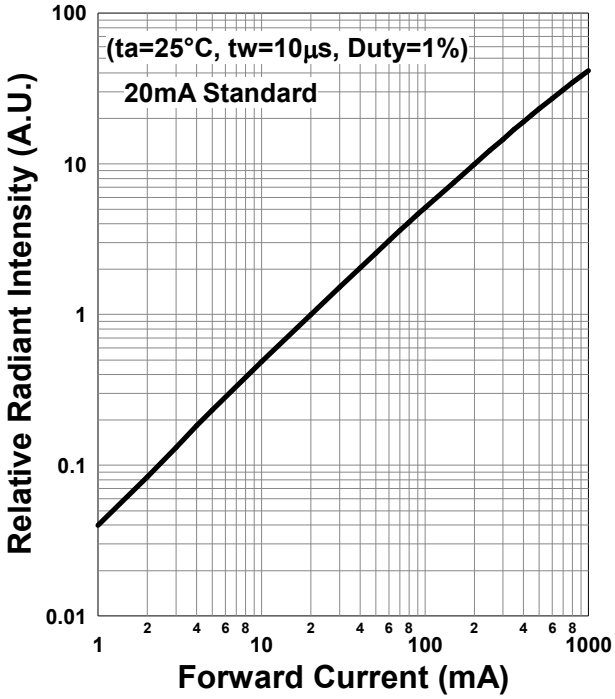


Typical Characteristic Curves 940nm

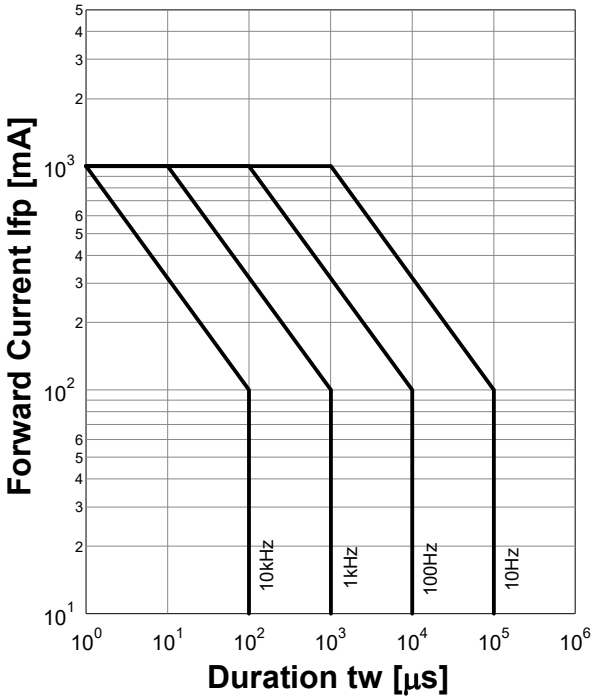
Forward Current - Forward Voltage



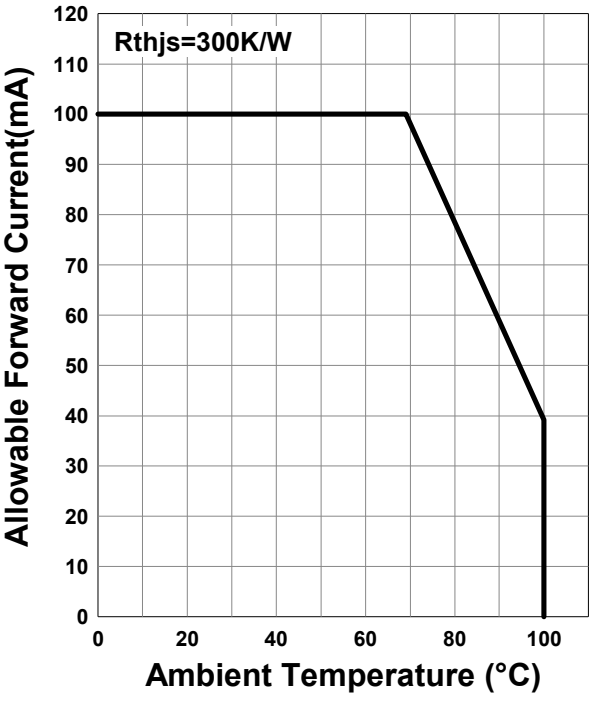
Relative Radiant Intensity - Forward Current



Forward Current - Pulse Duration

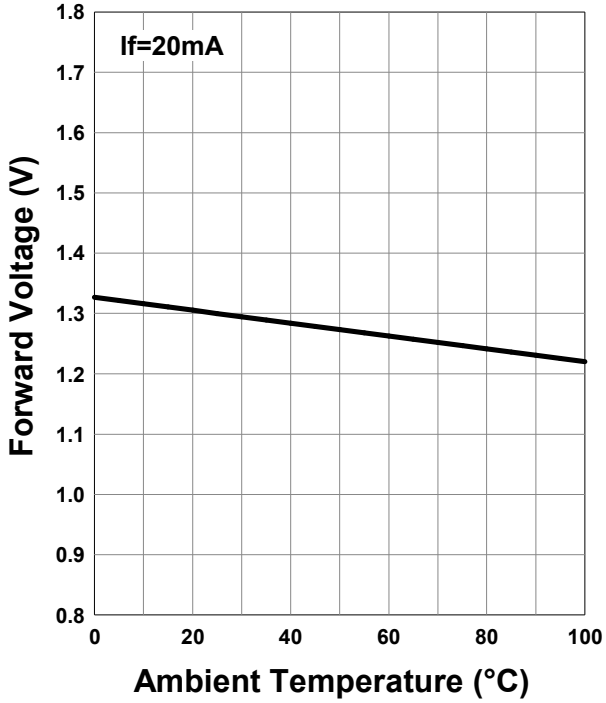


Allowable Forward Current - Ambient Temperature

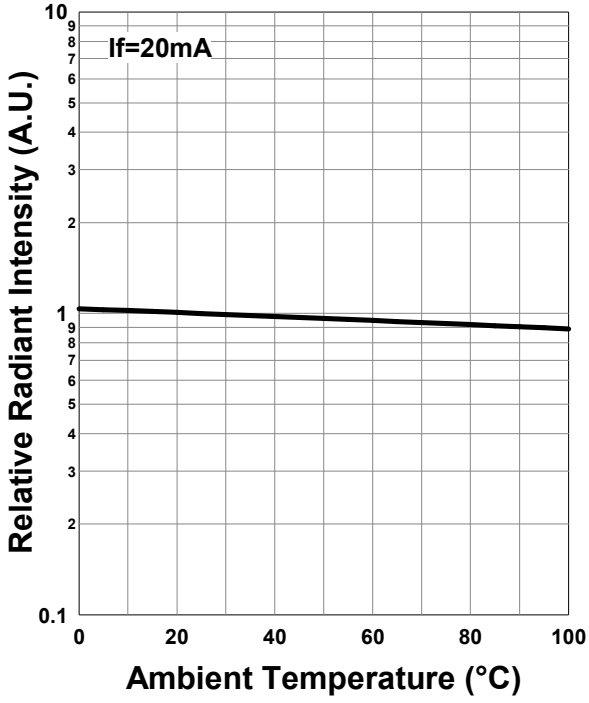


940nm

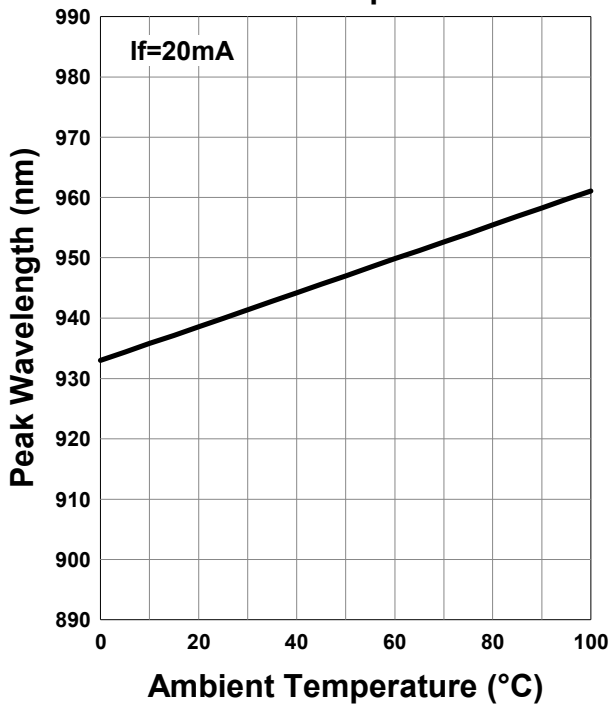
Forward Voltage - Ambient Temperature



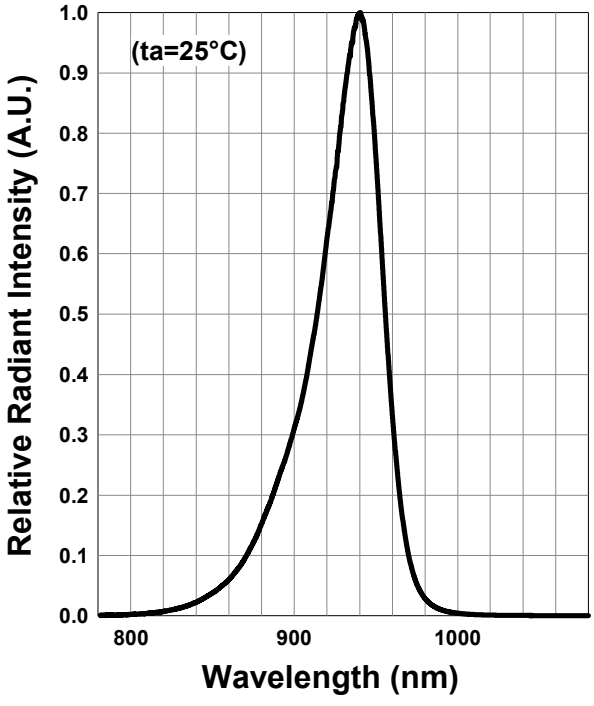
Relative Radiant Intensity - Ambient Temperature



Peak Wavelength - Ambient Temperature



Relative Spectral Emission



Disclaimer

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