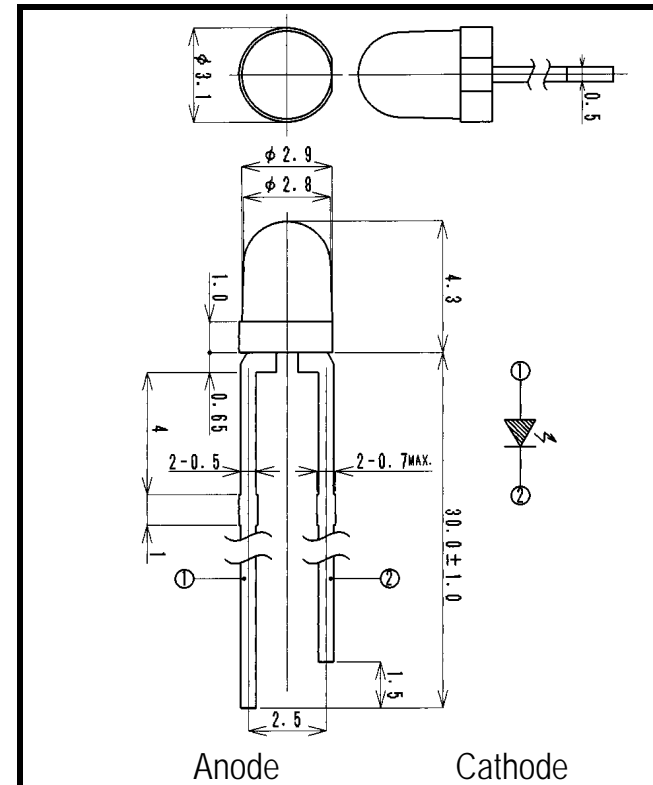
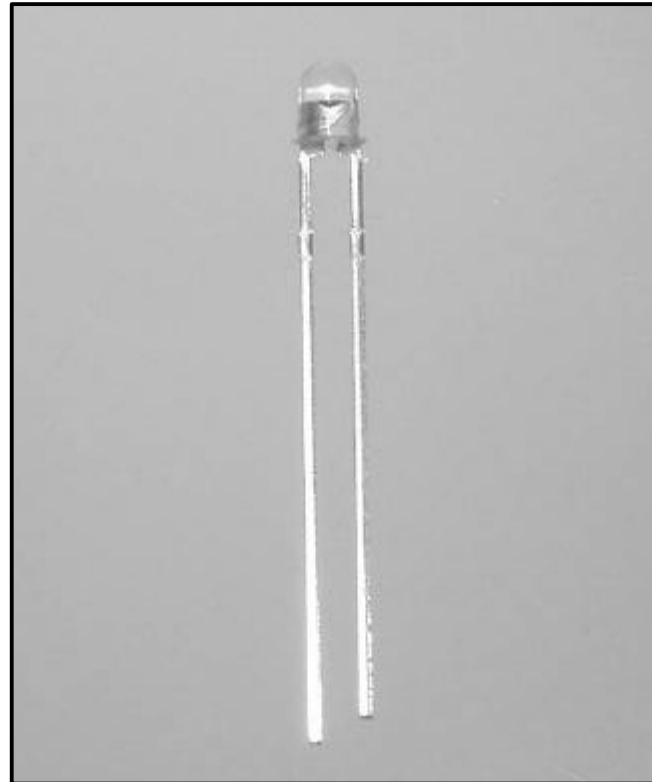


# VSF590C1-CD

# Visible Light Emitting Diode



- FEATURES**
- High Luminous Intensity
  - Colored/Diffused Epoxy Lens
  - Wide Illumination
  - Compact
- APPLICATIONS**
- Displays
  - Indicators
  - Decorations

## 1. ABSOLUTE MAXIMUM RATINGS (Ta=25 °C)

ITEM	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	30	mA
Forward Current (Pulse)*1	IFP	0.3	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	80	mW
Operating Temp.	Topr	-20 TO 80	
Storage Temp.	Tstg	-30 TO 100	
Junction Temp.	Tj	100	
Lead Soldering Temp.*2	Tls	260	

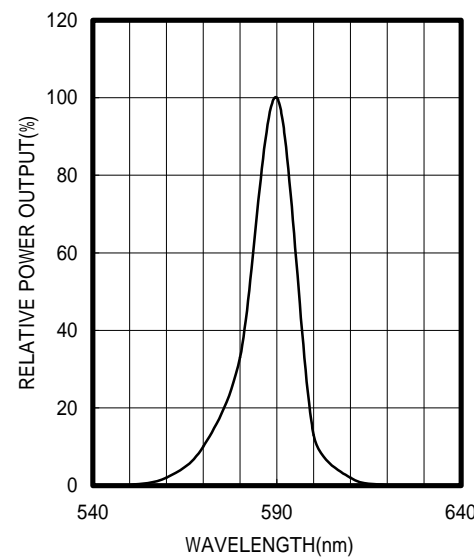
\*1:Tw=10uS,T=10mS

\*2:Time 5 Sec max,Position:Up to 3mm from the body

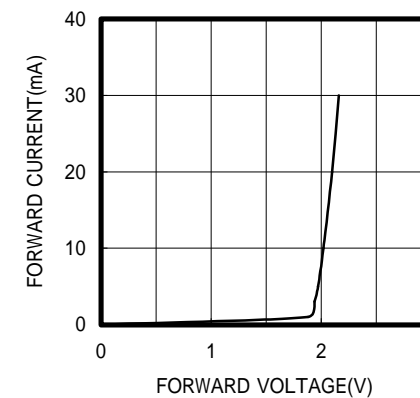
## 2. ELECTRICAL & OPTICAL CHARACTERISTICS (Ta=25 °C)

ITEM	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Luminous Intensity	Iv	IF=20mA		160		mcd
Forward Voltage	VF	IF=20mA		2.1	2.5	V
Reverse Current	IR	VR=5V			100	μA
Peak Wavelength	λp	IF=20mA		590		nm
Spectral Line Half Width		IF=20mA		15		nm
Half Intensity Beam Angle		IF=20mA		±40		deg.
Rise Time	Tr	IFP=20mA		-		nS
Fall Time	Tf	IFP=20mA		-		nS
Junction Capacitance	Cj	1MHz, V=0V		10		pF
Temp. Coefficient of Iv	Iv/T	IF=10mA		-0.7		%/°C
Temp. Coefficient of VF	Vf/T	IF=10mA		-1.8		mV/°C

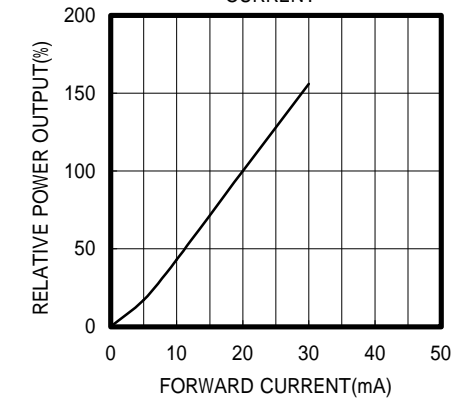
SPECTRAL OUTPUT



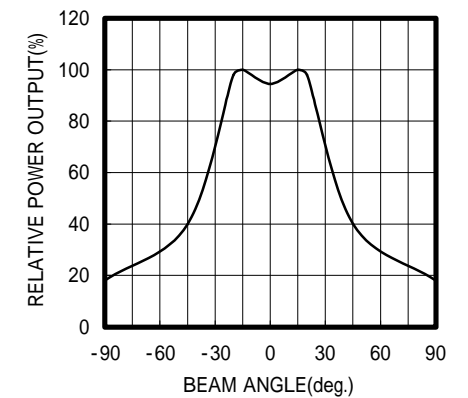
FORWARD I-V CHARACTERISTICS



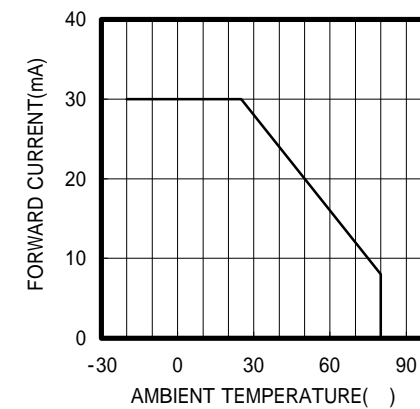
RELATIVE POWER vs FORWARD CURRENT



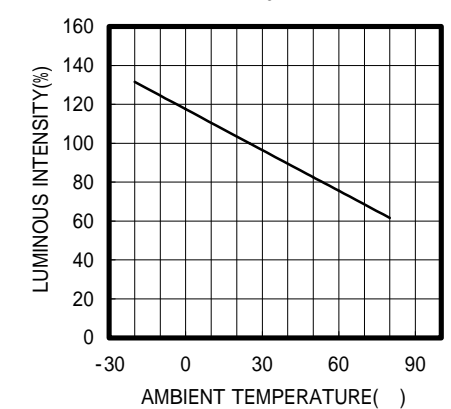
RADIATION PATTERN



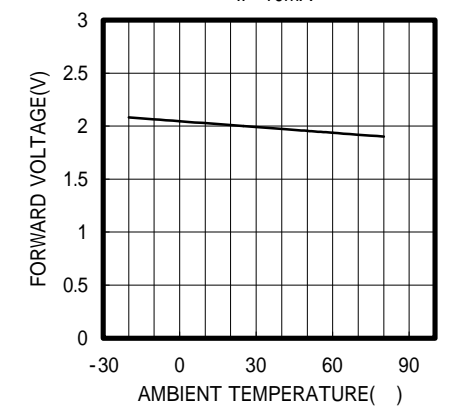
THERMAL DERATING CURVE



LUMINOUS INTENSITY vs TEMPERATURE  
IF=10mA



FORWARD VOLTAGE vs TEMPERATURE  
IF=10mA



**OPTRANS**

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