

654U6YC-T

■ Absolute Maximum Rating

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	I_F	20	mA
Peak Forward Current*	I_{FP}	160	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	40	mW
Electrostatic discharge	E_{SD}	2000	V
Operation Temperature	T_{opr}	-25~+80	°C
Storage Temperature	T_{stg}	-40~+80	°C
Lead Soldering Temperature*	T_{sol}	Max. 260°C for 5sec Max.	

* I_{FP} Conditions: Pulse Width ≤ 10 msec duty $\leq 1/10$

* T_{sol} Conditions: 3mm from the base of the epoxy bulb

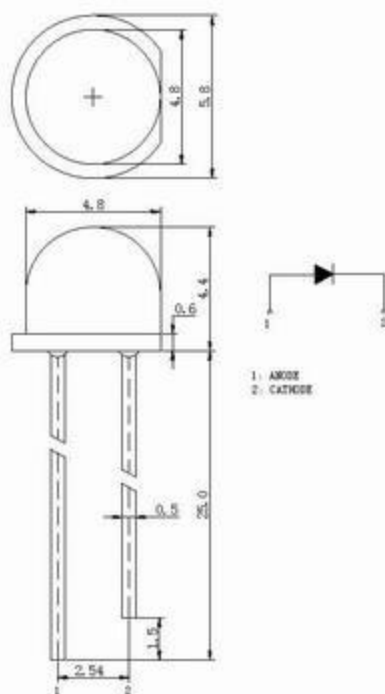
■ Typical Optical/ Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20$ mA	1.8	2.1	2.6	V
Reverse Current	I_R	$V_R=5$ V	--	--	10	uA
50% Power Angle	$2\theta_{1/2}$	$I_F=20$ mA	--	80	--	deg
Luminous Intensity	I_v	$I_F=20$ mA	600	800	--	mcd
Peak Wavelength	λ_P	$I_F=20$ mA	585	--	595	nm
Recommend Forward Current	$I_F(\text{rec})$	--	--	10~20	--	mA

Notes:

1. Absolute maximum ratings $T_a=25^\circ\text{C}$.
2. Tolerance of measurement of forward voltage ± 0.1 V.
3. Tolerance of measurement of peak Wavelength ± 2.0 nm.
4. Tolerance of measurement of luminous intensity $\pm 15\%$.

■ Package Dimensions And Materials



Tolerance Grade	Dimension Tolerance (UNIT:mm)			
	0.5~3	>3~6	>6~30	>30~120
Medium (m)	±0.1	±0.1	±0.2	±0.3
Chip			Lens Color	
Material	Emitting Color			
GaAsP/GaAs	YELLOW		Water clear	

■ Reliability Performance

1. Test Items And Result

Test Classification	Test Item	Test Conditions	Test Duration	Sample Size	AC/RE
Life Test	Room Temperature DC Operating Life Test	Ta=25°C±5°C, IF=20mA	1000 hrs	30pcs	0/1
Environment Test	Thermal Shock Test	-10°C±5°C→+100°C±5°C 5min. 10sec. 5min.	50 cycles	30 pcs	0/1
	Temperature Cycle Test	-40°C±5°C→+85°C±5°C 30min. 5min. 30min.	50 cycles	30 pcs	0/1
	High Temperature & High Humidity Test	Ta=85°C±5°C RH =85%±0.5 %RH	1000 hrs	30 pcs	0/1
	High Temperature Storage	Ta=100°C±5°C	1000 hrs	30 pcs	0/1
	Low Temperature Storage	Ta=-55°C±5°C	1000 hrs	30 pcs	0/1
Mechanical Test	Resistance to Soldering Heat	Ta=230°C±5°C	5sec.	30 pcs	0/1
	Lead Integrity	Load 2.5N(0.25kgf) 0° ~ 90° ~0°	3times	30 pcs	0/1

2. Criteria for Judging The Damage

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min.	Max.
Forward Voltage	V _F	I _F =20mA		U.S.L.*1.2
Reverse Current	I _R	V _R =5V		U.S.L.*2.2
Luminous Intensity	I _V	I _F =20mA	L.S.L.**×0.7	

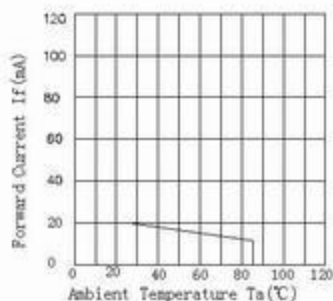
U.S.L.*: Upper Standard Level

L.S.L.**: Lower Standard Level

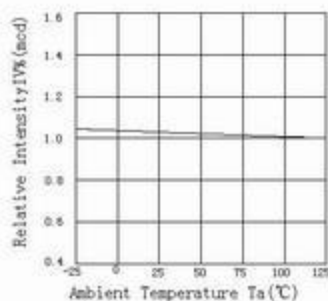
■ Typical Optical/Electrical Characteristics Curves

($T_a=25^\circ\text{C}$ Unless Otherwise Noted)

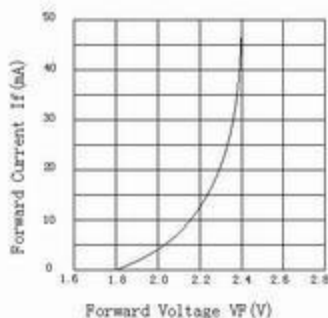
Forward Current vs. Ambient Temperature



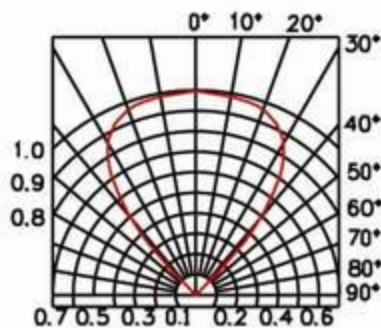
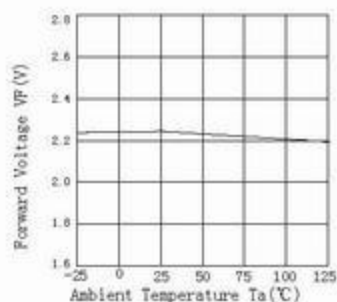
Relative Intensity vs. Ambient Temperature



Forward Current vs. Forward Voltage



Forward Voltage vs. Ambient Temperature



Luminous Spectrum ($T_a=25^\circ\text{C}$) SPECTRAL RADIANCE

