

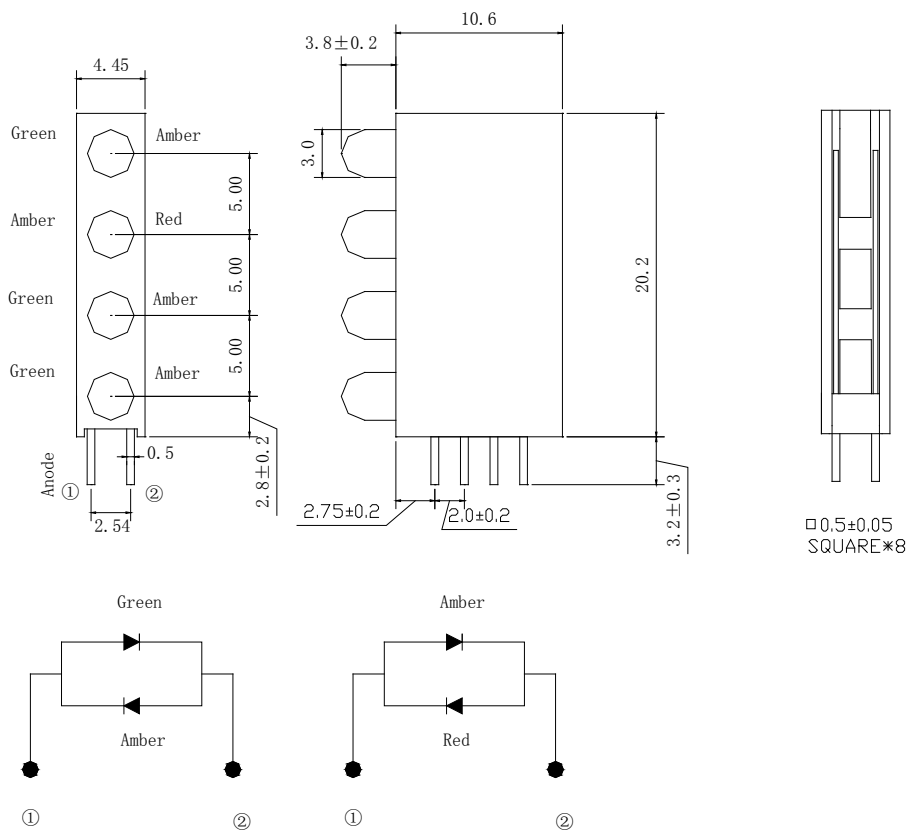
Features

- 3mm Round Type LED Assembly
- Low Power Consumption
- High Efficiency
- Various Colors and Viewing Angle
- Long Solid State Reliability
- Package: 1000pcs/Packing

Applications

- Indicator

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2mm (.0079") unless otherwise noted.
3. Specifications are subject to change without notice
4. This drawing is only for indication, not as a basis for the actual structure.



Selection Guide

Part No	Lens Type	Dice	Emitted Color
FDA-3524GAARGAGA-TWD1-D3.2	White Diffused	GaAsP	Green Orange Red

Electrical / Optical Characteristics At Ta=25 °C

Symbol	Parameter		Green	Orange	Red	Unit	Test Condition
Iv	Luminous Intensity	MIN.	18.0	30.0	30.0	mcd	IF=20mA
		TYP.	35.0	72.0	72.0		
2θ1/2	Viewing Angle	TYP.	30	30	30	deg	IF=20mA
λ Peak	Peak Emission Wavelength	TYP.	574	610	631	nm	IF=20mA
λ d	Dominant Wavelength	TYP.	571	605	625	nm	IF=20mA
Δλ	Spectral Line Half-Width	TYP.	20	20	20	nm	IF=20mA
VF	Forward Voltage	TYP.	2.1	2.1	2.0	V	IF=20mA
		MAX.	2.4	2.7	2.5		
IR	Reverse Current	MAX.	10	10	10	μ A	VR=5V

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 optical centerline value

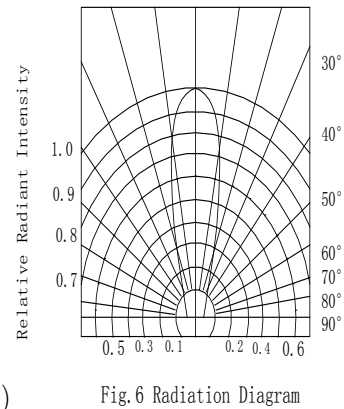
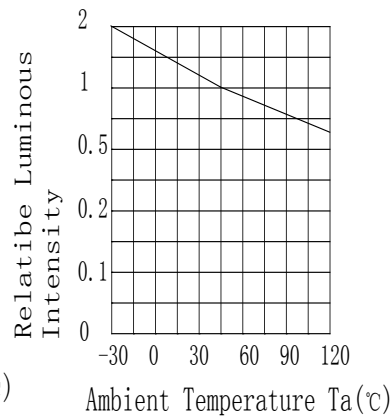
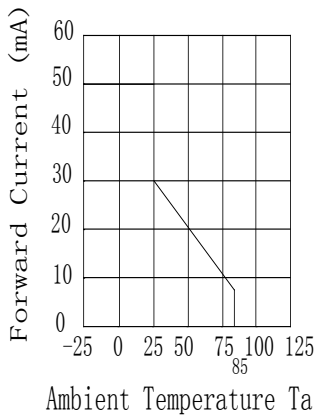
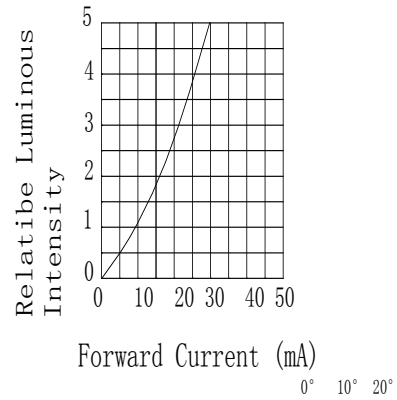
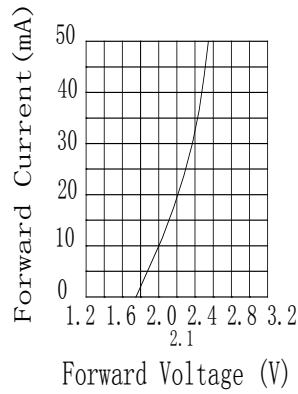
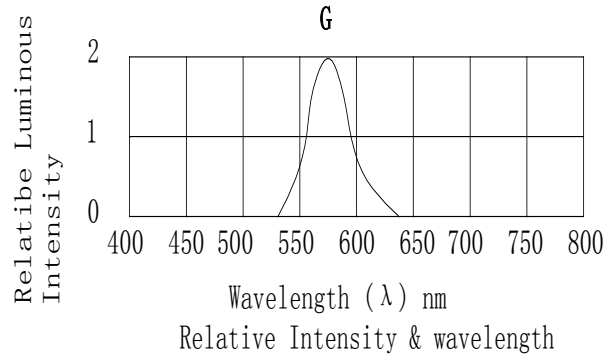
Absolute Maximum Ratings At Ta=25°C

Parameter	Green	Orange	Red	Unit
Power Dissipation	80	80	80	mW
Peak Forward Current[1]	150	150	150	mA
Continuous Forward Current	30	30	30	mA
Reverse Voltage	5	5	5	V
Operating Temperature Range	-25°C to + 85°C			
Storage Temperature Range	-55°C to + 105°C			
Soldering Condition	260°C For 5 Seconds			

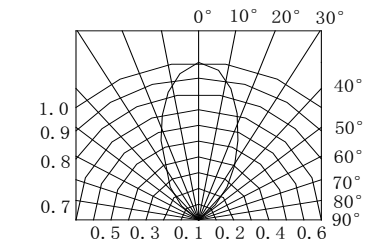
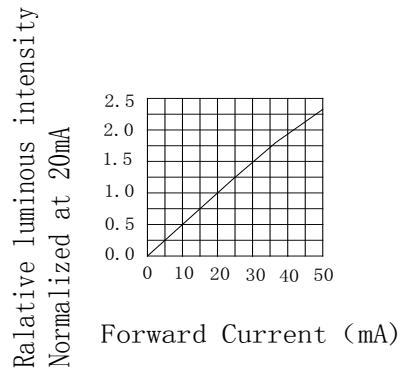
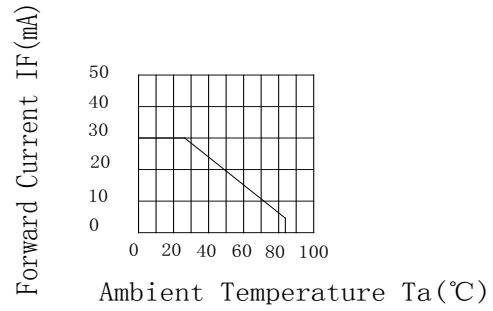
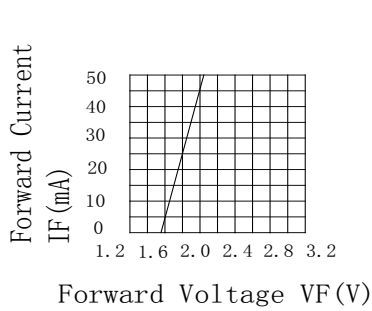
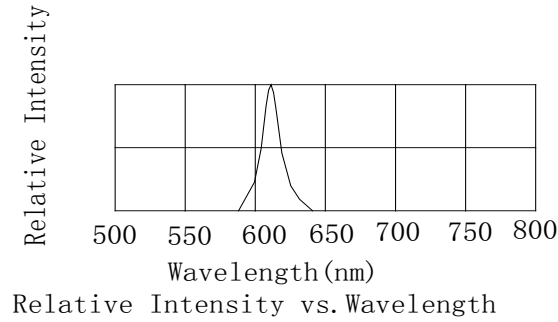
Note:

1. 1/10DutyCycle, 0.1msPulseWidth

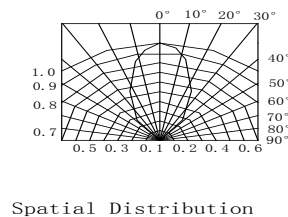
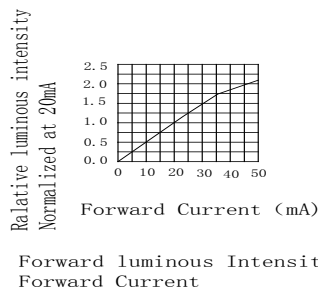
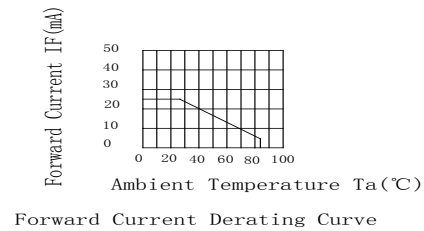
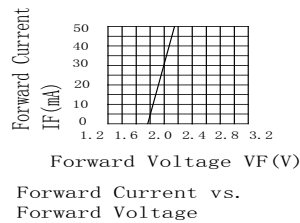
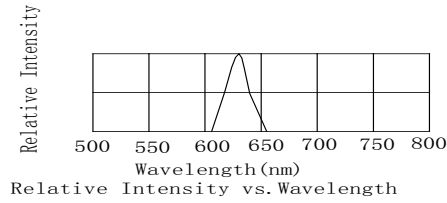
Electrical Optical Characteristics Curves At Ta=25 °C



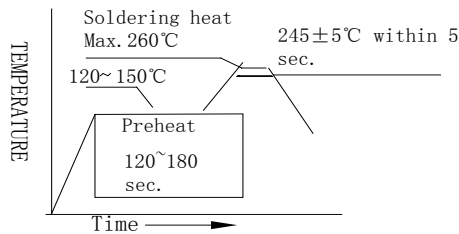
Electrical Optical Characteristics Curves At Ta=25 °C



Electrical Optical Characteristics Curves At Ta=25 °C



Reflow Soldering Instructions



Notes:

1. The LEDs should be used within a year.
2. The LEDs should be kept in 5~30°C and 60% RH for less.
3. The LEDs should be used within 24 hours, or else should be kept a 5~30°C and 30% RH or less. And LEDs should be used within 7 days after opening the package.

Reliability Test Items Conditions

Classification	Test Item	Test Conditions	Test hours	Result
Endurance Test	Opertion Life	Connect with a power $I_f=20\text{mA}$ $T_a=\text{Under room temperature}$	1000Hrs	0/20
	Hige Temperature High Humidity	$T_a=+65^\circ\text{C}\pm 5^\circ\text{C}$ RH=90%-95%	240Hrs	0/20
	Hige Temperature Storage	High $T_a=+85^\circ\text{C}\pm 5^\circ\text{C}$	1000Hrs	0/20
	Low Temperature Storage	Low $T_a=-35^\circ\text{C}\pm 5^\circ\text{C}$ Test time=1000hrs	1000Hrs	0/20
Environmental Test	Temperature Cycling	$-45^\circ\text{C}\sim+105^\circ\text{C}$ 15min 5min 15min	300 Cycles	0/20
	Thermal Shock	$-35^\circ\text{C}\sim\pm 5^\circ\text{C}\sim+85^\circ\text{C}\sim\pm 5^\circ\text{C}$ 5min 10sec 5min	300 Cycles	0/20
	Solder Resistance	Preheating: $120^\circ\text{C}-150^\circ\text{C}$,within 2 minutes. Operation heating : $260^\circ\text{C}(\text{Max.})$,within5 seconds(Max.)	5Cycles	0/20

Judgment criteria of fialure for the reliability

Measuring items	Symbol	Measuring conditions	Judgment criteria for failure
Forward voltage	$V_F(\text{V})$	$I_F=20\text{mA}$	Over $U\times 1.2$
Rvevrse current	$I_R(\mu\text{A})$	$V_R=5\text{V}$	Over $U\times 2$
Luminous intensity	$I_v(\text{mcd})$	$I_F=20\text{mA}$	Below $S\times 0.5$

Note: 1.U means the upper limit of specified characteristics. S means initial value.

2.Meansurement shall be taken between 2 hours after the test pieces have been returned to normal ambient cnditions after completion of each test.