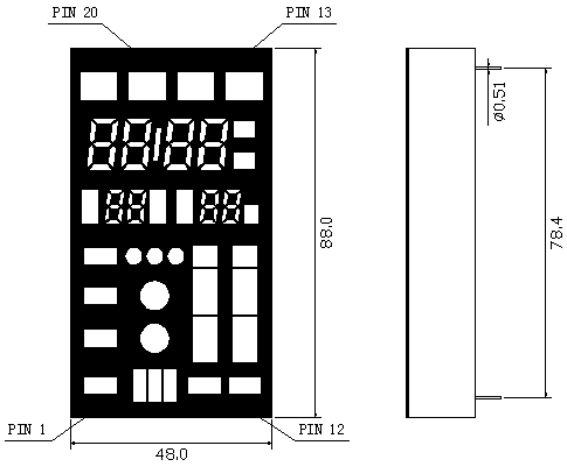
TOYO LED ELECTRONICS LIMITED

Room 1610, Hong Kong Plaza, 188 Connaught Road West, Hong Kong.
Tel : (852) 2540 7288 Fax : (852) 2517 1797
http://www.toyo-led.com E-mail : sales@toyo-led.com

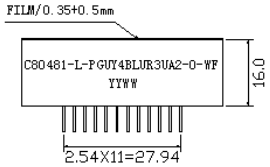
ISO 9001 BUREAU VERITAS Certification N° 194791

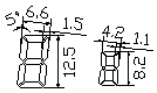
P/N: C80481-L-PGUY4BLUR3UA2-0-WF

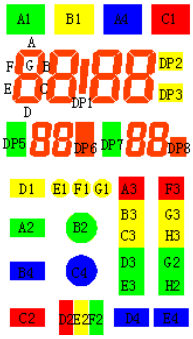
PACKAGE DIMENSION



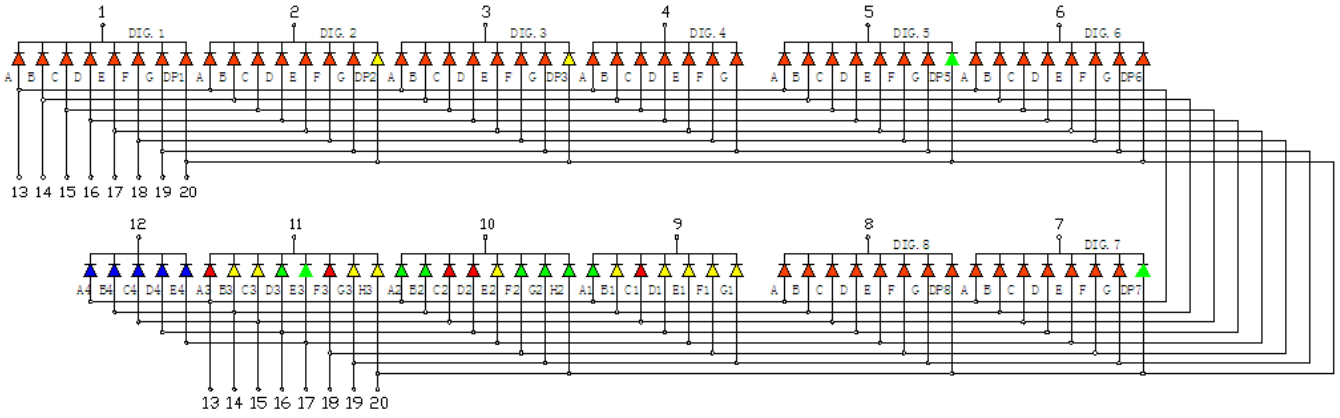
Pb-free







INTERNAL CIRCUIT DIAGRAM



CODE L

NOTES:

1. All dimensions are in millimeter(inch);
2. Tolerance is ±0.25mm(0.01″) especially other specified;
3. Pin length, housing color, marking no & circuit diagram can be customized;
4. Specifications are subject to change without notice.

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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

Pb-free

Chip Material: InGaN / GaN Pure Green LED Chip

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P_D	105	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I_{PEAK}	135	mA
DC Forward Current	I_F	25	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_A	-40 ℃ to +85 ℃	
Storage Temperature Range	T_{STG}	-40 ℃ to +85 ℃	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260 ℃			

ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25℃)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V_F	3.00	3.20	3.50	V	Per Segment	I_F =20mA
Luminous Intensity	I_V	260.0	285.0	310.0	mcd	Per Segment	I_F =20mA
Peak Emission Wavelength	λp	-	530	-	nm	Per Segment	I_F =20mA
Dominant Emission Wavelength	λd	520	522.5	525	nm	Per Segment	I_F =20mA
Spectral Line Half-Width	Δλ1/2	-	30	-	nm	Per Segment	I_F =20mA
Capacitance	C	-	45	-	pF	Per Segment	VF=0V;f=1MHz
Reverse Current	I_R	-	-	2	uA	Per Segment	VR = 5V

Note:

1. **Luminous intensity tolerance is ±10%;**
2. **Dominant Emission Wavelength tolerance is ±5%;**
3. **Recommend to use 4 chips or below in the parts.**

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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

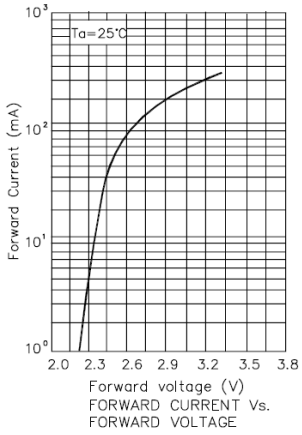


FIG. 2 Relative Intensity Vs. Forward Current

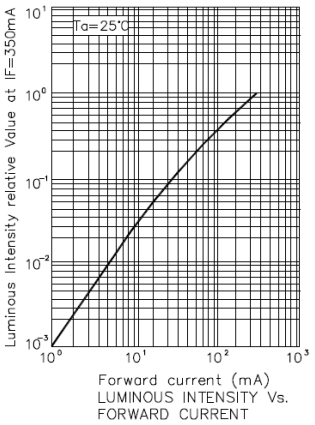


FIG. 3 Forward Current Vs. Temperature

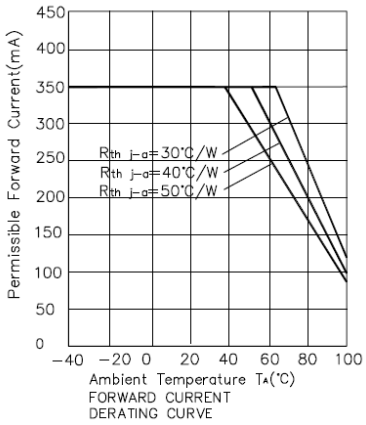


FIG. 4 Relative Intensity Vs. Temperature

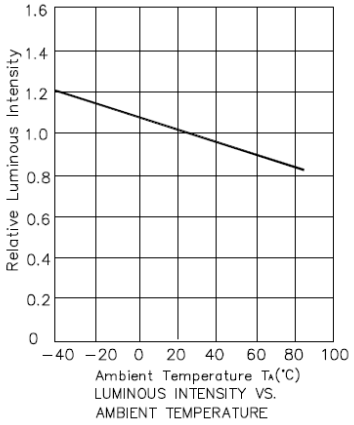
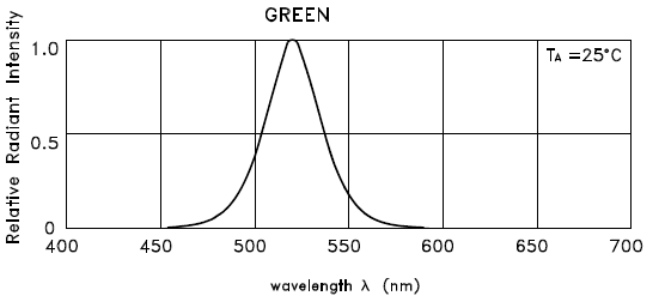


FIG. 5 Relative Intensity Vs. Wavelength



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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

Pb-free

Chip Material: AlGaInP / GaAs Ultra Bright Yellow LED Chip

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P_D	60	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I_{PEAK}	140	mA
DC Forward Current	I_F	25	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_A	-40 ℃ to +85 ℃	
Storage Temperature Range	T_{STG}	-40 ℃ to +85 ℃	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260 ℃			

ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25℃)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V_F	-	2.10	2.40	V	Per Segment	I_F =20mA
Luminous Intensity	I_V	55.0	60.0	65.0	mcd	Per Segment	I_F =20mA
Peak Emission Wavelength	λp	-	592	-	nm	Per Segment	I_F =20mA
Dominant Emission Wavelength	λd	581	586	591	nm	Per Segment	I_F =20mA
Spectral Line Half-Width	Δλ1/2	-	20	-	nm	Per Segment	I_F =20mA
Capacitance	C	-	20	-	pF	Per Segment	VF=0V;f=1MHz
Reverse Current	I_R	-	-	10	uA	Per Segment	VR = 5V

Note:

4. **Luminous intensity tolerance is ±10%;**
5. **Dominant Emission Wavelength tolerance is ±5%.**

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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

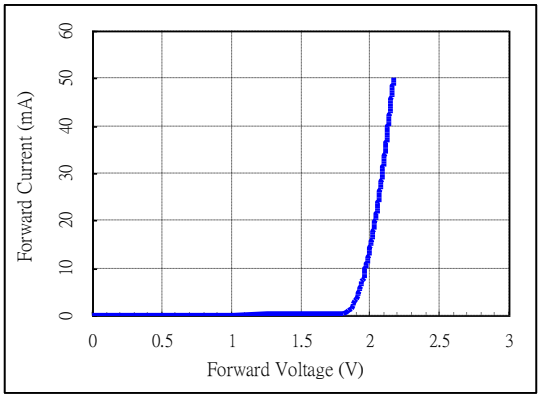


FIG. 2 Relative Intensity Vs. Forward Current

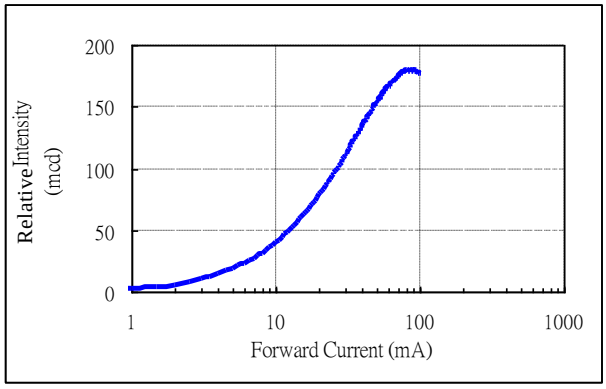


FIG. 3 Forward Voltage Vs. Temperature

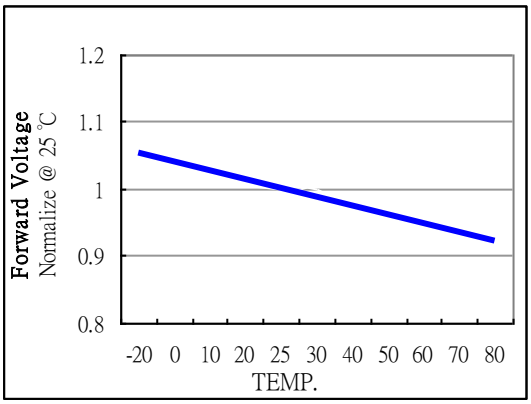


FIG. 4 Relative Intensity Vs. Temperature

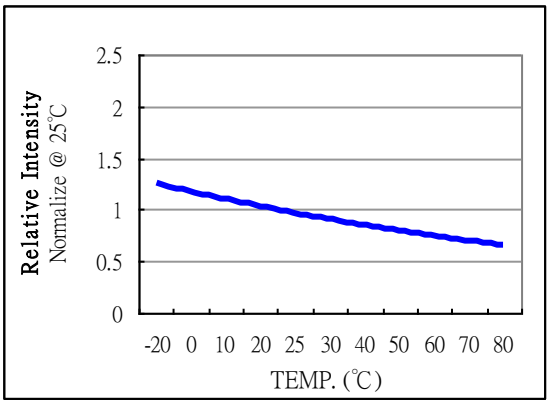
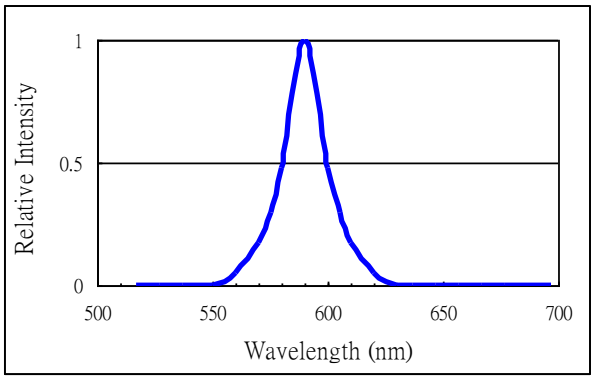


FIG. 5 Relative Intensity Vs. Wavelength



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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

Chip Material: InGaN Blue LED Chip

Pb-free

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P_D	96	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I_{PEAK}	100	mA
DC Forward Current	I_F	30	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_A	-40 ℃ to +85 ℃	
Storage Temperature Range	T_{STG}	-40 ℃ to +85 ℃	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260 ℃			

ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25℃)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V_F	-	3.00	3.20	V	Per Segment	I_F =20mA
Luminous Intensity	I_V	100	120	150	mcd	Per Segment	I_F =20mA
Peak Emission Wavelength	λp	-	472	-	nm	Per Segment	I_F =20mA
Dominant Emission Wavelength	λd	465	470	475	nm	Per Segment	I_F =20mA
Spectral Line Half-Width	Δλ1/2	-	25	-	nm	Per Segment	I_F =20mA
Capacitance	C	-	100	-	pF	Per Segment	VF=0V;f=1MHz
Reverse Current	I_R	-	-	10	uA	Per Segment	VR = 5V

Note:

6. **Luminous intensity tolerance is ±10%;**
7. **Dominant Emission Wavelength tolerance is ±5%.**

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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

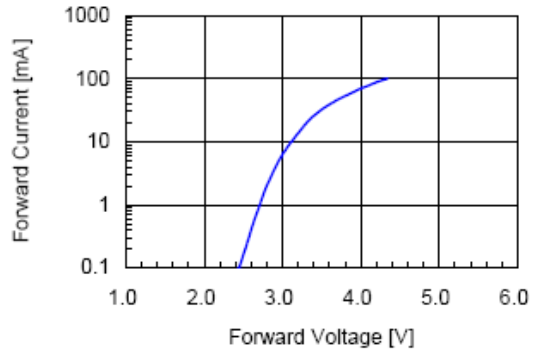


FIG. 2 Relative Intensity Vs. Forward Current

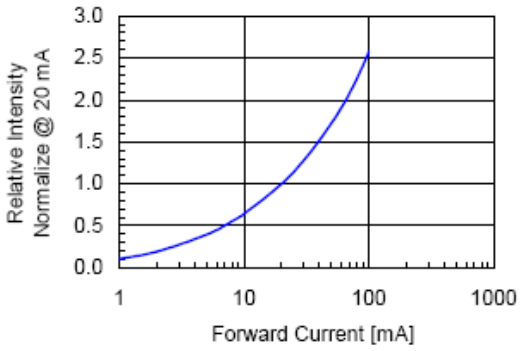


FIG. 3 Forward Voltage Vs. Temperature

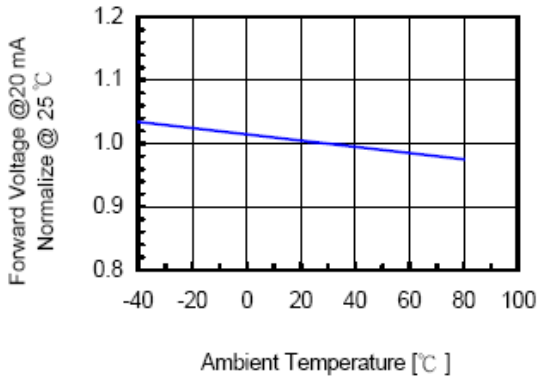


FIG. 4 Relative Intensity Vs. Temperature

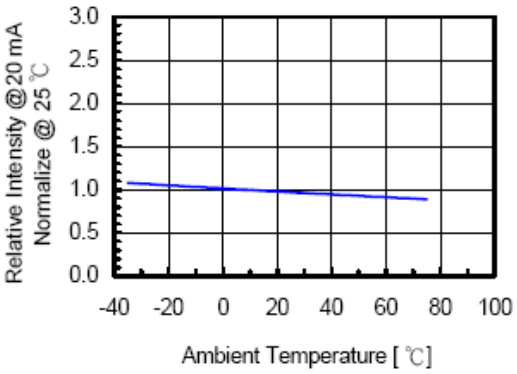
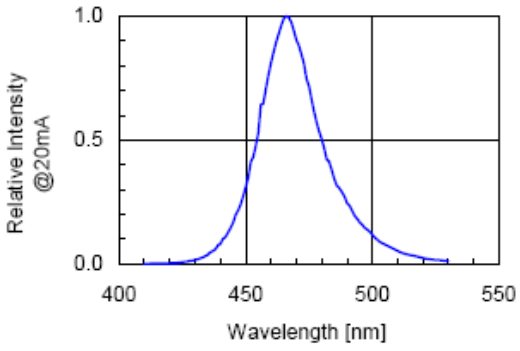


FIG. 5 Relative Intensity Vs. Wavelength



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ISO 9001 BUREAU VERITAS Certification N° 194791

P/N: C80481-L-PGUY4BLUR3UA2-0-WF

Pb-free

Chip Material: AlGaInP / GaAs Ultra Bright Red LED Chip

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P_D	72	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I_{PEAK}	90	mA
DC Forward Current	I_F	30	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_A	-40 ℃ to +85 ℃	
Storage Temperature Range	T_{STG}	-40 ℃ to +85 ℃	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260 ℃			

ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25℃)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V_F	-	2.05	2.40	V	Per Segment	I_F =20mA
Luminous Intensity	I_V	36.0	45.0	60	mcd	Per Segment	I_F =20mA
Peak Emission Wavelength	λp	-	645	-	nm	Per Segment	I_F =20mA
Dominant Emission Wavelength	λd	625	630	635	nm	Per Segment	I_F =20mA
Spectral Line Half-Width	Δλ1/2	-	20	-	nm	Per Segment	I_F =20mA
Capacitance	C	-	95	-	pF	Per Segment	VF=0V;f=1MHz
Reverse Current	I_R	-	-	10	uA	Per Segment	V_R = 5V

Note:

8. **Luminous intensity tolerance is ±10%;**
9. **Dominant Emission Wavelength tolerance is ±5%.**

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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

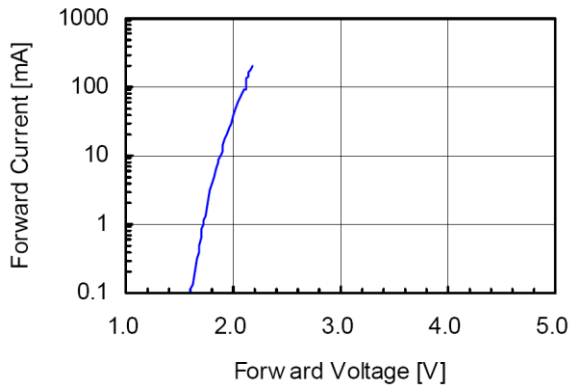


FIG. 2 Relative Intensity Vs. Forward Current

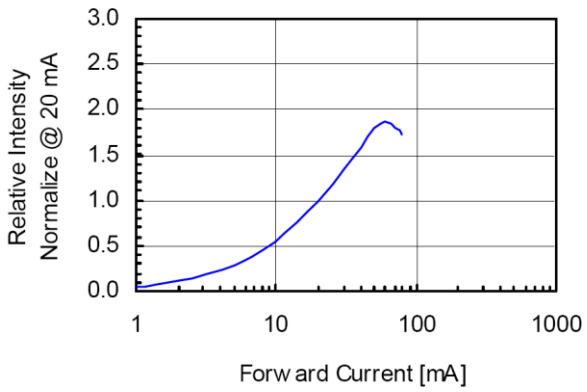


FIG. 3 Forward Voltage Vs. Temperature

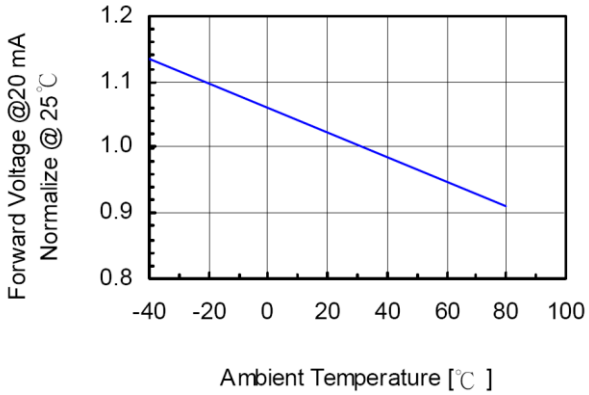


FIG. 4 Relative Intensity Vs. Temperature

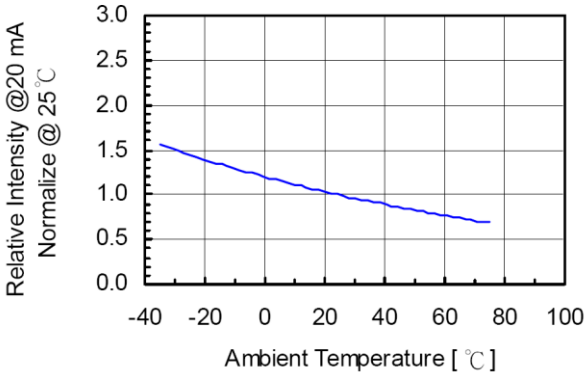
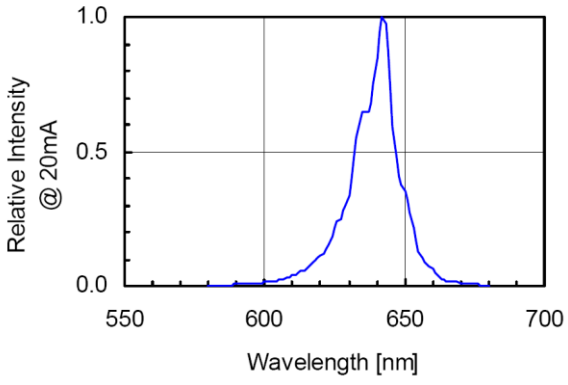


FIG. 5 Relative Intensity Vs. Wavelength



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ISO 9001 BUREAU VERITAS Certification N° 194791

P/N: C80481-L-PGUY4BLUR3UA2-0-WF

Pb-free

Chip Material: AlGaInP / GaAs Soft Orange LED Chip

ABSOLUTE MAXIMUM RATINGS (Ta = 25℃)

PARAMETER	SYMBOL	MAXIMUM RATING	UNIT
Power Dissipation	P_D	60	mW
Peak Forward Current (1/10 Duty Cycle, 0.1 Ms Pulse Width)	I_{PEAK}	160	mA
DC Forward Current	I_F	25	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_A	-40 ℃ to +85 ℃	
Storage Temperature Range	T_{STG}	-40 ℃ to +85 ℃	
Solder temperature 1/16 inch below seating plane for 3 seconds at 260 ℃			

ELECTRICAL OPTICAL CHARACTER AND CURVES (Ta = 25℃)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	LOCATION	TEST CONDITION
Forward Voltage	V_F	-	2.10	2.40	V	Per Segment	I_F =20mA
Luminous Intensity	I_V	85.0	90.0	95.0	mcd	Per Segment	I_F =20mA
Peak Emission Wavelength	λp	-	610	-	nm	Per Segment	I_F =20mA
Dominant Emission Wavelength	λd	600	605	610	nm	Per Segment	I_F =20mA
Spectral Line Half-Width	Δλ1/2	-	20	-	nm	Per Segment	I_F =20mA
Capacitance	C	-	15	-	pF	Per Segment	VF=0V;f=1MHz
Reverse Current	I_R	-	-	10	uA	Per Segment	VR = 5V

Note:

10. Luminous intensity tolerance is ±10%;

11. Dominant Emission Wavelength tolerance is ±5%.

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P/N: C80481-L-PGUY4BLUR3UA2-0-WF

■ Typical Electro-Optical Characteristic Curve:

FIG. 1 Forward Current Vs. Forward Voltage

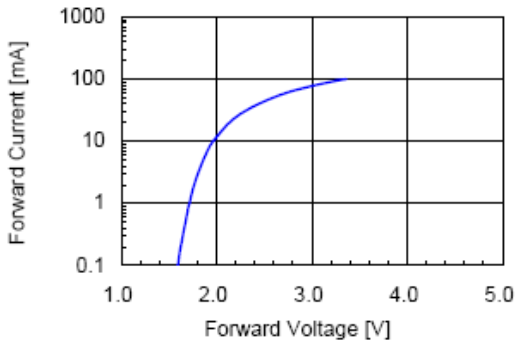

FIG. 2 Relative Intensity Vs. Forward Current

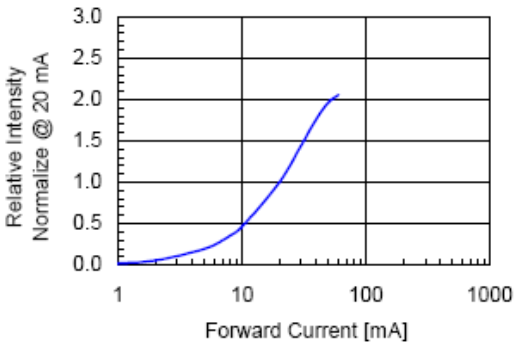

FIG. 3 Forward Voltage Vs. Temperature

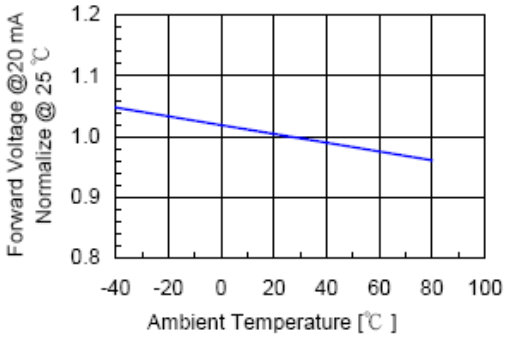

FIG. 4 Relative Intensity Vs. Temperature

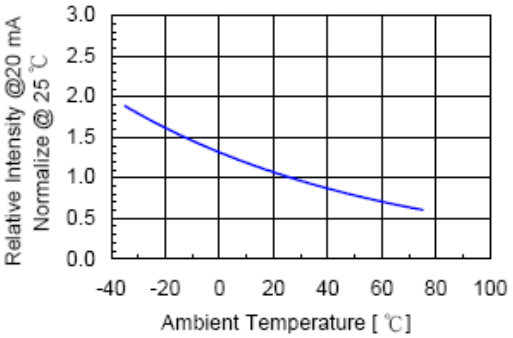

FIG. 5 Relative Intensity Vs. Wavelength