SunLED
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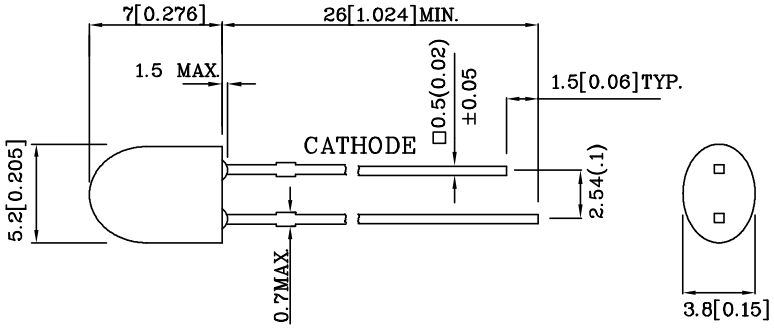
Part Number: **XLBG20DLSDLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



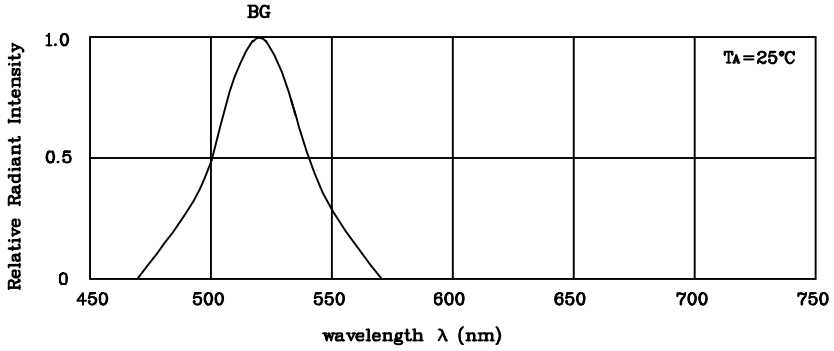
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (T_A=25°C)		**BG (InGaN)**	**Unit**
Reverse voltage	V_R	5	V
Forward current	I_F	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	i_{FS}	150	mA
Power dissipation	P_T	105	mW
Operating temperature	T_A	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

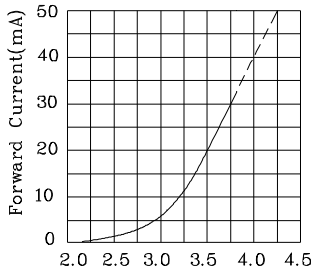
Operating Characteristics (T_A=25°C)		**BG (InGaN)**	**Unit**
Forward voltage (typ.) (I_F=20mA)	V_F	3.5	V
Forward voltage (max.) (I_F=20mA)	V_F	4.5	V
Reverse current (V_R=5V)	I_R	10	uA
Wavelength at peak emission (I_F=20mA)	λ peak	520	nm
Wavelength at Dominate emission (I_F=20mA)	λ D	525	nm
Spectral Line half-width (I_F=20mA)	Δλ	38	nm
Capacitance (V_F=0V, f=1MHz)	C	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLBG20DLSDLCR	Green	InGaN	Green Semi Diffused	180	445	520	100°(H) 50°(V)

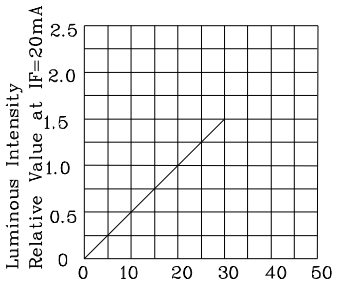


RELATIVE INTENSITY Vs. WAVELENGTH

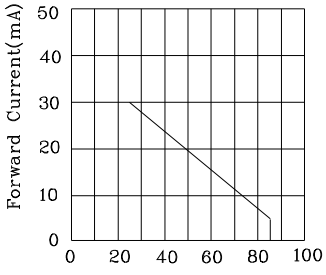
❖ **BG**



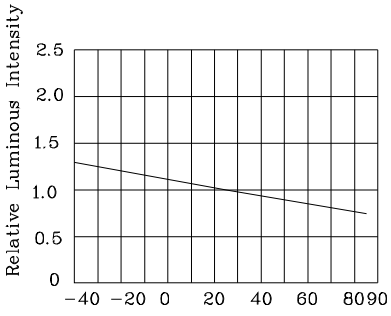
FORWARD CURRENT Vs.
FORWARD VOLTAGE



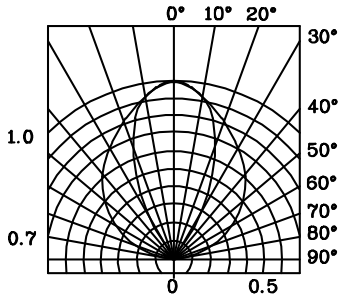
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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Part Number: **XLBG20WLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
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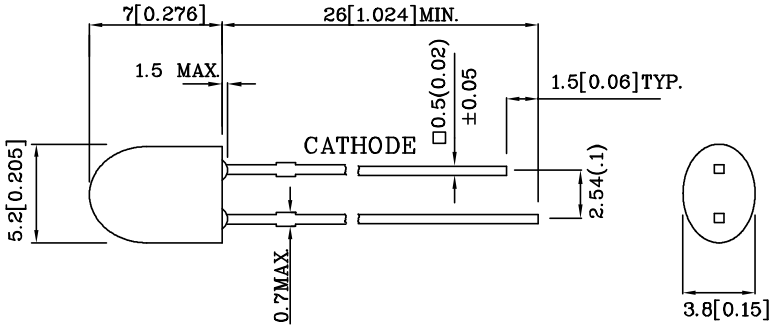


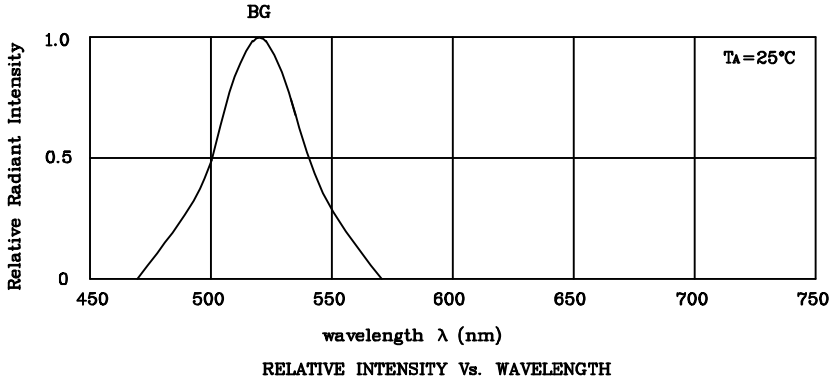
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (TA=25°C)		**BG (InGaN)**	**Unit**
Reverse voltage	VR	5	V
Forward current	IF	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	150	mA
Power dissipation	PT	105	mW
Operating temperature	TA	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

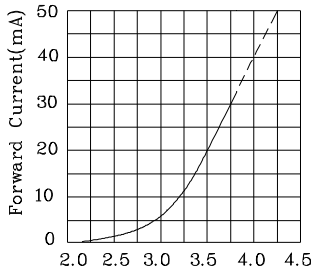
Operating Characteristics (TA=25°C)		**BG (InGaN)**	**Unit**
Forward voltage (typ.) (IF=20mA)	VF	3.5	V
Forward voltage (max.) (IF=20mA)	VF	4.5	V
Reverse current (VR=5V)	IR	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	520	nm
Wavelength at Dominate emission (IF=20mA)	λ D	525	nm
Spectral Line half-width (IF=20mA)	Δλ	38	nm
Capacitance (VF=0V, f=1MHz)	C	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLBG20WLCR	Green	InGaN	Water Clear	380	749	520	70°(H) 30°(V)

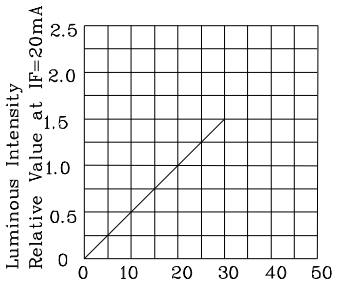


RELATIVE INTENSITY Vs. WAVELENGTH

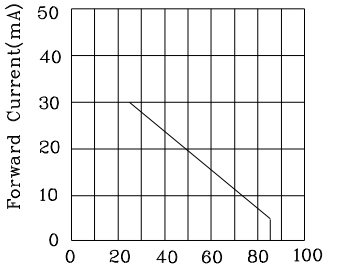
❖ **BG**



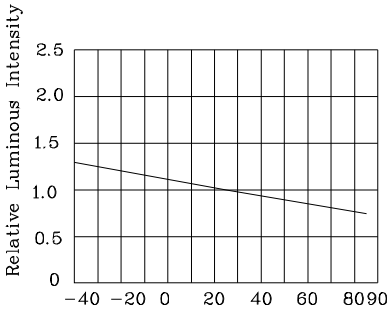
FORWARD CURRENT Vs.
FORWARD VOLTAGE



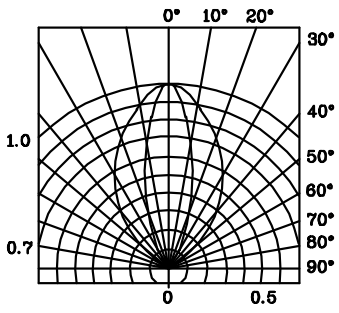
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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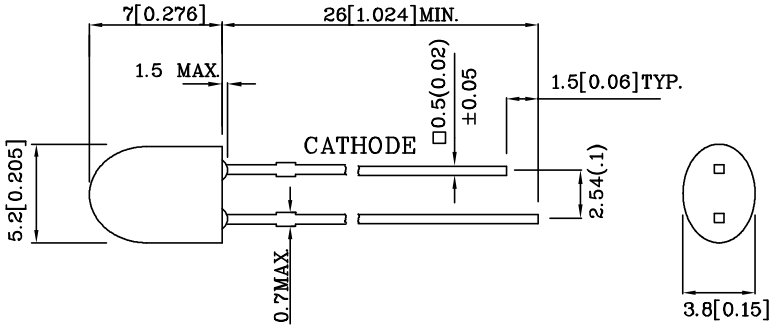
Part Number: **XLMO20DLSDLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.



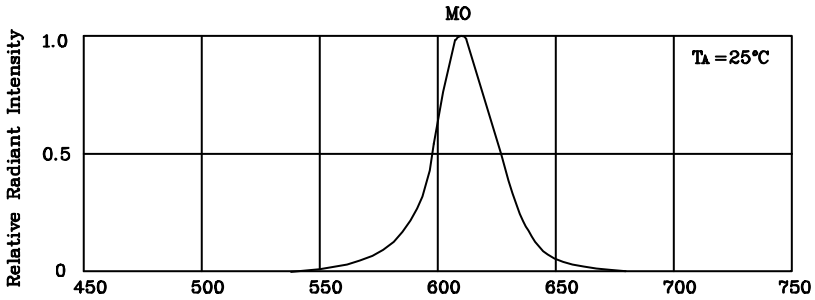
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (TA=25°C)		**MO (InGaAlP)**	**Unit**
Reverse voltage	VR	5	V
Forward current	IF	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	195	mA
Power dissipation	PT	75	mW
Operating temperature	TA	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

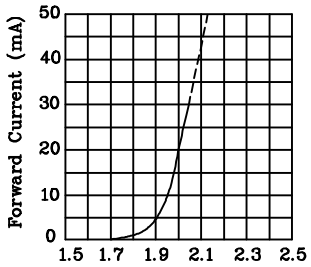
Operating Characteristics (TA=25°C)		**MO (InGaAlP)**	**Unit**
Forward voltage (typ.) (IF=20mA)	VF	2.0	V
Forward voltage (max.) (IF=20mA)	VF	2.5	V
Reverse current (VR=5V)	IR	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	610	nm
Wavelength at Dominate emission (IF=20mA)	λ D	601	nm
Spectral Line half-width (IF=20mA)	Δλ	29	nm
Capacitance (VF=0V, f=1MHz)	C	30	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLMO20DLSDLCR	Orange	InGaAlP	Red Semi Diffused	480	995	610	100°(H) 50°(V)

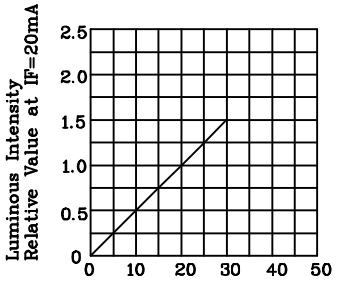


RELATIVE INTENSITY Vs. WAVELENGTH

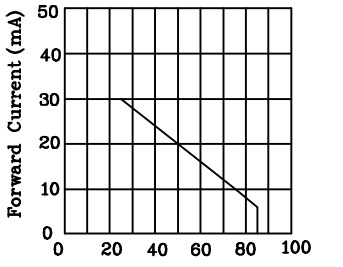
❖ **MO**



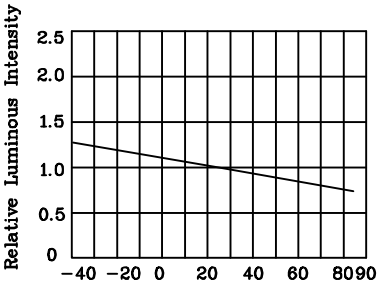
FORWARD CURRENT Vs
FORWARD VOLTAGE



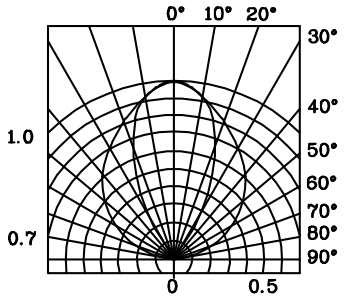
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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www.SunLED.com

Part Number: **XLMO20WLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
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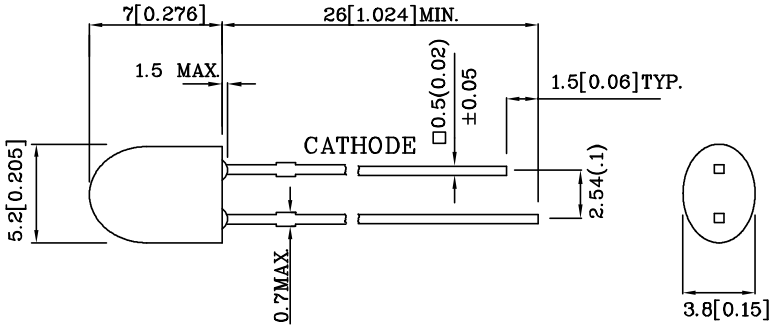


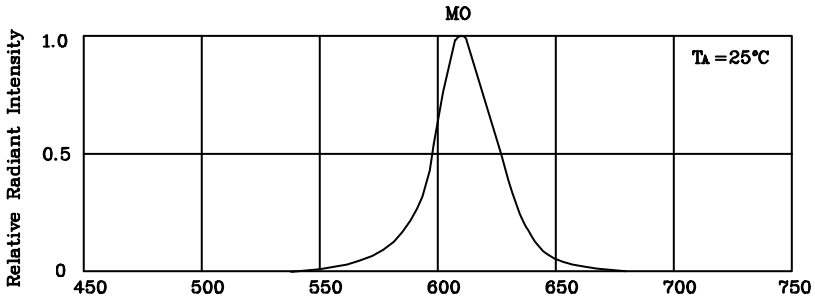
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (TA=25°C)		**MO (InGaAlP)**	**Unit**
Reverse voltage	VR	5	V
Forward current	IF	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	195	mA
Power dissipation	PT	75	mW
Operating temperature	TA	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

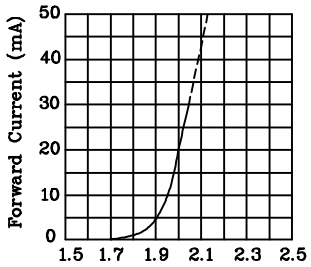
Operating Characteristics (TA=25°C)		**MO (InGaAlP)**	**Unit**
Forward voltage (typ.) (IF=20mA)	VF	2.0	V
Forward voltage (max.) (IF=20mA)	VF	2.5	V
Reverse current (VR=5V)	IR	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	610	nm
Wavelength at Dominate emission (IF=20mA)	λ D	601	nm
Spectral Line half-width (IF=20mA)	Δλ	29	nm
Capacitance (VF=0V, f=1MHz)	C	30	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLMO20WLCR	Orange	InGaAlP	Water Clear	480	895	610	70°(H) 30°(V)

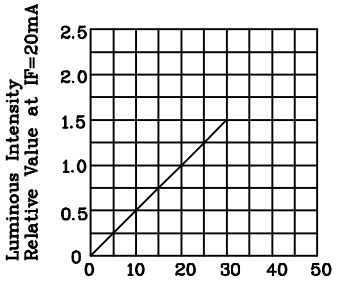


RELATIVE INTENSITY Vs. WAVELENGTH

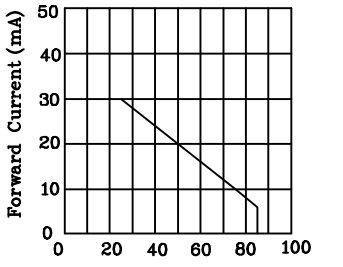
❖ **MO**



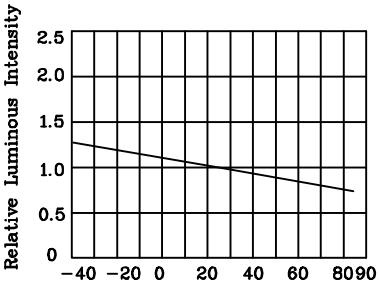
FORWARD CURRENT Vs
FORWARD VOLTAGE



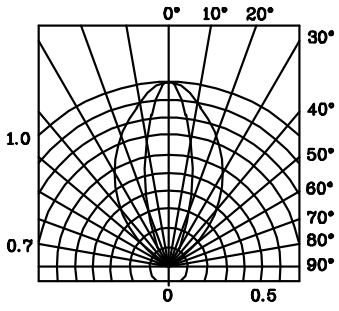
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

SunLED
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Part Number: **XLZE20DLSDLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
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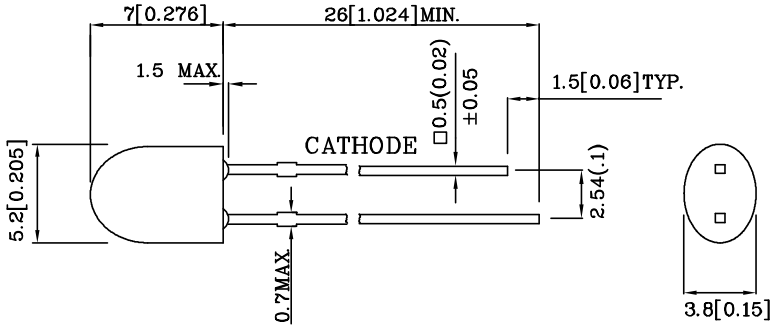


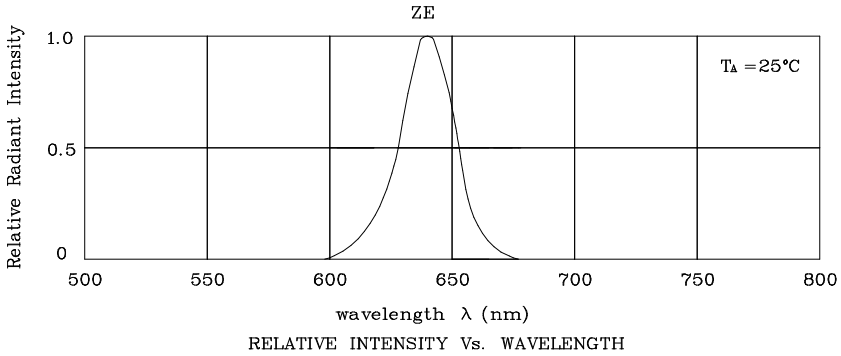
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (TA=25°C)		**ZE (InGaAlP)**	**Unit**
Reverse voltage	VR	5	V
Forward current	IF	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	150	mA
Power dissipation	PT	120	mW
Operating temperature	TA	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

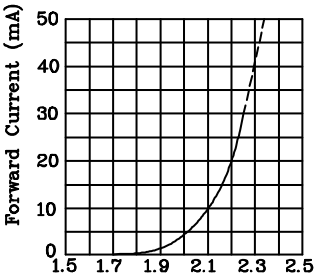
Operating Characteristics (TA=25°C)		**ZE (InGaAlP)**	**Unit**
Forward voltage (typ.) (IF=20mA)	VF	2.2	V
Forward voltage (max.) (IF=20mA)	VF	2.8	V
Reverse current (VR=5V)	IR	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	640	nm
Wavelength at Dominate emission (IF=20mA)	λ D	630	nm
Spectral Line half-width (IF=20mA)	Δλ	25	nm
Capacitance (VF=0V, f=1MHz)	C	27	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLZE20DLSDLCR	Red	InGaAlP	Red Semi Diffused	1800	2690	640	100°(H) 50°(V)

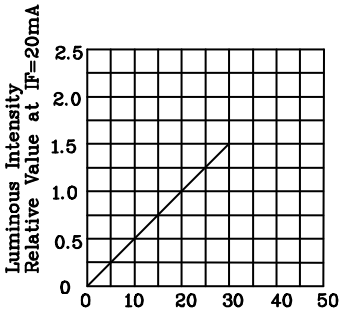


RELATIVE INTENSITY Vs. WAVELENGTH

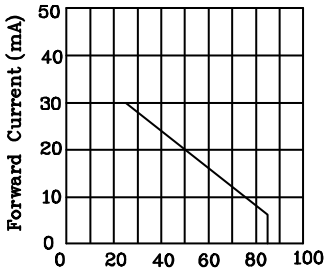
❖ **ZE**



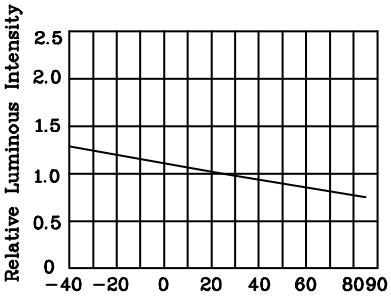
FORWARD CURRENT Vs
FORWARD VOLTAGE



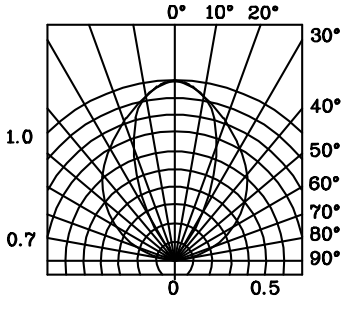
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

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Part Number: **XLZE20WLCR**

OVAL SOLID STATE LAMP

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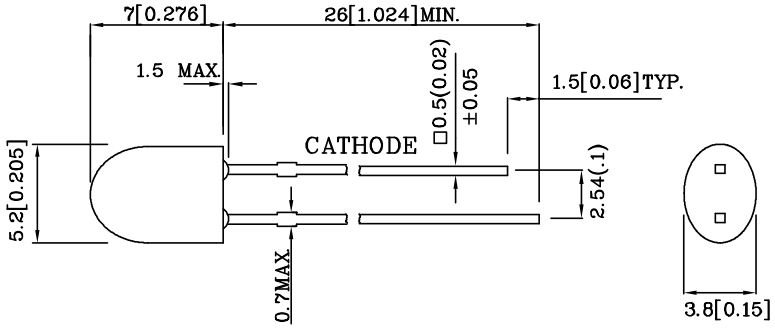


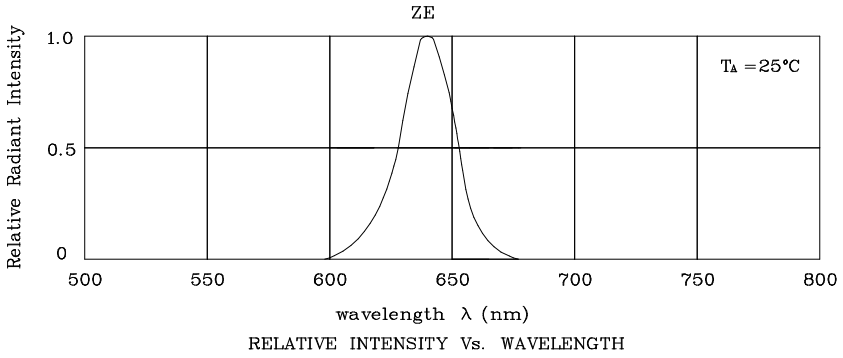
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (T_A=25°C)		**ZE (InGaAlP)**	**Unit**
Reverse voltage	V_R	5	V
Forward current	I_F	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	150	mA
Power dissipation	P_T	120	mW
Operating temperature	T_A	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

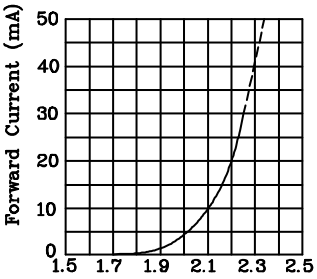
Operating Characteristics (T_A=25°C)		**ZE (InGaAlP)**	**Unit**
Forward voltage (typ.) (I_F=20mA)	V_F	2.2	V
Forward voltage (max.) (I_F=20mA)	V_F	2.8	V
Reverse current (V_R=5V)	I_R	10	uA
Wavelength at peak emission (I_F=20mA)	λ peak	640	nm
Wavelength at Dominate emission (I_F=20mA)	λ D	630	nm
Spectral Line half-width (I_F=20mA)	Δλ	25	nm
Capacitance (V_F=0V, f=1MHz)	C	27	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLZE20WLCR	Red	InGaAlP	Water Clear	2500	3495	640	70°(H) 30°(V)

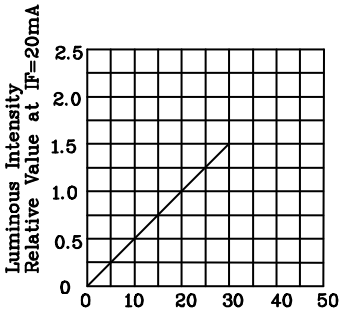


RELATIVE INTENSITY Vs. WAVELENGTH

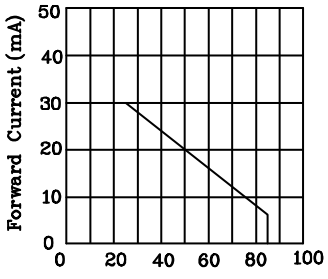
❖ **ZE**



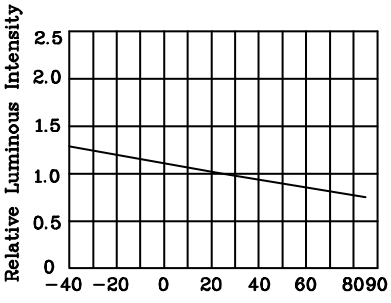
FORWARD CURRENT Vs
FORWARD VOLTAGE



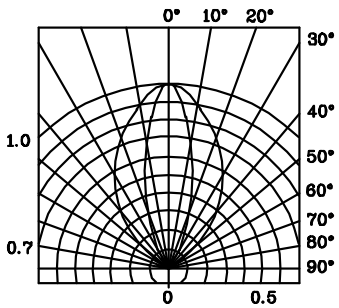
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

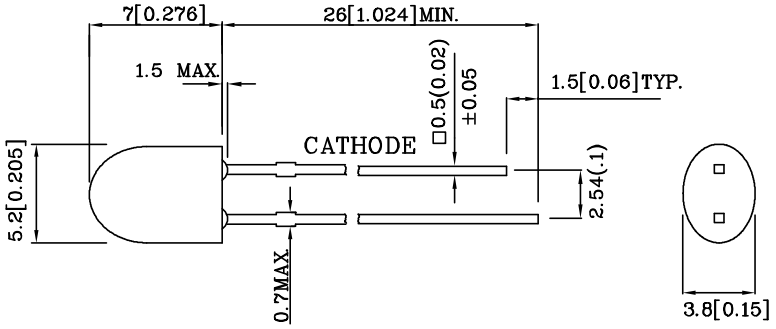
SunLED
www.SunLED.com

Part Number: **XLZY20DLSDLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.



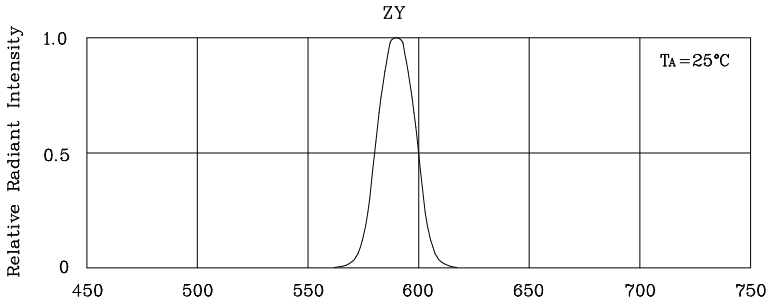
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (TA=25°C)		**ZY (InGaAlP)**	**Unit**
Reverse voltage	VR	5	V
Forward current	IF	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	140	mA
Power dissipation	PT	120	mW
Operating temperature	TA	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

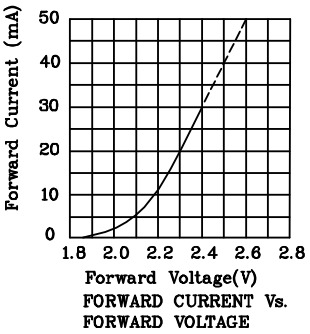
Operating Characteristics (TA=25°C)		**ZY (InGaAlP)**	**Unit**
Forward voltage (typ.) (IF=20mA)	VF	2.3	V
Forward voltage (max.) (IF=20mA)	VF	2.8	V
Reverse current (VR=5V)	IR	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	590	nm
Wavelength at Dominate emission (IF=20mA)	λ D	589	nm
Spectral Line half-width (IF=20mA)	Δλ	20	nm
Capacitance (VF=0V, f=1MHz)	C	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLZY20DLSDLCR	Yellow	InGaAlP	Yellow Semi Diffused	380	748	590	100°(H) 50°(V)

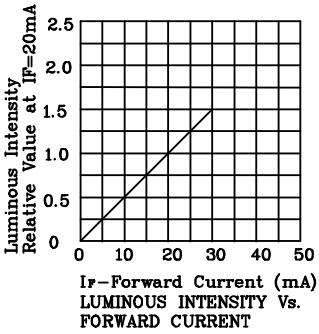


RELATIVE INTENSITY Vs. WAVELENGTH

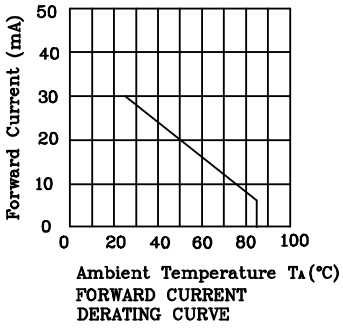
❖ **ZY**



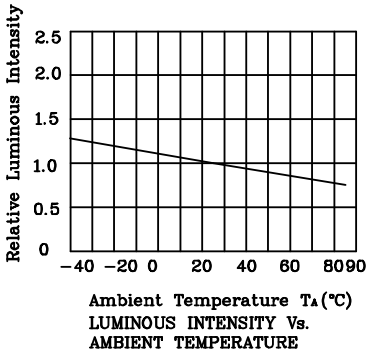
FORWARD CURRENT Vs.
FORWARD VOLTAGE



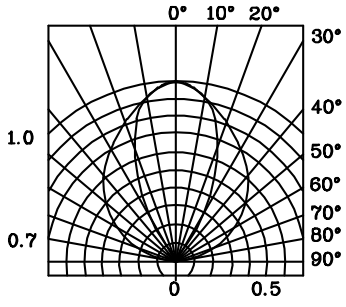
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

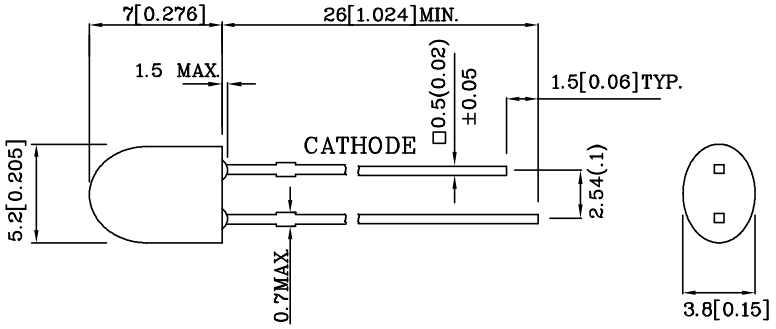
SunLED
www.SunLED.com

Part Number: **XLZY20WLCR**

OVAL SOLID STATE LAMP

Features

- OUTSTNDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- IC COMPATIBLE/LOW CURRENT CAPABILITY.



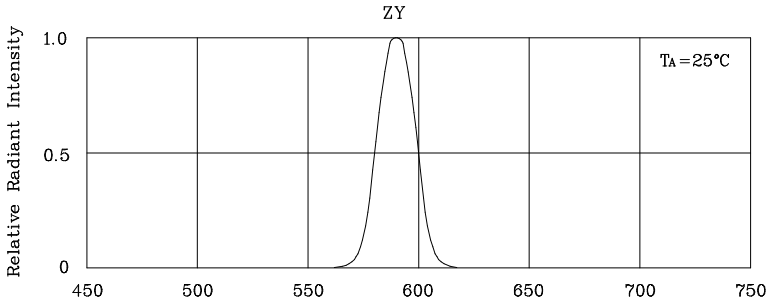
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (T_A=25°C)		**ZY (InGaAlP)**	**Unit**
Reverse voltage	V_R	5	V
Forward current	I_F	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	i_{FS}	140	mA
Power dissipation	P_T	120	mW
Operating temperature	T_A	-40 ~ +85	°C
Storage temperature	Tstg	-40 ~ +85	
Lead solder temperature [2mm below package base]	260°C For 5 Seconds		

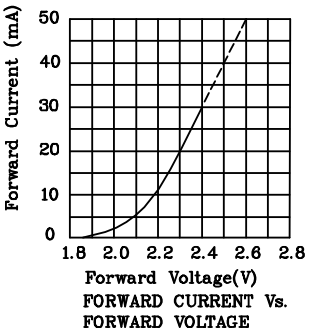
Operating Characteristics (T_A=25°C)		**ZY (InGaAlP)**	**Unit**
Forward voltage (typ.) (IF=20mA)	V_F	2.3	V
Forward voltage (max.) (IF=20mA)	V_F	2.8	V
Reverse current (VR=5V)	I_R	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	590	nm
Wavelength at Dominate emission (IF=20mA)	λ D	589	nm
Spectral Line half-width (IF=20mA)	Δλ	20	nm
Capacitance (VF=0V, f=1MHz)	C	45	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd		Wavelength nm λ P	Viewing Angle 2 θ 1/2
				min.	typ.		
XLZY20WLCR	Yellow	InGaAlP	Water Clear	650	1095	590	70°(H) 30°(V)

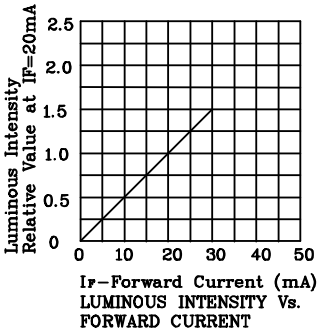


RELATIVE INTENSITY Vs. WAVELENGTH

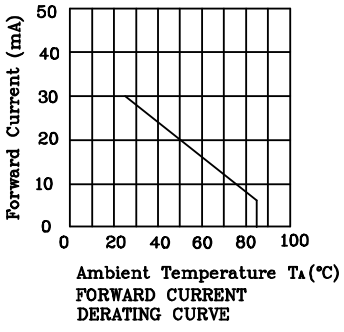
❖ **ZY**



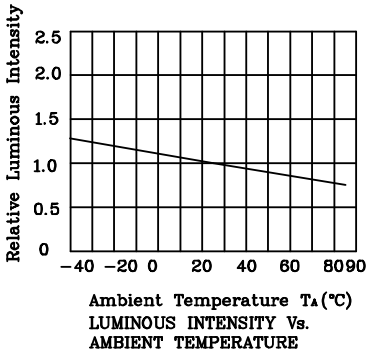
FORWARD CURRENT Vs.
FORWARD VOLTAGE



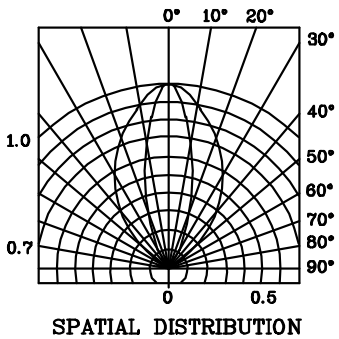
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



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