SMD Infrared Diode

BL-LS3010A0E1IR

Features:

- 3.0mmx1.0mm SMD, side view, Infrared diode
- High Reliability
- Peak Wavelength at 940, 880, 850nm
- Water Clear, yellow Transparent, Blue Transparent available
- IC compatible /Low current capability.
- PACKAGE: 2KPCS/REEL.
- RoHs Compliance

RoHs Compliance

ATTENTION
OBSERVE PRECAUTIONS ELECTROSTATIC SENSITIVE DEVICES

■ Applications:

- Free air transmission system
- Smoke detector
- Infrared Camera
- Optoelectronic switch
- Infrared applied system

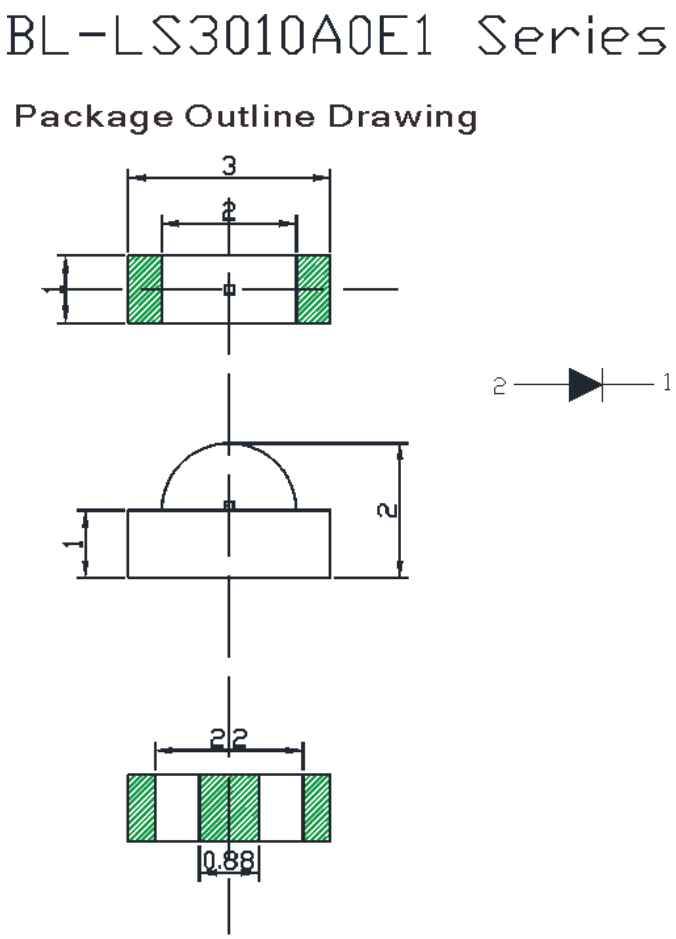
■ Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=20mA)

Part Number	Chip		Lens Type	Δλ	Ir (Vr=5V, uA)	Forward Voltage(VF) Unit:V		Radiant Power (mw/sr)	Viewing Angle 2θ1/2(deg)
	Material	λ_P (nm)				Typ	Max	Typ	
BL-LS3010A0E1IRAC	GaAs	940	Water Clear	50	10	1.20	1.50	1.5	120
BL-LS3010A0E1IRAB	GaAs	940	Blue Trans.	50	10	1.20	1.50	1.5	
BL-LS3010A0E1IRBC	GaAlAs	880	Water Clear	50	10	1.20	1.50	1.5	
BL-LS3010A0E1IRBB	GaAlAs	880	Blue Trans.	50	10	1.20	1.50	1.5	
BL-LS3010A0E1IRCC	GaAlAs	850	Water Clear	50	10	1.20	1.50	2	
BL-LS3010A0E1IRCB	GaAlAs	850	Blue Trans.	50	10	1.20	1.50	2	
BL-LS3010A0E1IRCY	GaAlAs	850	Yellow Trans.	50	10	1.20	1.50	2	

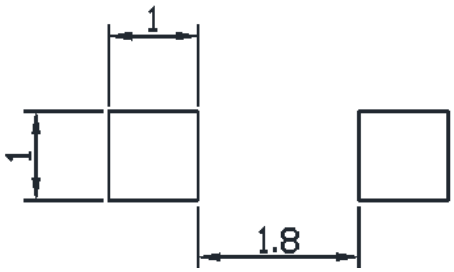
■ Absolute maximum ratings (Ta=25°C)

Parameter	Rating	Unit
Forward Current I_F	65	mA
Power Dissipation P_d	130	mW
Reverse Voltage V_R	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	250	mA
Operation Temperature T_{OPR}	-40 to +100	°C
Storage Temperature T_{STG}	-40 to +100	°C
Lead Soldering Temperature T_{SOL}	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)	°C

■ **Package configuration & Internal circuit diagram**



Recommended Soldering Pad Dimensions

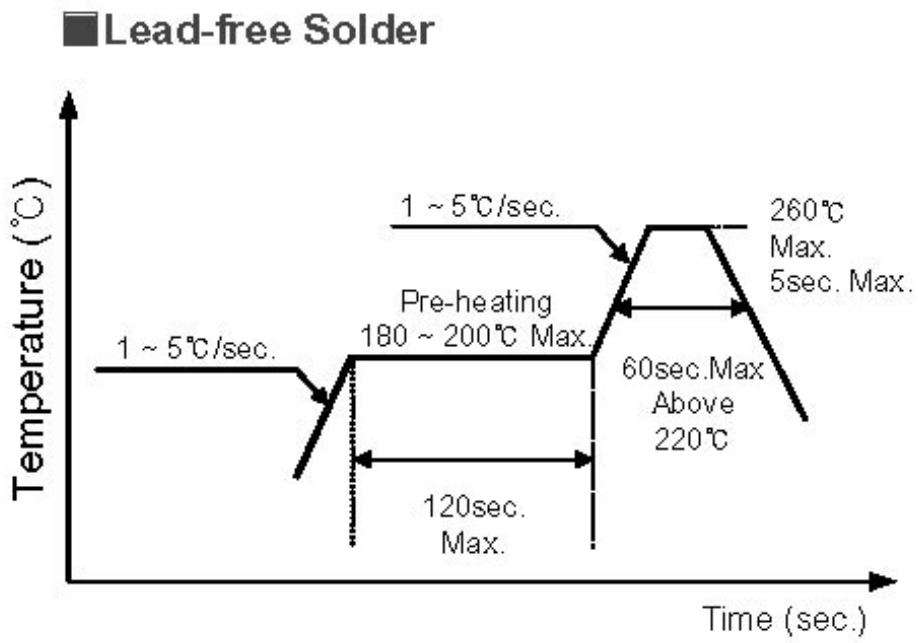


Notes:
1. All dimensions are in millimeters (inches)
2. Tolerance is ±0.25(0.01")unless otherwise noted.
3. Specifications are subject to change without notice.

■ Tape Specifications

Smt Reflow Solding Instructions

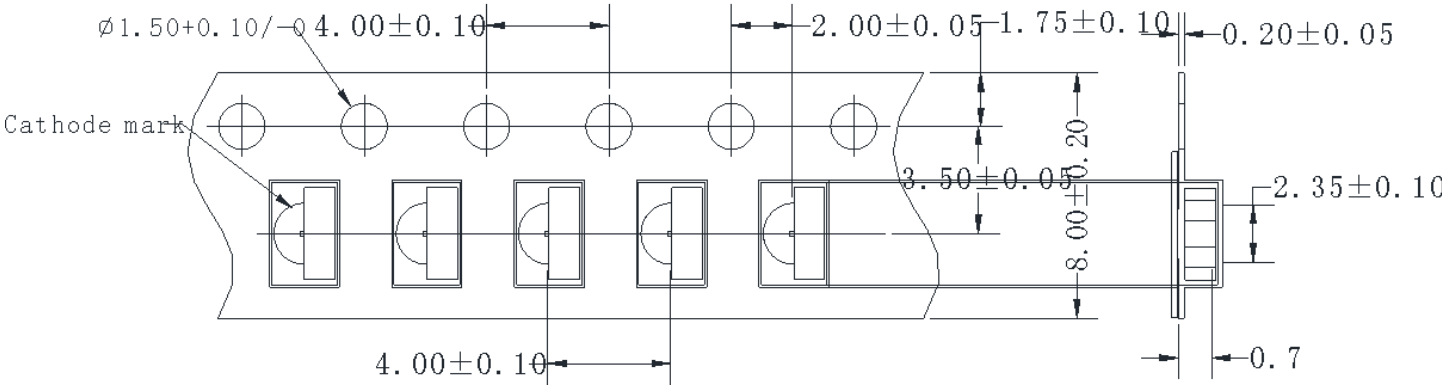
Number of reflow process shall be less than 2 times
and cooling process to normai temperature is required
between first and second soldering process



Tape Specifications
(Units:mm)

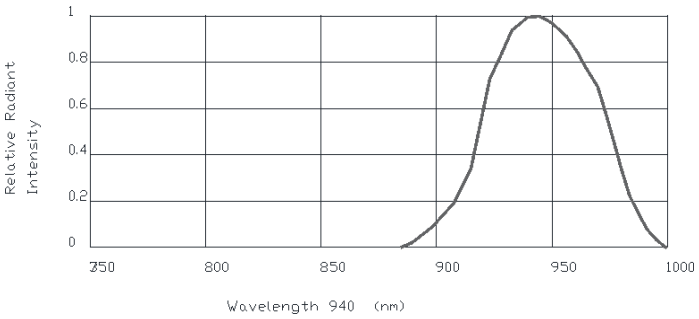
Unit: mm

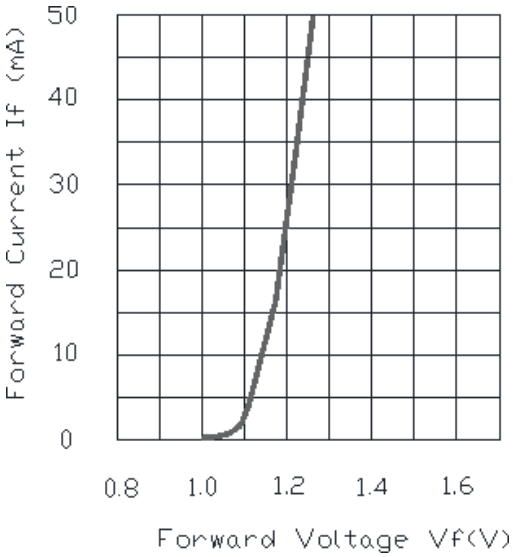
Tolerance: ±0.1

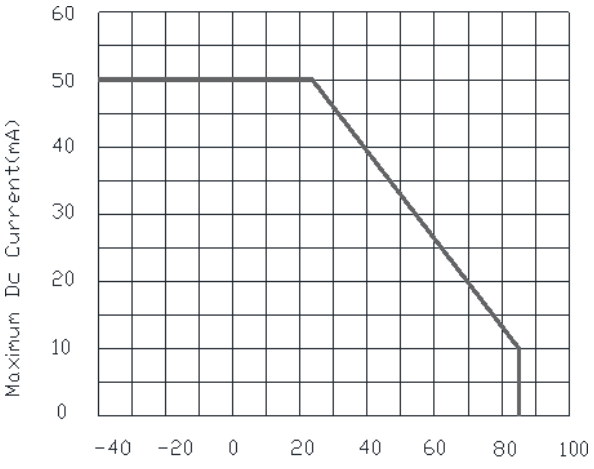


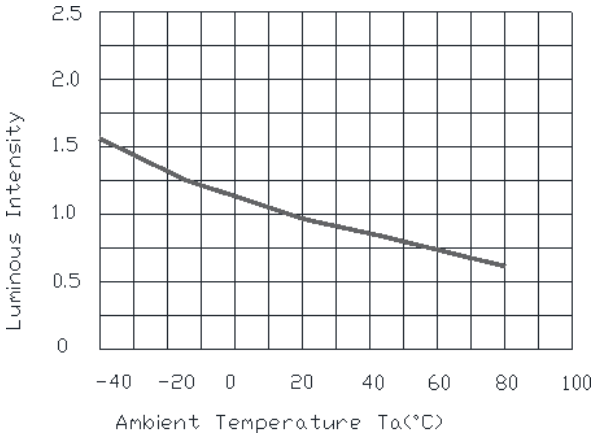
■ Typical electrical-optical characteristics curves:

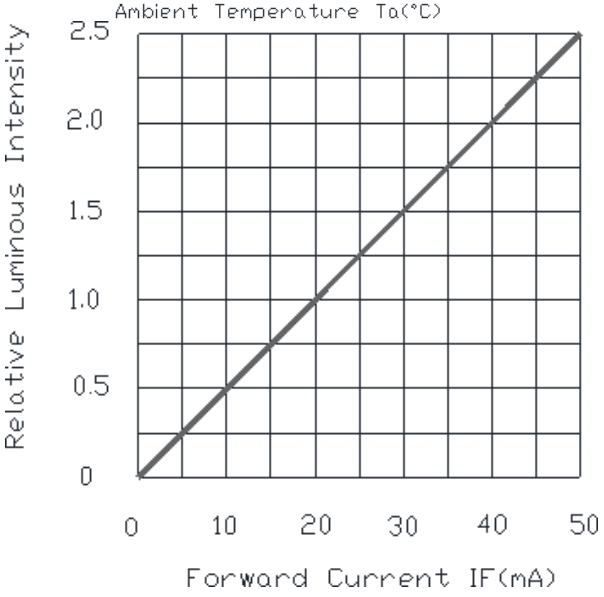
940nm

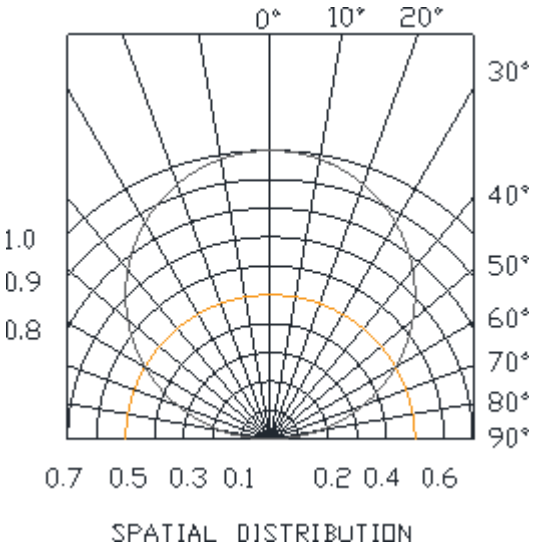




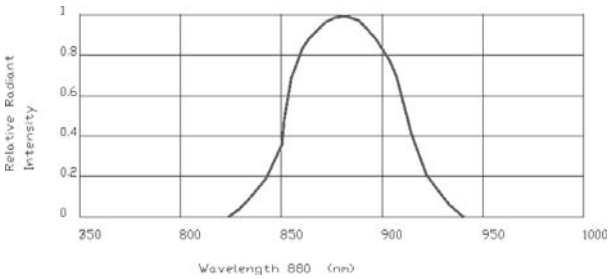


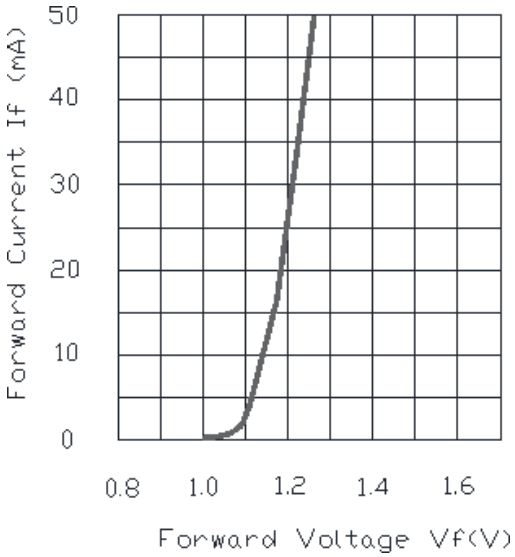


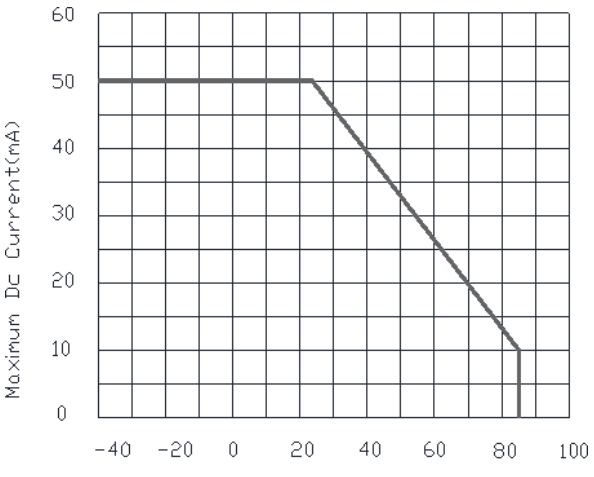


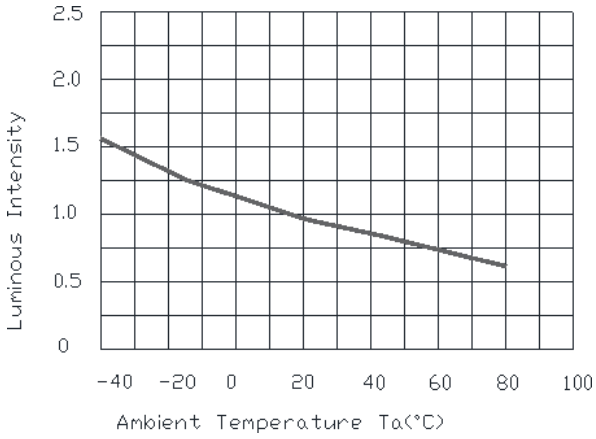


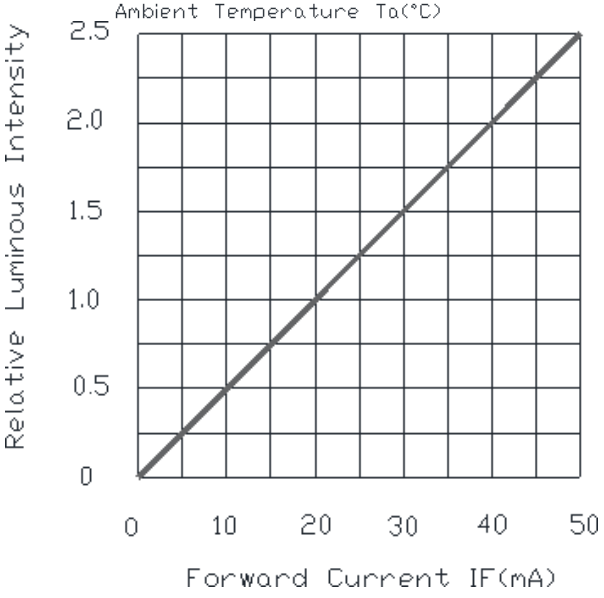
880nm

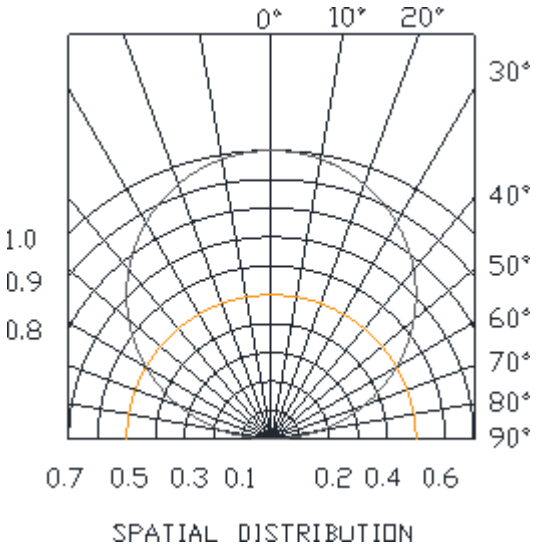

Relative Radiant Intensity
1
0.8
0.6
0.4
0.2
0
750
800
850
900
950
1000
Wavelength 880 (nm)


Forward Current If (mA)
50
40
30
20
10
0
0.8
1.0
1.2
1.4
1.6
Forward Voltage Vf(V)

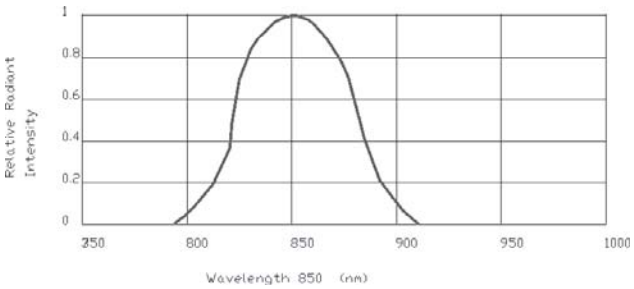

Maximum Dc Current(mA)
60
50
40
30
20
10
0
-40
-20
0
20
40
60
80
100
Ambient Temperature Ta(°C)

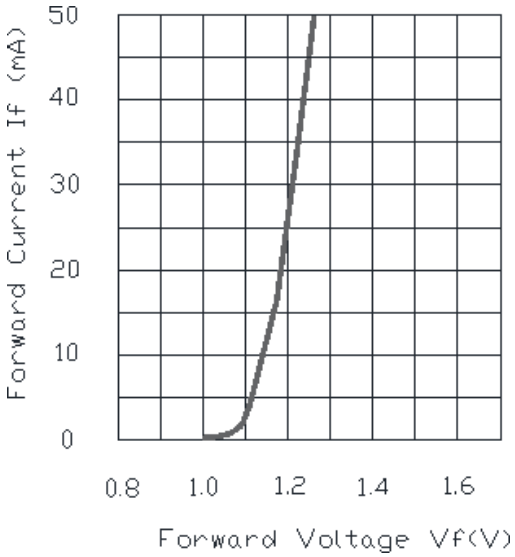

Luminous Intensity
2.5
2.0
1.5
1.0
0.5
0
-40
-20
0
20
40
60
80
100
Ambient Temperature Ta(°C)

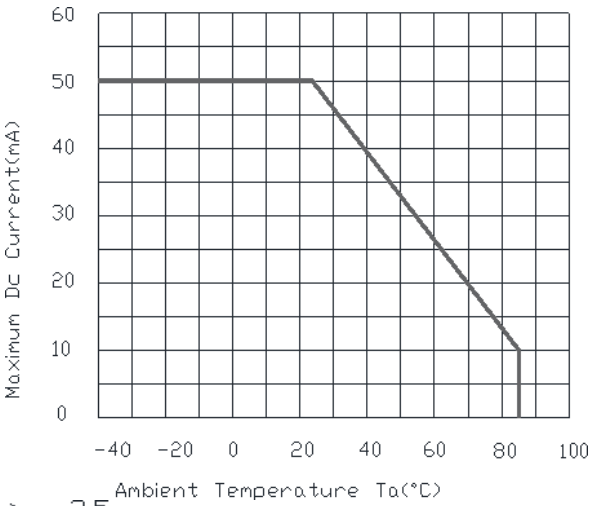

Relative Luminous Intensity
2.5
2.0
1.5
1.0
0.5
0
0
10
20
30
40
50
Forward Current IF(mA)

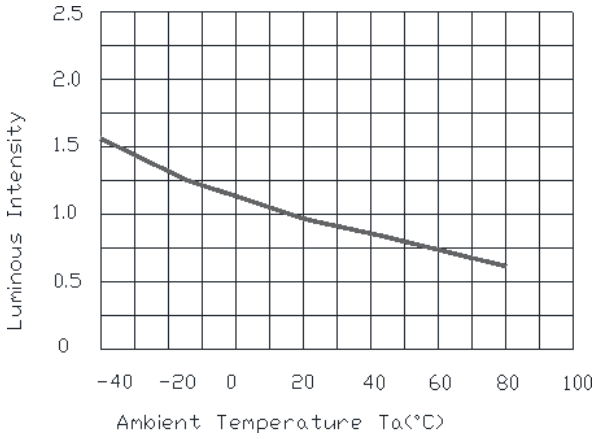

0°
10°
20°
30°
40°
50°
60°
70°
80°
90°
1.0
0.9
0.8
0.7
0.5
0.3
0.1
0.2
0.4
0.6
SPATIAL DISTRIBUTION

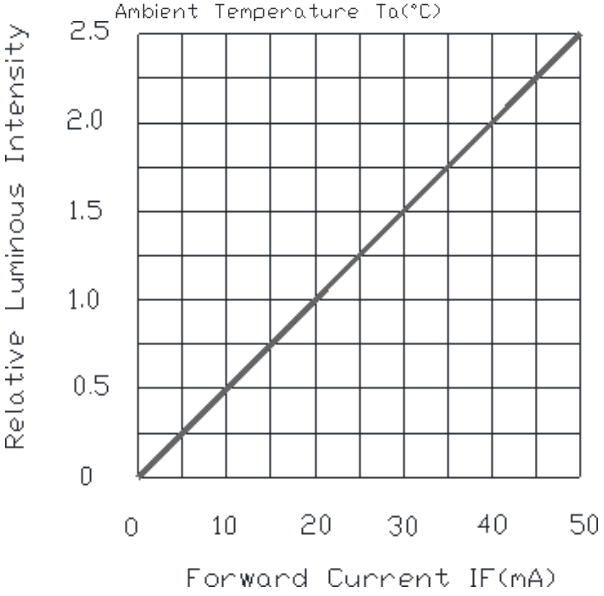
850nm

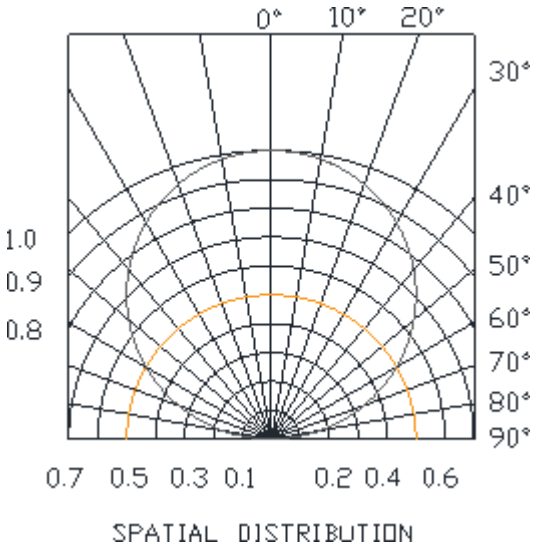

Relative Radiant Intensity
1
0.8
0.6
0.4
0.2
0
350
800
850
900
950
1000
Wavelength 850 (nm)


Forward Current If (mA)
50
40
30
20
10
0
0.8
1.0
1.2
1.4
1.6
Forward Voltage Vf(V)


Maximum Dc Current(mA)
60
50
40
30
20
10
0
-40
-20
0
20
40
60
80
100
Ambient Temperature Ta(°C)


Luminous Intensity
2.5
2.0
1.5
1.0
0.5
0
-40
-20
0
20
40
60
80
100
Ambient Temperature Ta(°C)


Relative Luminous Intensity
2.5
2.0
1.5
1.0
0.5
0
0
10
20
30
40
50
Forward Current IF(mA)


0°
10°
20°
30°
40°
50°
60°
70°
80°
90°
1.0
0.9
0.8
0.7
0.5
0.3
0.1
0.2
0.4
0.6
SPATIAL DISTRIBUTION

■ Packing and weighting

