American Opto Plus LED Corp.
L423SRD

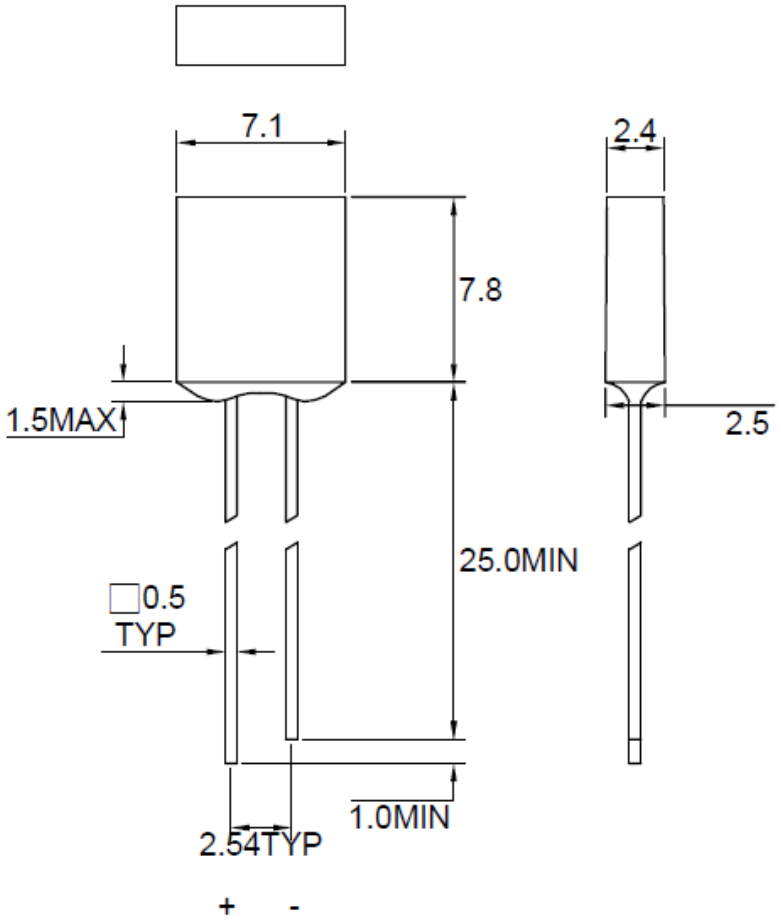
2.4 x 7.1 x 7.8mm Rectangular LED

DESPCRIPTION

- Rectangular LED
- 2.4 x 7.1 x 7.8mm
- Lens Color: Red Diffused

FEATURES

- Emitted Color: Red
- Technology: GaAlAs Viewing angle: 122 Degrees



Note:
1. All dimensions are in millimeter, tolerance is ±0.25mm unless otherwise noted.
2. Specifications are subject to change without notice.

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current	I_F	40	mA
Peak Forward Current Duty 1/10@ 10KHz	I_{FP}	120	mA
Power Dissipation	P_D	120	mW
Reverse Current @5V	Ir	10	μA
Operating Temperature Range	T_{OPR}	-40 ~ +85	°C
Storage Temperature Range	T_{STG}	-40 ~ +100	°C

* Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handing these LED. All devices, equipment and machinery must be properly grounded.

TYPICAL OPTICAL-ELECTRICAL CHARACTERISTICS (Ta=25°C)

PART NUMBER	CHIP	COLOR		Peak wave length λD nm	Spectral halfwidth Δλnm	Forward voltage @20mA (V)		Luminous intensity @20mA (mcd)		Viewing Angle 2θ1/2 (deg)
		Emitted	Lens			Min	Max	Min	Typ	
L423SRD	GaAlAs	Red	Red Diffused	660	20	1.7	2.4	28	50	122

Note:

1. The forward voltage data did not include ±0.1V testing tolerance
2. The luminous intensity data did not include ±15% testing tolerance

TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVE

Fig.1 Forward current vs. Forward Voltage

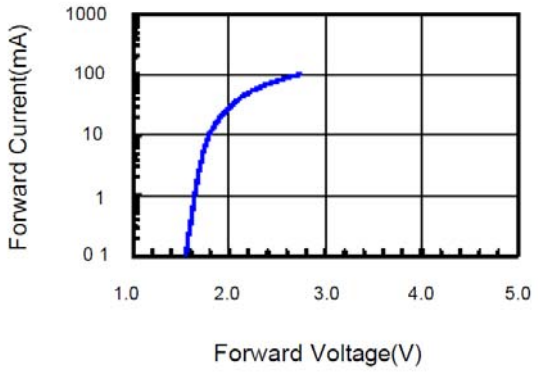


Fig.2 Relative Intensity vs. Forward Current

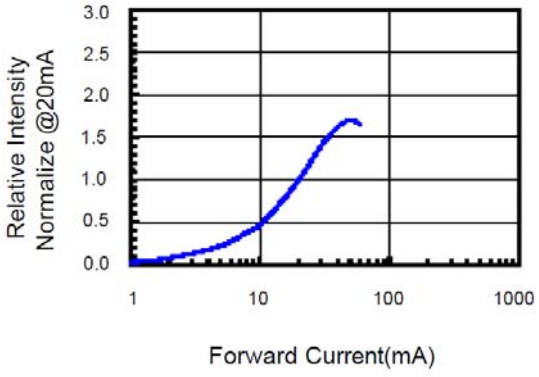


Fig.3 Forward Voltage vs. Temperature

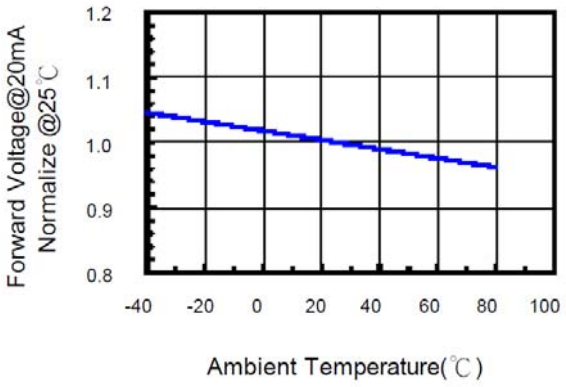


Fig.4 Relative Intensity vs. Temperature

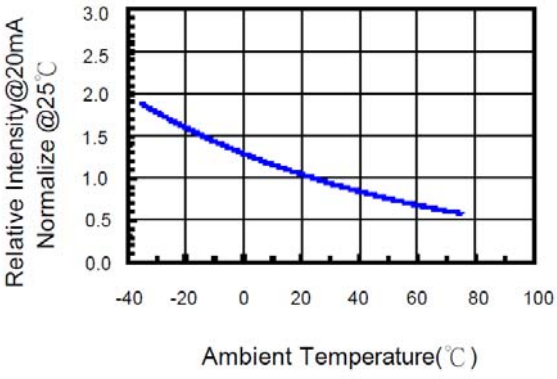


Fig.5 Relative Intensity vs. Wavelength

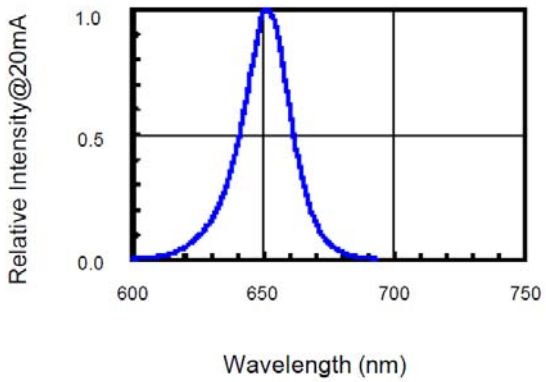
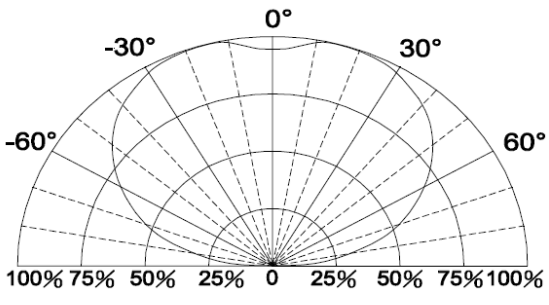


Fig.6 Directivity Radiation



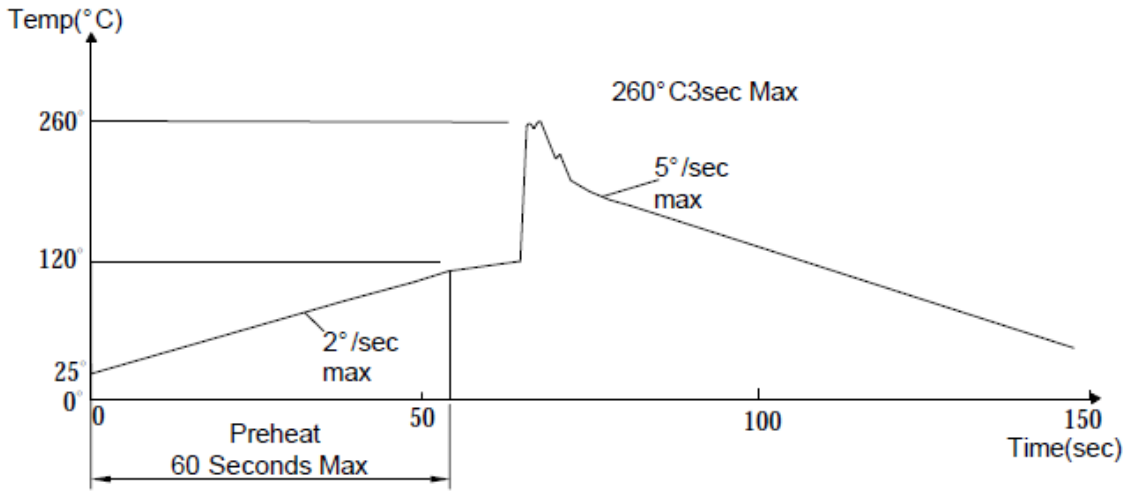
SOLDERING CONDITION (Pb-Free)

1.Iron:

Soldering Iron:30W Max
Temperature 350° C Max
Soldering Time:3 Seconds Max(One time only)
Distance:2mm Min(From solder joint to body)

2.Wave Soldering Profile

Dip Soldering
Preheat: 120° C Max
Preheat time: 60seconds Max
Ramp-up
2° C/sec(max)
Ramp-Down:-5° C/sec(max)
Solder Bath:260° C Max
Dipping Time:3 seconds Max
Distance:2mm Min(From solder joint to body)



Note:

1. Wave solder should not be made more than one time.

2. You can just only select one of the soldering conditions as above.

RELIABILITY TEST

Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=20mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of detemining the resisance of a part in electrical and themal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under ondition of hogh temperature for hours.	MIL-STD-883:1008 JIS C 7021: B-10
Low Temperature Storage Test	1.Ta=-40℃±5℃ 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021: B-12
High Temperature High Humidity Test	1.Ta=65℃±5℃ 2.RH=90％~95％ 3.t=240hrs ±2hrs	The purpose of this test is the resistance of the device under tropical for hous.	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105℃±5℃ &-40℃±5℃ (10min) (10min) 2.total 10 cycles	The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011
Solder Resistance Test	1.T.Sol=260℃±5℃ 2.Dwell time= 10 ±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1
Solderability Test	1.T.Sol=230℃±5℃ 2.Dwell time=5 ±1sec	This test intended to see soldering well performed or not.	MIL-STD-202: 208D MIL-STD-750: 2026 MIL-STD-883: 2003 JIS C 7021: A-2