NICOMATIC

Manufacturer
& designer
of interconnect
solutions

Product
datasheet

Edition March 2020

LED

SIDE VIEW 1206

1.0 mm HIGH

ADVANTAGES

- Easy to place size versus other packaging
- Market standard tape & reel for automated pick & place machines
- Can be run at lower current levels

FUNCTIONALITIES

- Specific DESIGN for Printed Conductive Ink

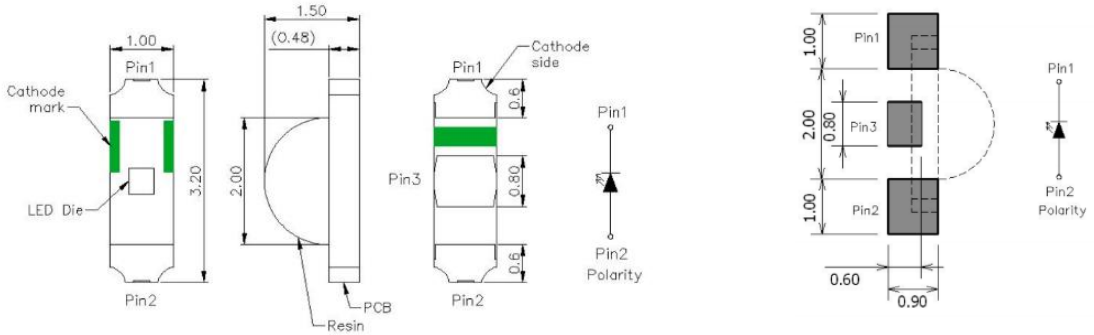
TECHNICAL DATA

ELECTRO-OPTICAL CHARACTERISTICS (I_F=20mA / Ta=25˚C)

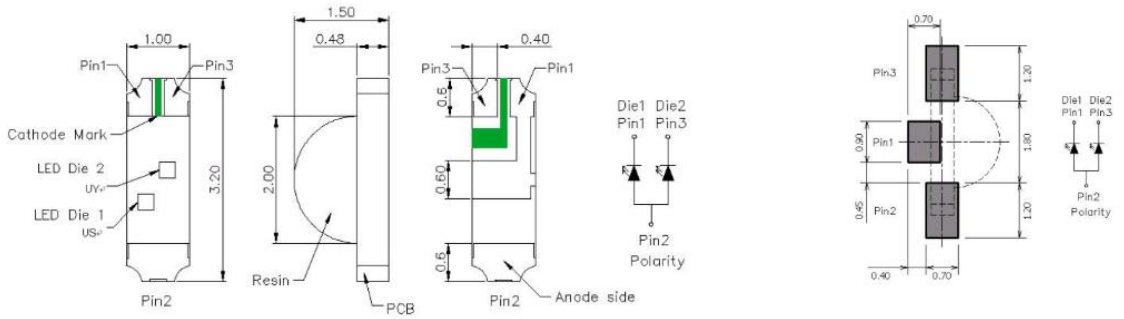
Part Number	Lens Type	Emitting Color	Die Material	Dominant Wavelength λd (nm)	Luminous Intensity Iv (mcd)		Viewing angle (deg)
					Min.	Typ.	
STERGB100W-10	Water Clear	Red Green Blue	AlInGaP	622 523 465	370 800 130	450 1000 170	X=118, Y=145 X=125, Y=128 X=124, Y=136
SBEREY100W-10	Water Clear	Red Yellow	AlInGaP	624 589	45	112.5	X=130, Y=100 X=124, Y=115
SBEYEG100W-10	Water Clear	Yellow Green	AlInGaP	589 571	45	71.5	X=130, Y=100 X=124, Y=115
SBEREG100W-10	Water Clear	Red Green	AlInGaP	624 571	45 28.5	112.5 71.5	X=130, Y=100 X=124, Y=115
SZEG100W-10	Water Clear	Green	AlInGaP	571	28.5	71.5	X=140, Y=115
SZER100W-10	Water Clear	Red	AlInGaP	631	28.5	71.5	X=140, Y=116
SZEO100W-10	Water Clear	Orange	AlInGaP	605	45	71.5	X=140, Y=115
SZEY100W-10	Water Clear	Yellow	AlInGaP	589	45	112.5	X=140, Y=116
SZEB100W-10	Water Clear	Blue	InGaN	470	112.5	180	X=140, Y=116
SZEW100D-10	Yellow Diffused	White	InGaN	-	360	510	X=130, Y=140

PACKAGE DIMENSION & RECOMMENDED SOLDER PATTERN

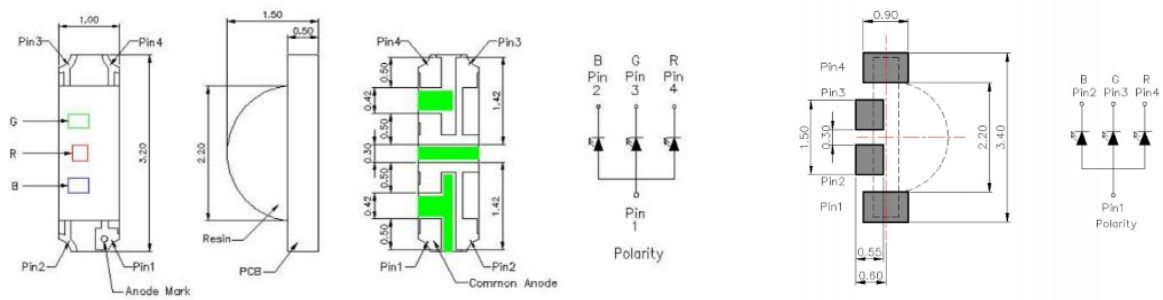
Mono-color



Bi-color type

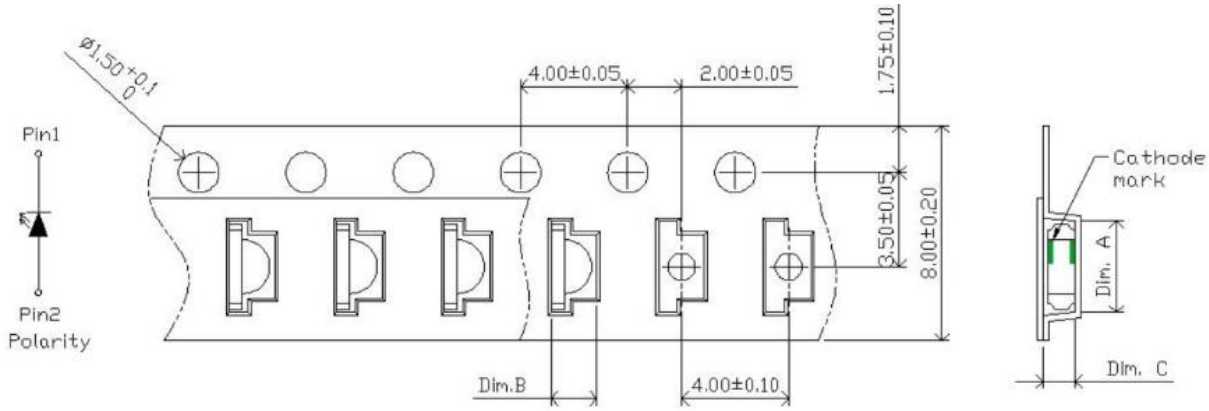


Tri-color type



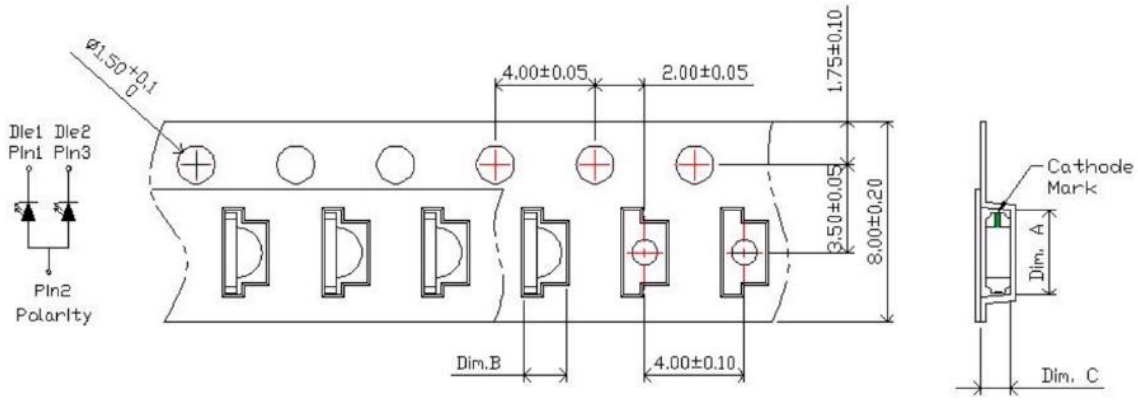
CARRIER TAPE DIMENSION

Mono-color tape



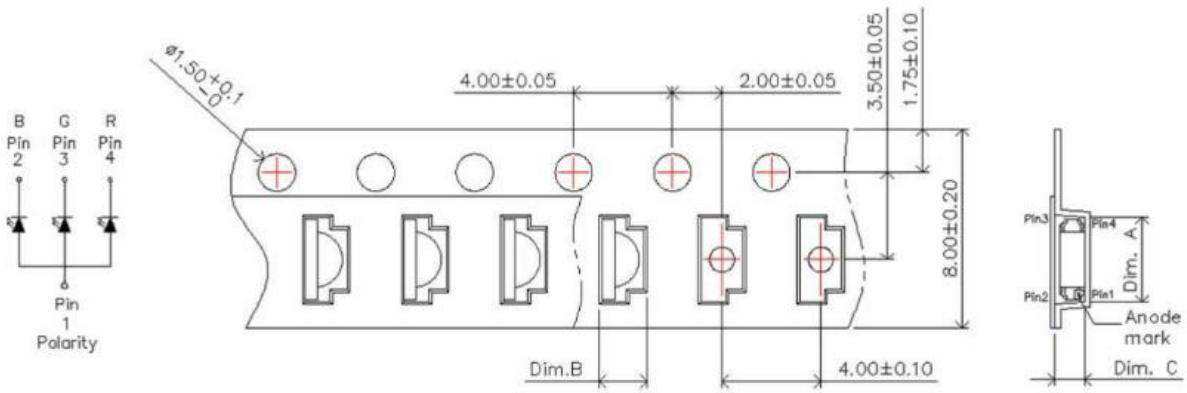
Dim. A	Dim. B	Dim. C	Q'ty/Reel
3.40±0.10	1.70±0.10	1.20±0.10	3K

Bi-color tape



Dim. A	Dim. B	Dim. C	Q'ty/Reel
3.40±0.10	1.70±0.10	1.20±0.10	3K

Tri-color tape



Dim. A	Dim. B	Dim. C	Q'ty/Reel
3.40±0.10	1.70±0.10	1.20±0.10	3K

TECHNICAL DATA

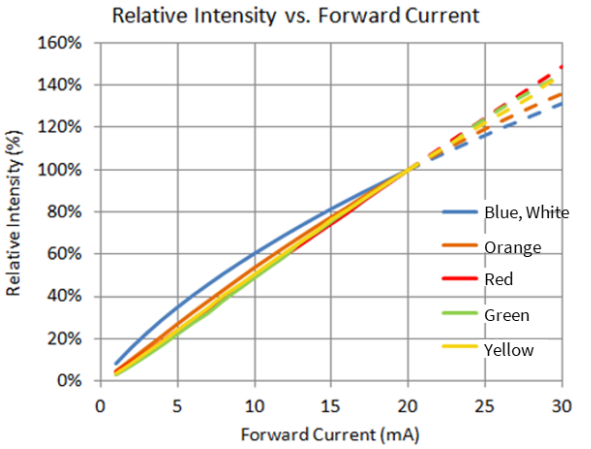
PRODUCT CHARACTERISTICS (ABSOLUTE MAXIMUM RATINGS)

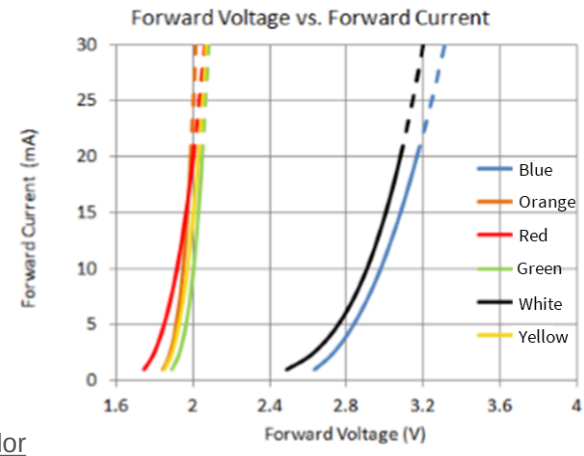
	Red / Orange / Yellow / Green	Blue White	Bi-Color	RGB
Reverse voltage V_R	5V			
Forward current I_F	20 mA	20 mA	20 mA	20 mA
Peak Forward Current I_{FP} (Duty 1/10 @ 1KHz)	40 mA	60 mA	40 mA	R: ≦60 G: ≦30 B: ≦30
Power Dissipation Pd	48 mW	78 mW	48 mA	R: 45 G: 56 B: 60
Electrostatic Discharge (ESD)	2000 V	200 V	2000 V	200 V
Operating temperature T_{opr}	-40°C to +85°C			
Storage temperature T_{stg}	-40°C to +100°C			
Soldering temperature T_{sol}	217°C for 60~150 sec. 260°C for 10sec Max.			

WARNING

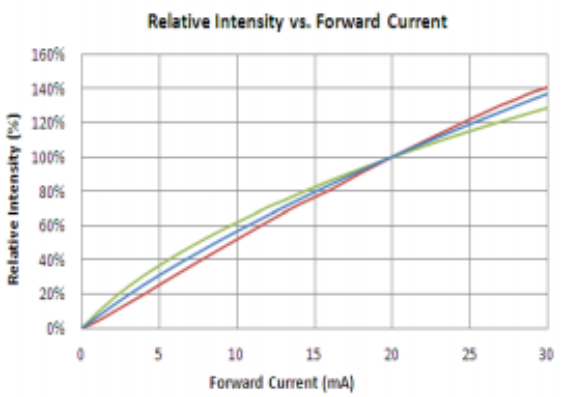
Tolerances:
- *Luminous Intensity (Iv): ±11%*
- *Dominant Wavelength (λd): ±1nm*
- *Forward Voltage (V_F): ±0.1V*

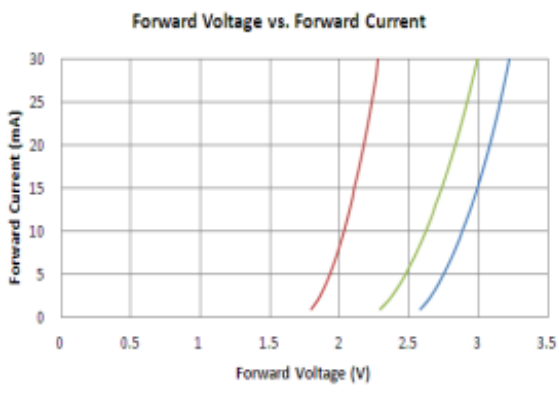
Mono-color, Bi-color





Tri-color





OTHER INFORMATION

PRECAUTIONS FOR USE

WARNING

Electrostatic Discharge (ESD) protection

The symbol to the left denotes that ESD precaution is needed. ESD protection for GaP and AlGaAs based chips is necessary even though they are relatively safe in the presence of low static-electric discharge. Parts built with AlInGaP, GaN, or/and InGaN based chips are **STATIC SENSITIVE devices. ESD precaution must be taken during design and assembly.** If manual work or processing is needed, please ensure the device is adequately protected from ESD during the process.