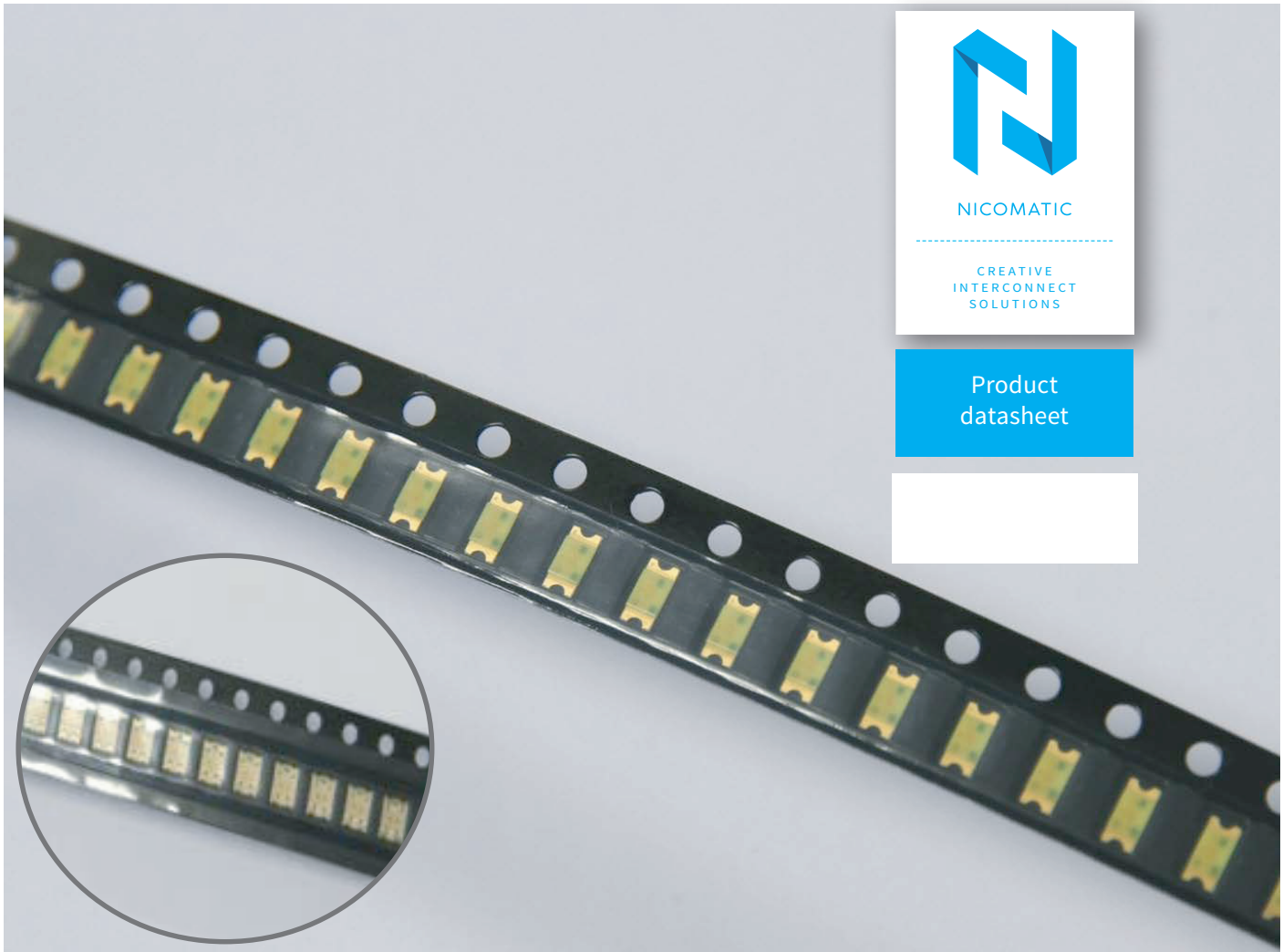
NICOMATIC

CREATIVE INTERCONNECT SOLUTIONS

Product datasheet



LED

ULTRA-THIN
0.5 mm HIGH

ADVANTAGES

- 0.5mm high
- Easy to place size versus other packaging
- Reduce spacer thickness and/or eliminate embossing (cost reduction!)
- 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

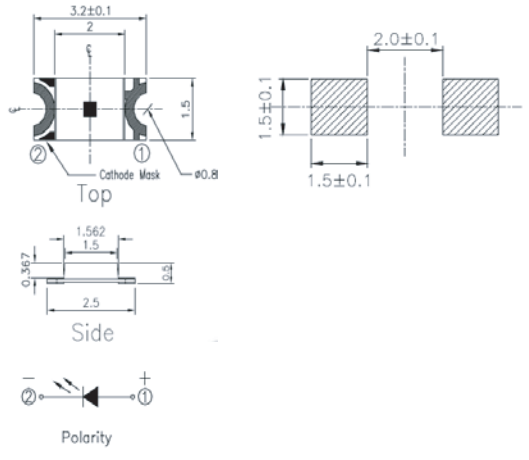
ELECTRO-OPTICAL CHARACTERISTICS (I_F=20mA / Ta=25˚C)

Part Number	Lens Type	Emitting Color	Die Material	Dominant Wavelength λd (nm)	Luminous Intensity Iv (mcd)		Forward Voltage V_F (F)		Reverse Current I_R max (μA) @ V_R = 5V
					Min.	Typ.	Typ.	Max.	
ZUR55W-05	Water Clear	Red	AlGaInP	624	32	74	2	2.4	10
ZUO55W-05	Water Clear	Orange	AlGaInP	605	32	45	2	2.4	10
ZUY55W-05	Water Clear	Yellow	AlGaInP	589	32	45	2	2.4	10
ZMG55W-05	Water Clear	Green	AlGaInP	573	16	35	2	2.4	10
ZUB55W-05	Water Clear	Blue	InGaN	470	36	48	3.5	4.3	50
ZPW55D-05	Yellow Diffused	White	InGaN	-	45	76	2.7	3.15	10
BURMG57W-05	Water Clear	Red Green	AlGaInP	624 573	45 16	74 35	2 2	2.4 2.4	10
BUYMG57W-05	Water Clear	Yellow Green	AlGaInP	589 573	32 16	45 35	2 2	2.4 2.4	10
BURUY57W-05	Water Clear	Red Yellow	AlGaInP	624 598	45 32	74 45	2 2	2.4 2.4	10
ZHR55W-05	Water Clear	High Red	AlGaInP	639	40	94	2	2.4	10
ZHG55W-05	Water Clear	High Green	InGaN	518	125	160	3.3	3.7	50
ZHB55W-05	Water Clear	High Blue	InGaN/SiC	465	46	78	2.7	3.2	50

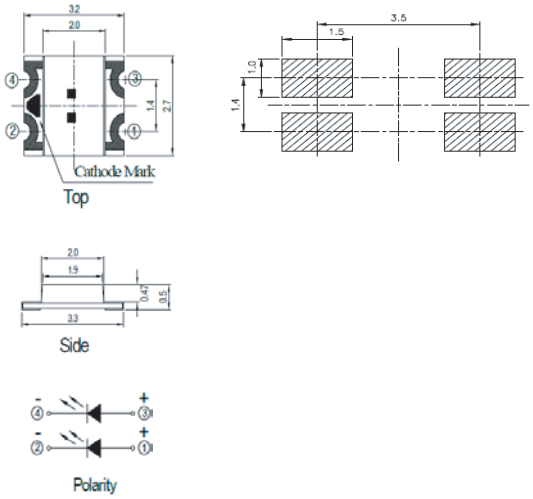
Viewing angle = 140 deg for all.

PACKAGE DIMENSION & RECOMMENDED SOLDER PATTERN

Mono-color type

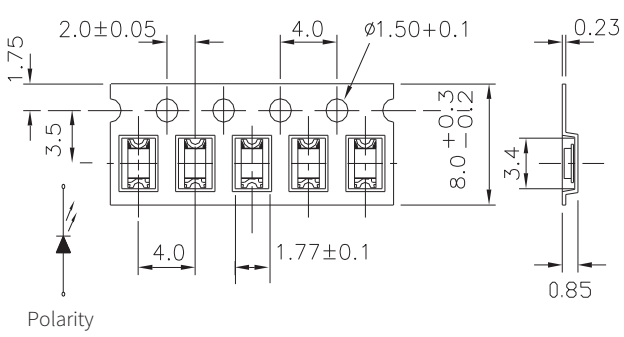


Bi-color type

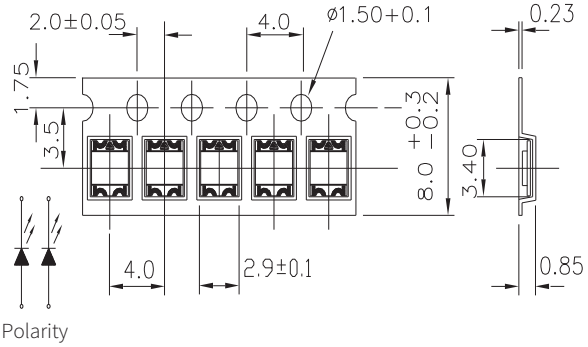


CARRIER TAPE DIMENSION

Mono-color tape



Bi-color tape



TECHNICAL DATA

PRODUCT CHARACTERISTICS (ABSOLUTE MAXIMUM RATINGS)

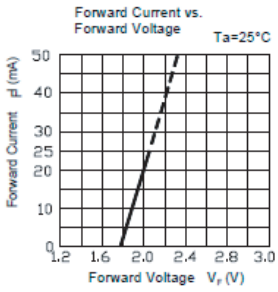
	Red / Orange / Yellow / Green High Red	Blue	White High Green	High Blue
Reverse voltage V_R	5V			
Forward current I_F	25 mA	10 mA	25 mA	15 mA
Peak Forward Current I_{FP} (Duty 1/10 @ 1KHz)	60mA	100 mA	100 mA	35 mA
Power Dissipation Pd	60 mW	40 mW	110 mW	65 mW
Electrostatic Discharge (ESD)	2000 V	150 V	150 V	1000 V
Operating temperature T_{opr}	-40°C to +85°C			
Storage temperature T_{stg}	-40°C to +90°C			
Soldering temperature T_{sol}	260°C for 10 sec. 350°C for 3sec.			

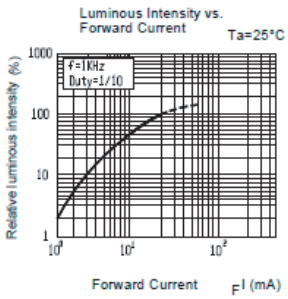
WARNING

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

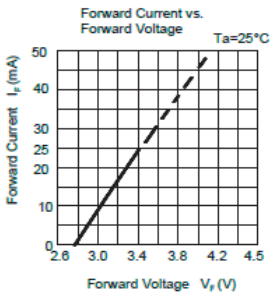
TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

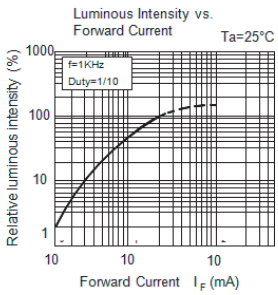
Red / Orange / Yellow / Green
High Red



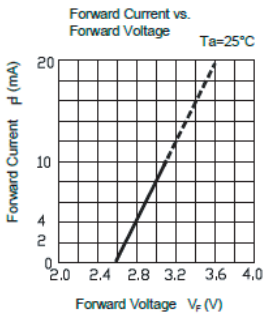


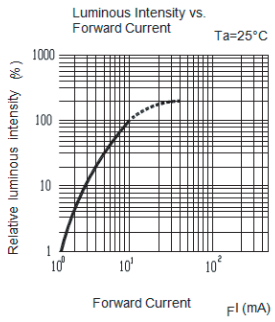
White
High Green / High Blue





Blue





PACKAGING INFORMATION

1. Keep moisture proof bag sealed until LEDs are ready to be used.
2. Before opening the package: The LEDs should be kept at 30°C (86°F) or lower & 90% Relative Humidity or less.
3. After opening the package: The LEDs floor life is 1 year under 30°C (86°F) or lower & 60% Relative Humidity or less. Store remaining unused LEDs in moisture proof packages.
4. If the moisture absorbent material (silica gel) has faded away or LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

- Baking treatment: 60±5°C (140±9°F) for 24 hours

OTHER INFORMATION

PRECAUTIONS FOR USE

Electrostatic Discharge (ESD) protection

WARNING

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.

High reliability applications such as military/aerospace, automotive safety/security systems, and medical equipment may require different product. This specification guarantees the quality and performance of the product as an individual component. Do not use this product beyond the specification described in this document.