SunLED

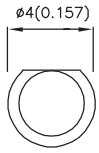
Optoelectronic Components Catalogue

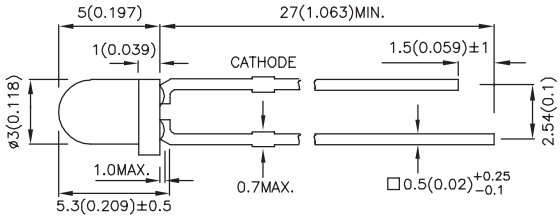
2017-2018

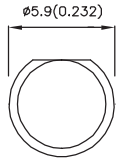
GUARANTEED TO SHINE

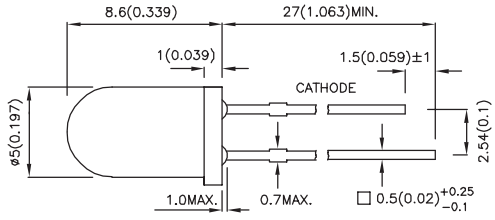
TS16949 Automotive • ISO9001 Quality • ISO14001 Environmental

Part Number	Chip Structure	λpeak (nm)	Po(mW/sr) I_F=20mA,50mA*		Viewing Angle 2θ1/2	Lens
			Min.	Typ.		
3mm						
TNI30W	GaAs	940	3 *8	7 *14	50°	Water Clear
TNI30BF	GaAs	940	3 *8	7 *14	50°	Blue Transparent
THI30W	GaAlAs	880	3 *5	15 *19	50°	Water Clear
THI30BF	GaAlAs	880	3 *5	15 *19	50°	Blue Transparent
THI30W850	GaAlAs	850	8 *15	15 *49	50°	Water Clear
THI30BF850	GaAlAs	850	8 *15	15 *49	50°	Blue Transparent
5mm						
TNI12W	GaAs	940	8 *25	19 *49	20°	Water Clear
TNI12BF	GaAs	940	8 *25	19 *49	20°	Blue Transparent
THI12W	GaAlAs	880	6 *12	14 *24	20°	Water Clear
THI12BF	GaAlAs	880	6 *12	14 *24	20°	Blue Transparent
THI12W850	GaAlAs	850	12 *40	29 *89	20°	Water Clear
THI12BF850	GaAlAs	850	12 *40	29 *89	20°	Blue Transparent

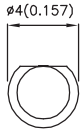
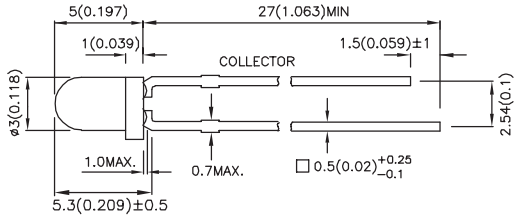








1. Dimension Unit: mm(inches), Tolerance: ±0.25mm (0.01").
2. Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

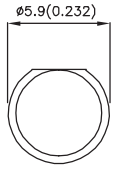
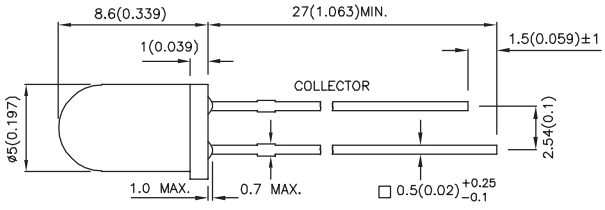
Part Number	Lens	Description
3mm   		
RNI30W-1	Water Clear	3mm

Electrical & Radiant Characteristics T_a =25°C

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
$I_{(ON)}$	On State Collector Current	0.3	0.8	-	mA	V_{CE}=5V, Ee=1mW/cm² λ=940nm
$V_{BR\ CEO}$	Collector-to-Emitter Breakdown Voltage	30	-	-	V	I_C=100μA Ee=0mW/cm²
$V_{BR\ ECO}$	Emitter-to-Collector Breakdown Voltage	5	-	-	V	I_E=100μA Ee=0mW/cm²
$V_{CE\ (SAT)}$	Collector-to-Emitter Saturation Voltage	-	-	0.8	V	I_C=2mA Ee=20mW/cm²
I_{CEO}	Collector Dark Current	-	-	100	nA	V_{CE}=10V Ee=0mW/cm²
T_R	Rise Time (10% to 90%)	-	15	-	μs	V_{CE}=5V I_C=1mA R_L=1KΩ
T_F	Fall Time (90% to 10%)	-	15	-	μs	V_{CE}=5V I_C=1mA R_L=1KΩ

Absolute Maximum Rating T_a =25°C

Collector-to-Emitter Voltage	30V	Operating Temperature Range	-40°C ~ +85°C
Emitter-to-Collector Voltage	5V	Storage Temperature Range	-40°C ~ +85°C
Power Dissipation at (or below) 25°C Free Air Temperature	100mW	Lead Soldering Temperature(>5mm For 5sec)	260°C

Part Number	Lens	Description
5mm   		
RNI12W	Water Clear	5mm

Electrical & Radiant Characteristics T_a =25°C

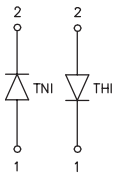
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
$I_{(ON)}$	On State Collector Current	0.5	2.5	-	mA	V_{CE}=5V, Ee=1mW/cm² λ=940nm
$V_{BR\ CEO}$	Collector-to-Emitter Breakdown Voltage	30	-	-	V	I_C=100μA Ee=0mW/cm²
$V_{BR\ ECO}$	Emitter-to-Collector Breakdown Voltage	5	-	-	V	I_E=100μA Ee=0mW/cm²
$V_{CE\ (SAT)}$	Collector-to-Emitter Saturation Voltage	-	-	0.8	V	I_C=2mA Ee=20mW/cm²
I_{CEO}	Collector Dark Current	-	-	100	nA	V_{CE}=10V Ee=0mW/cm²
T_R	Rise Time (10% to 90%)	-	15	-	μs	V_{CE}=5V I_C=1mA R_L=1KΩ
T_F	Fall Time (90% to 10%)	-	15	-	μs	V_{CE}=5V I_C=1mA R_L=1KΩ

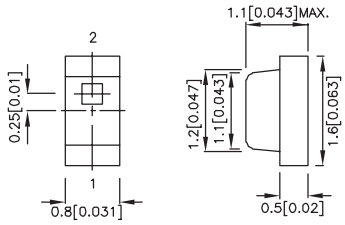
Absolute Maximum Rating T_a =25°C

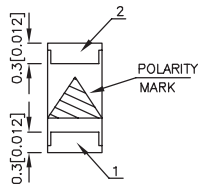
Collector-to-Emitter Voltage	30V	Operating Temperature Range	-40°C ~ +85°C
Emitter-to-Collector Voltage	5V	Storage Temperature Range	-40°C ~ +85°C
Power Dissipation at (or below) 25°C Free Air Temperature	100mW	Lead Soldering Temperature(>5mm For 5sec)	260°C

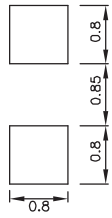
1. Dimension Unit: mm(inches), Tolerance: ±0.25mm (0.01").
2. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure	λpeak (nm)	Po(mW/sr) I_F=20mA		Viewing Angle 2θ1/2	Lens
			Min.	Typ.		
1.6x0.8x1.1mm (0603)						
ZTNI53W	GaAs	940	0.8	1.8	150°	Water Clear
ZTHI53W	GaAlAs	880	0.8	1.3	150°	Water Clear
2.0x1.25x1.1mm (0805)						
ZTNI54W	GaAs	940	0.8	1.8	160°	Water Clear
ZTHI54W	GaAlAs	880	0.8	1.3	160°	Water Clear
3.0x1.0x2.5mm (1104 Right Angle)						
ZTNI56W-1	GaAs	940	1.2	2.3	30°	Water Clear
ZTHI56W-1	GaAlAs	880	1	2.3	30°	Water Clear
3.2x1.6x1.8mm (1206 Dome Lens)						
ZTNI55W-3	GaAs	940	2	4.8	40°	Water Clear
ZTHI55W-3	GaAlAs	880	1.6	3.8	40°	Water Clear
3.5x2.8x1.9mm (PLCC2)						
ZTNI45S	GaAs	940	1.2	2.3	120°	Water Clear
ZTHI45S	GaAlAs	880	1.2	1.8	120°	Water Clear



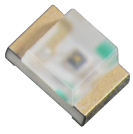


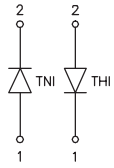


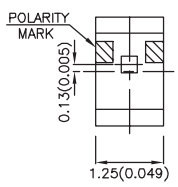


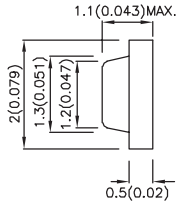
Dimension Unit: mm(inches), Tolerance : ±0.1(0.004")

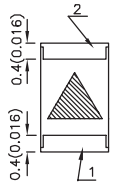
Recommended Soldering Pattern

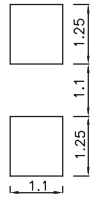






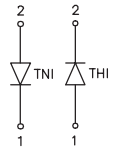


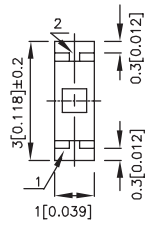


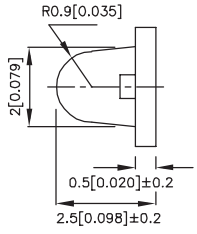


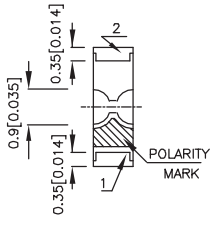
Dimension Unit: mm(inches), Tolerance : ±0.1(0.004")

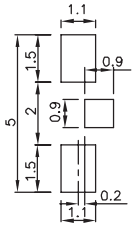
Recommended Soldering Pattern





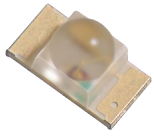


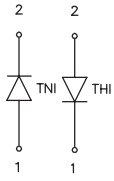


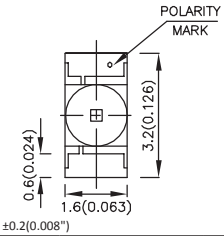


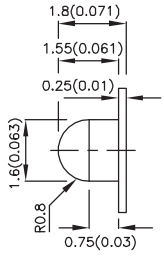
Dimension Unit: mm(inches), Tolerance: ±0.15mm (0.006")

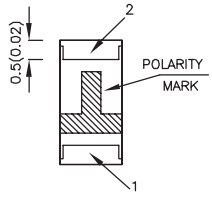
Recommended Soldering Pattern

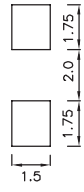






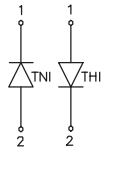


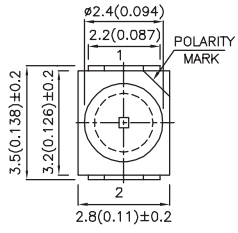


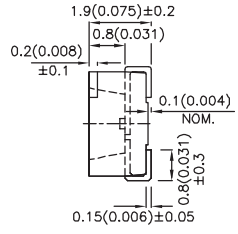


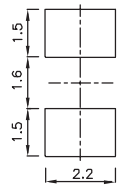
Dimension Unit: mm(inches), Tolerance : ±0.2(0.008")

Recommended Soldering Pattern





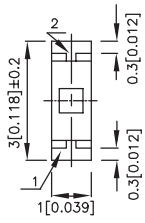
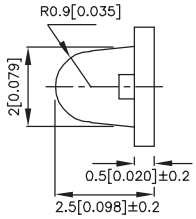
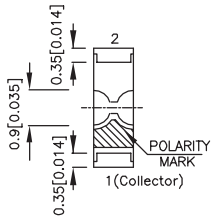
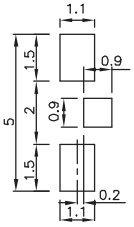
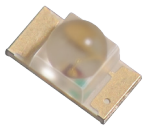
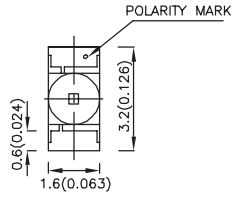
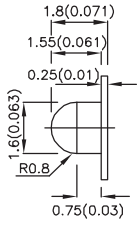
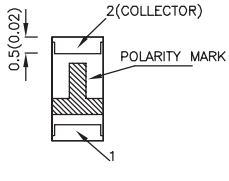
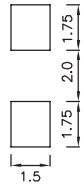
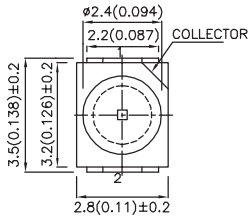
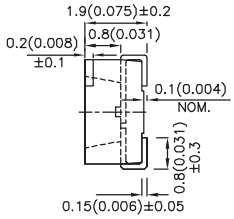
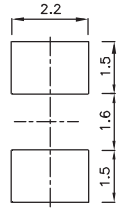




Dimension Unit: mm(inches), Tolerance: ±0.25mm (0.01")

Recommended Soldering Pattern

1. Dimension Unit: mm(inches), Tolerance: ±0.25mm (0.01").
2. Radiant intensity value and wavelength are in accordance with CIE127-2007 standards.
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Lens	Description
3.0x1.0x2.5mm (1104 Right Angle)       Dimension Unit: mm(inches), Tolerance: ±0.15mm (0.006") Recommended Soldering Pattern		
ZRNI56W-1	Water Clear	3.0x1.0x2.5mm
3.2x1.6x1.8mm (1206 Dome Lens)       Dimension Unit: mm(inches), Tolerance : ±0.2(0.008") Recommended Soldering Pattern		
ZRNI55W-3	Water Clear	3.2x1.6x1.8mm
3.5x2.8x1.9mm (PLCC2)      Dimension Unit: mm(inches), Tolerance: ±0.25mm (0.01") Recommended Soldering Pattern		
ZRNI45S	Water Clear	3.5x2.8x1.9mm

Electrical & Radiant Characteristics T_a =25°C

Symbol	Parameter	Part Number	Min.	Typ.	Max.	Unit	Test Condition
$I_{(ON)}$	On State Collector Current	ZRNI56W-1	0.2	0.5	-	mA	V_{CE}=5V, Ee=1mW/cm² λ=940nm
		ZRNI55W-3	0.4	1			
		ZRNI45S	0.2	0.4			
$V_{BR\ CEO}$	Collector-to-Emitter Breakdown Voltage	-	30	-	-	V	I_C=100μA Ee=0mW/cm²
$V_{BR\ ECO}$	Emitter-to-Collector Breakdown Voltage	-	5	-	-	V	I_E=100μA Ee=0mW/cm²
$V_{CE\ (SAT)}$	Collector-to-Emitter Saturation Voltage	-	-	-	0.8	V	I_C=2mA Ee=20mW/cm²
I_{CEO}	Collector Dark Current	-	-	-	100	nA	V_{CE}=10V Ee=0mW/cm²
T_R	Rise Time (10% to 90%)	-	-	15	-	μs	V_{CE}=5V I_C=1mA R_L=1KΩ
T_F	Fall Time (90% to 10%)	-	-	15	-	μs	V_{CE}=5V I_C=1mA R_L=1KΩ

Absolute Maximum Rating T_a =25°C

Collector-to-Emitter Voltage	30V	Operating Temperature Range	-40°C ~ +85°C
Emitter-to-Collector Voltage	5V	Storage Temperature Range	-40°C ~ +85°C
Power Dissipation at (or below) 25°C Free Air Temperature	100mW		

1. Soldering Pattern Dimension Unit : mm Tolerance : ±0.1mm.
2. We reserve the right to make changes at any time to enhance the design and / or performance of the product.