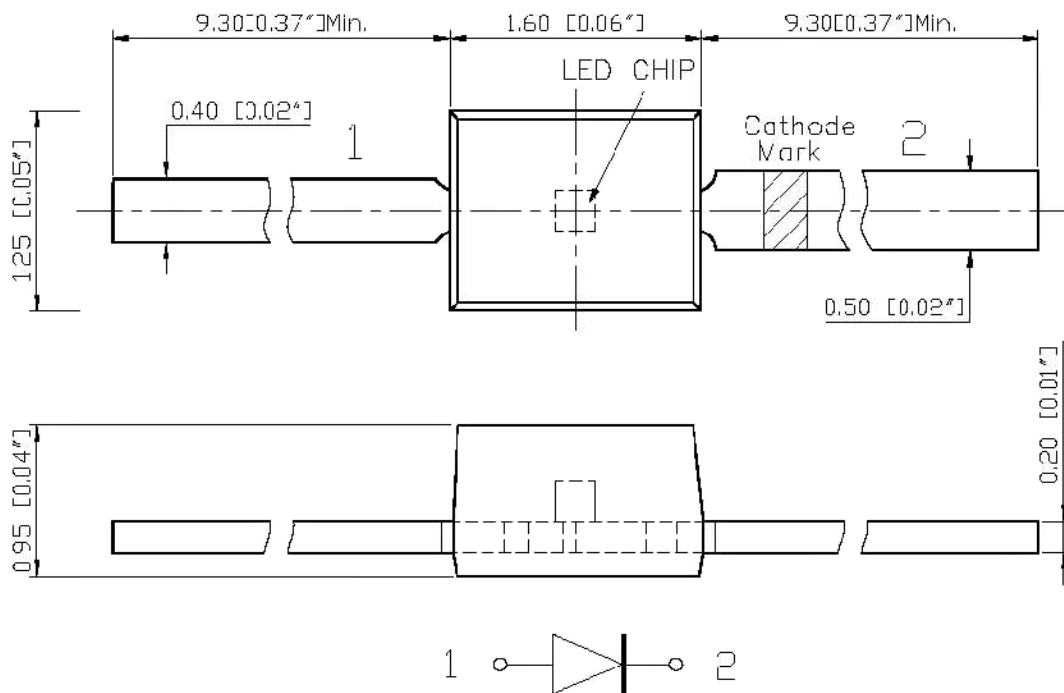


# knitter-switch

## Axial Package LED Sheet

PAPT NO. : LED-W

### ● PACKAGE OUTLINE DIMENSIONS





**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE DEVICES

Notes :

1. All dimensions are in millimeters.
2. Tolerance is  $\pm 0.1\text{mm}$  (.004") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject change without notice.

# knitter-switch

## ● Chip Materials

\* Dice Material : GaInN / Sic

\* Light Color : White

\* Lens Color : Yellow

## ● Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Power Dissipation	Pd	120	mW
Peak Pulsing Current (1/8 Duty Cycle, f = 1kHz)	I <sub>fp</sub>	125	mA
Forward Current	I <sub>f</sub>	30	mA
Reverse Voltage	V <sub>r</sub>	5	V
Operating Temperature Range	T <sub>opr</sub>	-20~80	°C
Storage Temperature Range	T <sub>stg</sub>	-20~85	°C
Lead Soldering Temperature	260°C For 5 SEC (5mm[0.20"] from body)		

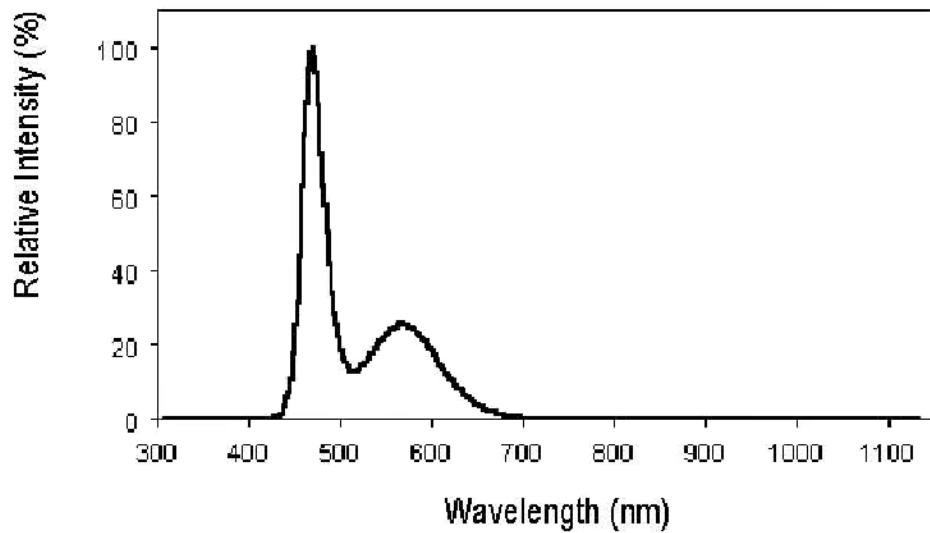
## ● Electro-Optical Characteristics (Ta = 25°C)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
CIE Coordinates	X	I <sub>f</sub> =20mA		0.29		nm
	Y			0.33		
Viewing Angle	2θ <sub>1/2</sub>	I <sub>f</sub> =10mA		150		Deg.
Forward Voltage	V <sub>f</sub>	I <sub>f</sub> =20mA		3.6	4.0	V
Chip luminous intensity	I <sub>v</sub>	I <sub>f</sub> =20mA	200	270		mcd
Reverse Current	I <sub>r</sub>	V <sub>r</sub> =5V			10	μA

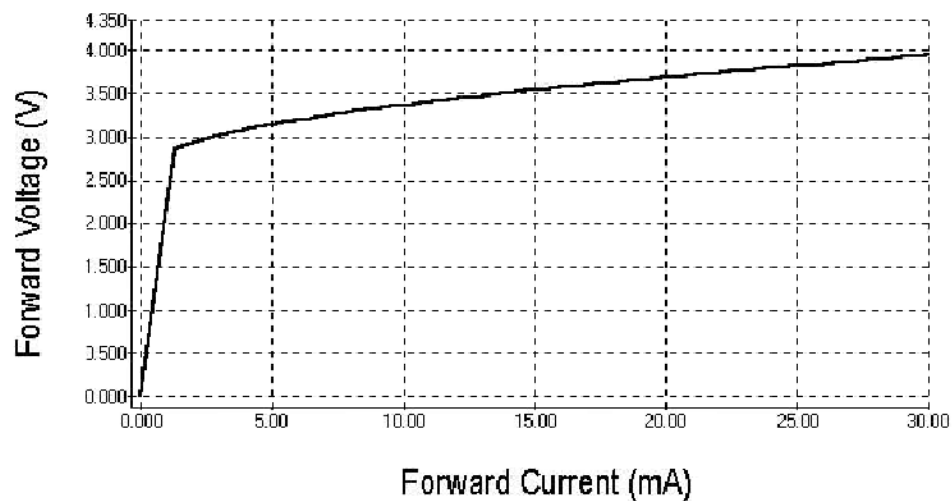
# knitter-switch

## ● OPTICAL CHARACTERISTIC CURVES

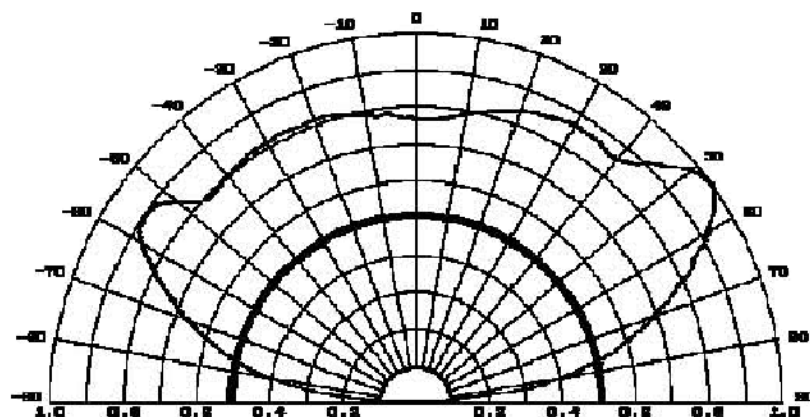
Relative Intensity vs. Wavelength



Forward Current vs. Forward Voltage



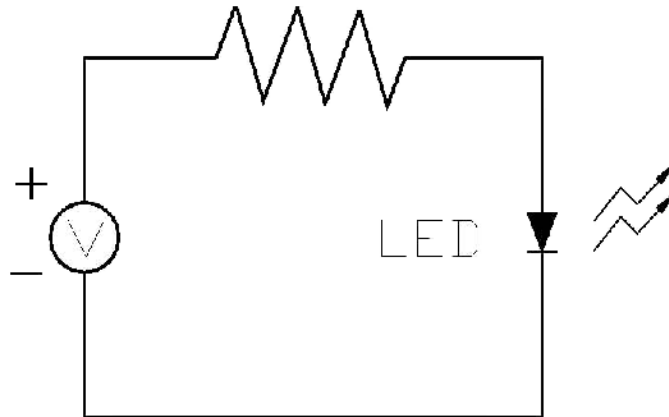
Directive Characteristics



# knitter-switch

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## ● Test Circuit



## ● Handling precautions

### 1. Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

### 2. Storage

2.1 It is recommended to store the products in the following conditions:

Humidity: 60%R.H. Max.

Temperature: 5°C~30°C (41°F~86°F)

2.2 Shelf life in sealed bag: 12 month at <5°C~30°C and <30%R.H. after the package is Opened, the products should be used within a week or they should be keeping to stored  $\leq 20$  R.H. with zip-lock sealed.

### 3. Baking

It is recommended to baking before soldering when the pack is unsealed after 72hrs.

The Conditions are as followings:

3.1 60±3°Cx(12~24hrs) and <5%RH, taped reel type

3.2 100±3°Cx(45min~1hr), bulk type

3.3 130±3°Cx(15~30min), bulk type

# knitter-switch

## ● Test items and results of reliability

Type	Test Item	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	-20°C 30min ↑ ↓ 80°C 30min	100 cycle	0/22
	Thermal Shock	-20°C 15min ↑ ↓ 80°C 15min	100 cycle	0/22
	High Humidity Heat Cycle	30°C ↔ 65°C 90%RH 24hrs/1cycle	10 cycle	0/22
	High Temperature Storage	Ta=80°C	1000 hrs	0/22
	Humidity Heat Storage	Ta=60°C RH=90%	1000 hrs	0/22
	Low Temperature Storage	Ta=-30°C	1000 hrs	0/22
Operation Sequence	Life Test	Ta=25°C If=20mA	1000 hrs	0/22
	High Humidity Heat Life Test	60°C RH=90% If=10mA	500 hrs	0/22
	Low Temperature Life Test	Ta=-20°C If=20mA	1000 hrs	0/22