APPROVAL SHEET

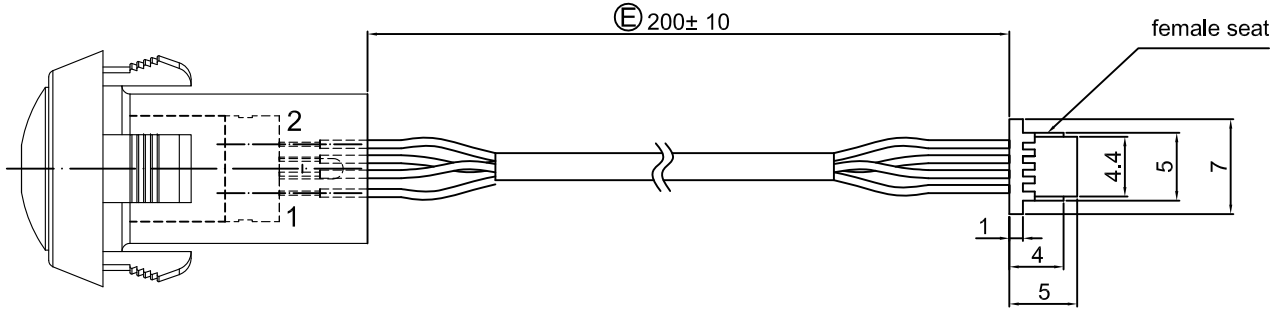
DESCRIPTION: **PUSH BUTTON SWITCH WITH**

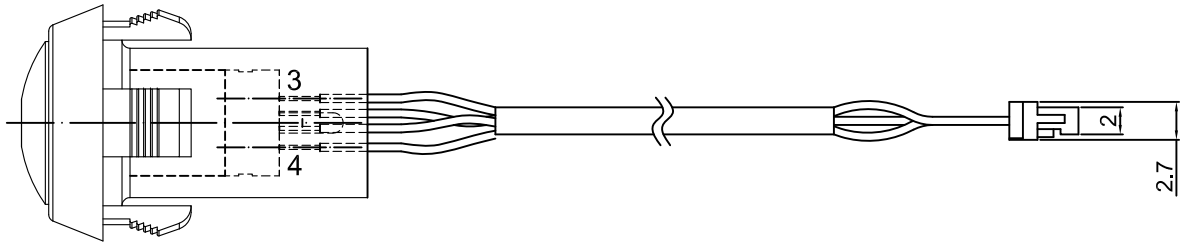
PART NO: **PS001W-N11NAKWUGXX-W200**

CUSTOMER: MARUTSU	**CUSTOMER'S PART NO:**
CUSTOMER SIGNATURE	**COMMENTS**

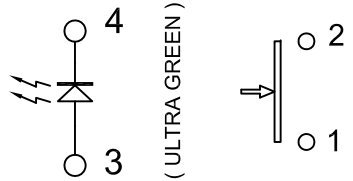
APPROVAL	REVIEW	PREPARE
Kaven	*Tereance*	*Gina*

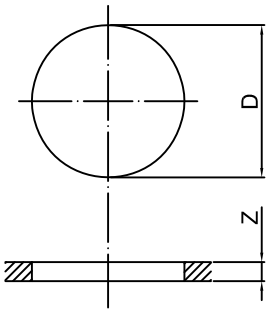
DIMENSION	TOLERANCE
BELOW 10 mm	± 0.3
10~100 mm	± 0.5
ABOVE 100 mm	± 0.8
ANGLE	± 3°





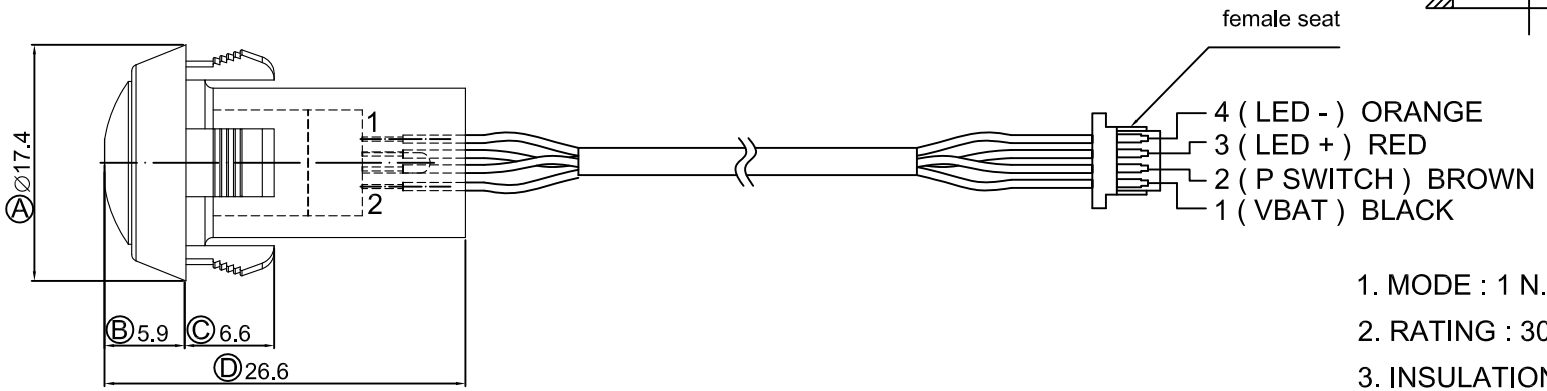
SCHEMATIC





PANEL CUT OUT

Z	D
1.0 ~ 2.0	8.0 ~ 8.2
2.0 ~ 2.5	8.2 ~ 8.4
2.5 ~ 3.0	8.4 ~ 8.6



1. MODE : 1 N.O. , MOMENTARY .
2. RATING : 30 VDC , 100 mA .
3. INSULATION RESISTANCE : 500 VDC , 100MΩ MIN
4. OPERATION FORCE : 400 ± 100 gf .
5. OPERATION TEMPERATURE : -40°C ~ +85°C .
6. MECHANICAL LIFE : 50,000 CYCLES .
7. CRITICAL DIMENSIONS: 'A' ~ 'E'

3					DATE	2012/07/14	UNIT	mm	MODE	LED PUSH BUTTON SWITCH
2					APPROVAL	KAVEN	SCALE	1 : 1	PART	PS001W-N11NAKWUGXX-W200
1					CONFIRM	TEREANCE	VIEW		2D FILE NAME	PS001W-N11NAKWUGXX-W200
	DATE	APPROVAL	DESIGN	ENGINEERING CHANGE DESCRIPTION	DESIGN	JASON	VER.	01	3D FILE NAME	

SPECIFICATIONS OF PS001W SERIES
PUSH BUTTON SWITCH WITH LED

1. POLE - POSITION：1P1T, MOMENTARY TYPE

2. OPERATING TEMPERATURE RANGE：-40℃ ~ 85℃

3. RATING：30V DC 0.1A

4. ELECTRICAL PERFORMANCE

	ITEM	TEST CONDITIONS	CRITERIA
4-1	CONTACT RESISTANCE	DC 1.5V 100mA，BY METHOD OF VOLTAGE DROP	50 mΩ MAX.
4-2	INSULATION RESISTANCE	DC 500V	100 MΩ MIN.
4-3	DIELECTRIC STRENGTH	AC 500V FOR 1 MINUTE	BREAKDOWN IS NOT ALLOWABLE

5. MECHANICAL PERFORMANCE

	ITEM	TEST CONDITIONS	CRITERIA
5-1	OPERATING FORCE	ALONG OPERATING DIRECTION TO APPLY A STATIC LOAD AT END OF ACTUATOR TO DEPRESS UNTIL IT STOPS MOVEMENT	400±100gf
5-2	ROBUSTNESS OF TERMINAL	200 gf FOR 1 MINUTE	TERMINAL COULD BE BENT BUT LOOSENED TERMINAL OR BASE FRAME BROKEN IS NOT ALLOWABLE

5-3	ROBUSTNESS OF ACTUATOR	1. TO APPLY A STATIC FORCE 2 Kg VERTICALLY ON THE TOP OF ACTUATOR，DEPRESS IT 2. TO APPLY A STATIC FORCE 300 g VERTICALLY AT 1 mm BELOW TOP OF THE ACTUATOR，PULL IT 3. TO APPLY A STATIC FORCE 300 g HORIZONTALLY FROM ANY DIRECTION AT 1 mm BELOW TOP OF THE ACTUATOR，PURH IT	ACTUATOR BROKEN OR ANY UNSUAL APPEARANCE OCCURRED ON SWITCH CONSTRUCTION IS NOT ALLOWABLE
5-4	SOLDERABILITY	260±5℃ IN 3 SECONDS	SOLDER COVERAGE 75% MIN.

6. RESISTANCE OF SOLDERING HEAT
   6-1 MANUAL SOLDERING：300±5℃ IN 3 SECONDS
   6-2 DIP SOLDERING：260±5℃ IN 3 SECONDS

7. DURABILITY
   OPERATING LIFE WITHOUT LOAD AFTER 50,000 CYCLES
   7-1 CONTACT RESISTANCE：100 mΩ MAX.
   7-2 OPERATING FORCE：WITHIN THE RANGE ±30% OF SPECIFICATION
   7-3 INSULATION RESISTANCE：500V DC 10 MΩ MIN.
   7-4 DIELECTRIC STRENGTH：500V AC FOR 1 MINUTE，BREAKDOWN IS NOT ALLOWABLE

8. ENVIRONMENTAL PERFORMANCE

	ITEM	TEST CONDITIONS	CRITERIA
8-1	COLD	-40±2℃ FOR 48 HOURS	1. IT SHOULD MEET REQUIREMENTS OF ITEM 4。 2. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL。

8-2	DRY HEAT	85℃±2℃ FOR 48 HOURS	1. CONTACT RESISTANCE SHOULD BE LESS THAN 100 mΩ。 2. IT SHOULD MEET REQUIREMENTS OF 4-2 AND 4-3。 3. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL。
8-3	DAMP HEAT	40℃±2℃ 90% ~ 95% RH FOR 96 HOURS	1. CONTACT RESISTANCE SHOULD BE LESS THAN 100 mΩ。 2. INSULATION RESISTANCE SHOULD BE HIGHER THAN 10 MΩ。 3. IT SHOULD MEET DIELECTRIC STRENGTH REQUIREMENT OF 4-3。 4. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL。
8-4	DEGREE OF PORTECTION	THE PRODUCT IS PLACED 1 M DEEP IN WATER (IF THE PRODUCT IS 850 mm MAX. IN HEIGHT) FOR 30 MIN.	1. IT SHOULD MEET REQUIREMENTS OF ITEM 4。 2. MECHANICAL PERFORMANCE SHOULD REMAIN TO NORMAL。 3. RESISTS THE PENETRATION OF WATER WHEN THE PRODUCT IS PLACED UNDERWATER AT SPECIFIED PRESSURE FOR A SPECIFIED TIME。

9. LED SPECIFICATIONS WILL BE FURNISHED DEPENDING ON DIFFERENT LED COLOR DEMAND A SINGLE BIN CANNOT BE ORDERED. PLEASE CONTACT US IN ADVANCE. IF YOU NEED A PARTICULAR BIN SORTING BEFORE PLACING YOUR ORDER TO CLARIFY THE LEAD TIME, MOQ AND PRICING

T-1 (3mm) SOLID STATE LAMP

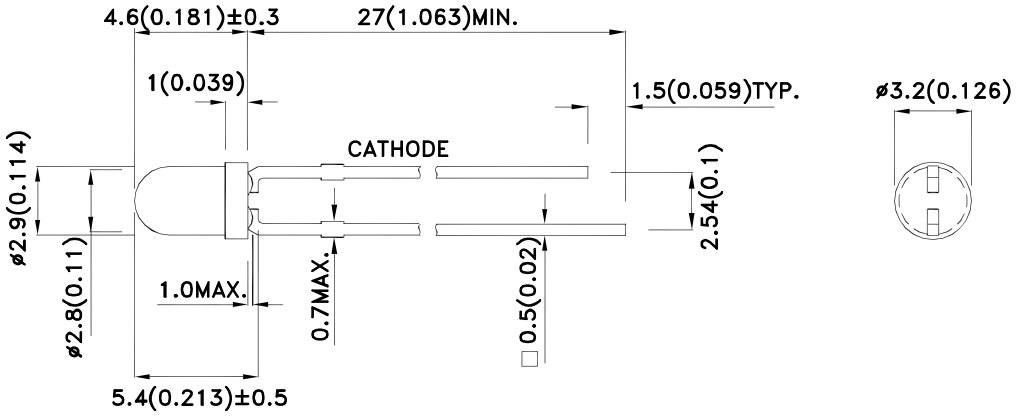
Features

- Low power consumption.
- Popular T-1 diameter package.
- General purpose leads.
- Reliable and rugged.
- Long life - solid state reliability.
- Available on tape and reel.
- RoHS compliant.

Description

The Green source color devices are made with AlGaInP on GaAs substrate Light Emitting Diode.

Package Dimensions



Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle [1]
			Min.	Typ.	2θ1/2
	Green (AlGaInP)	Water Clear	180	400	34°

Notes:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

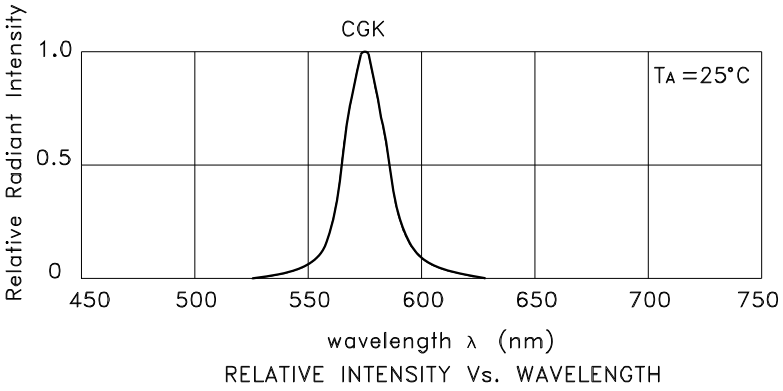
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Green	574		nm	I_F=20mA
λD [1]	Dominant Wavelength	Green	570		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Green	20		nm	I_F=20mA
C	Capacitance	Green	15		pF	V_F=0V;f=1MHz
V_F [2]	Forward Voltage	Green	2.1	2.5	V	I_F=20mA
I_R	Reverse Current	Green		10	uA	V_R = 5V

Notes:
1.Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Absolute Maximum Ratings at TA=25°C

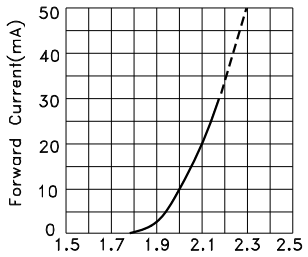
Parameter	Green	Units
Power dissipation	75	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

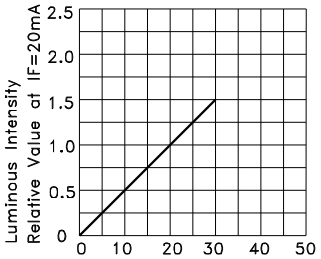


RELATIVE INTENSITY Vs. WAVELENGTH

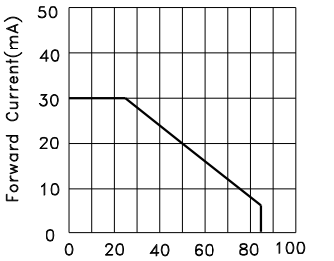
Green



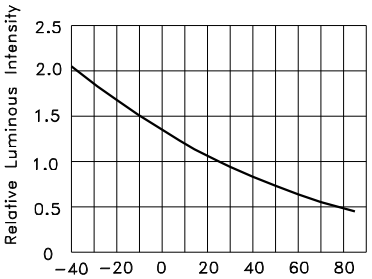
FORWARD CURRENT Vs.
FORWARD VOLTAGE



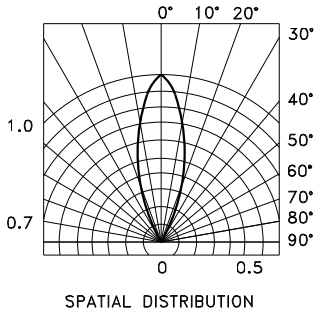
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

PRECAUTIONS

1. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead-forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures. (Fig. 1)

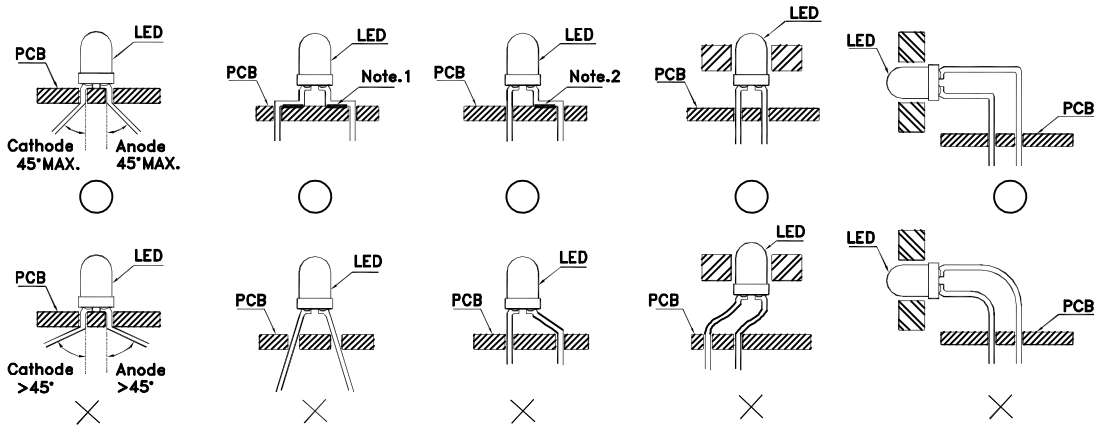


Fig.1

"○" Correct mounting method "×" Incorrect mounting method

2. When soldering wire to the LED, use individual heat-shrink tubing to insulate the exposed leads to prevent accidental contact short-circuit. (Fig.2)

3. Use stand-offs (Fig.3) or spacers (Fig.4) to securely position the LED above the PCB.

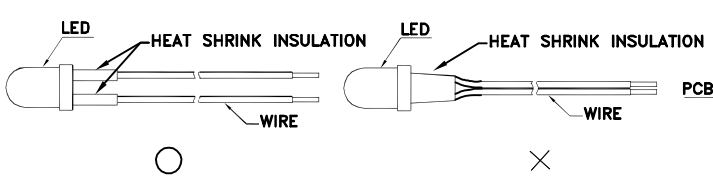


Fig. 2

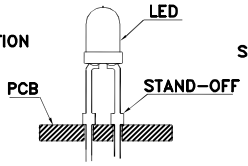


Fig. 3

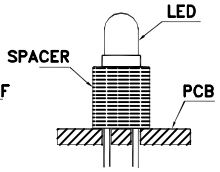


Fig. 4

4. Maintain a minimum of 2mm clearance between the base of the LED lens and the first lead bend. (Fig. 5 and 6)

5. During lead forming, use tools or jigs to hold the leads securely so that the bending force will not be transmitted to the LED lens and its internal structures. Do not perform lead forming once the component has been mounted onto the PCB. (Fig. 7)

6. Do not bend the leads more than twice. (Fig. 8)

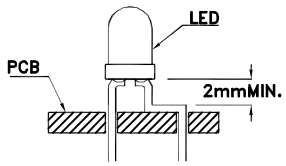


Fig. 5

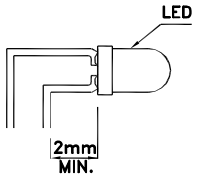


Fig. 6

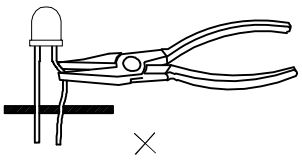


Fig. 7

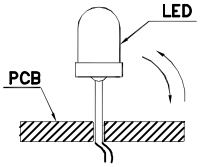
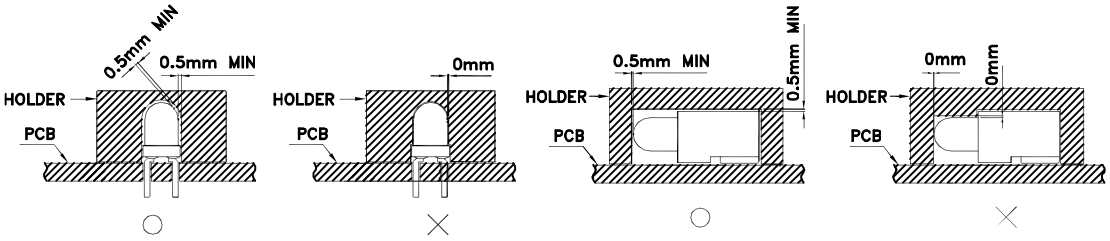
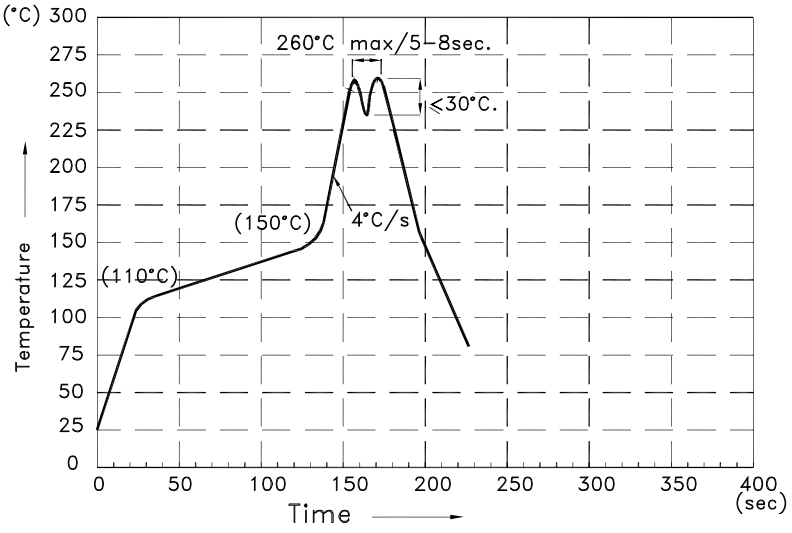


Fig. 8

7. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.



8. The tip of the soldering iron should never touch the lens epoxy.
9. Through-hole LEDs are incompatible with reflow soldering.
10. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.
11. Recommended Wave Soldering Profile for Kingbright Thru-Hole Products



NOTES:

1.Recommend the wave temperature 245°C~260°C.The maximum soldering temperature should be less than 260°C.

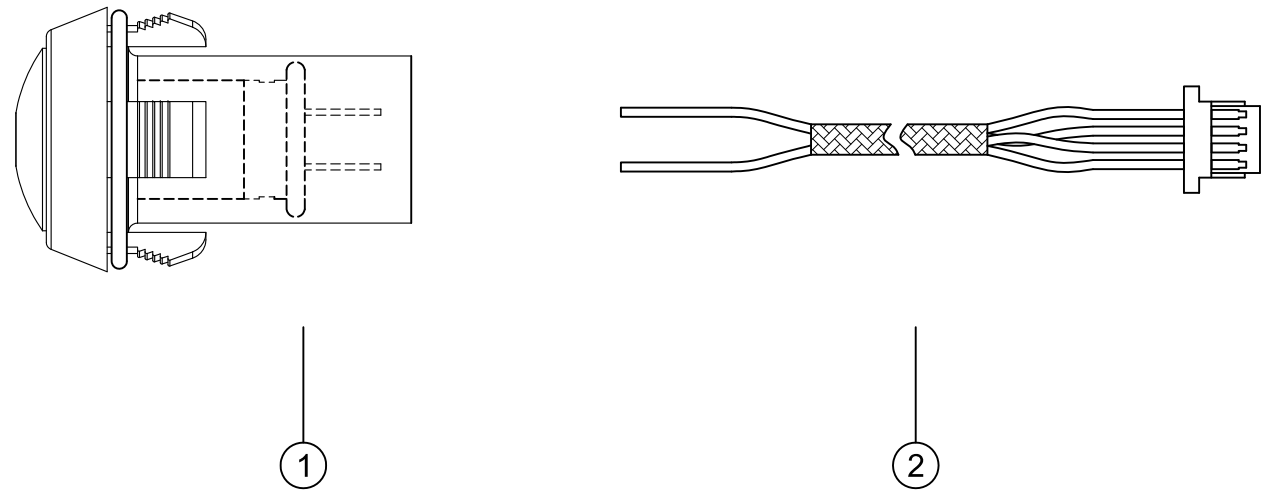
2.Do not apply stress on epoxy resins when temperature is over 85 degree°C.

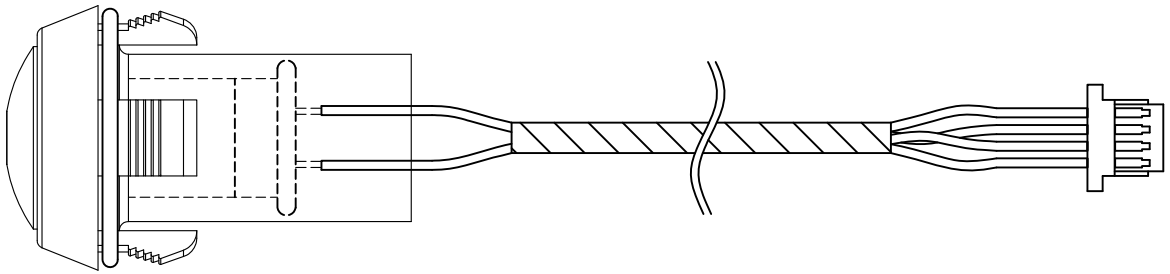
3.The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).

4.During wave soldering, the PCB top-surface temperature should be kept below 105C.

5.No more than once.

DIMENSION	TOLERANCE
BELOW 10 mm	± 0.3
10~100 mm	± 0.5
ABOVE 100 mm	± 0.8
ANGLE	± 3°





NO.	PART NAME	QTY	MATERIAL	SPECIAL DEAL	RoHS REPORT No.
1	SWITCH	1	PS001W-N11NAKWUGXX		
2	CABLE CONNECT	1			

3					DATE	2012/07/14	UNIT	mm	MODE	PUSH BUTTON SWITCH
2					APPROVAL	KAVEN	SCALE	1 : 1	PART	PS001W-N11NAKWUGXX-W200
1					CONFIRM	TEREANCE	VIEW		2D FILE NAME	PS001W-N11NAKWUGXX-W200 MATERIAL LIST
	DATE	APPROVAL	DESIGN	ENGINEERING CHANGE DESCRIPTION	DESIGN	JASON	VER.	01	3D FILE NAME	