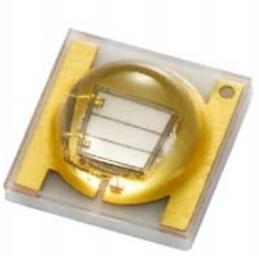
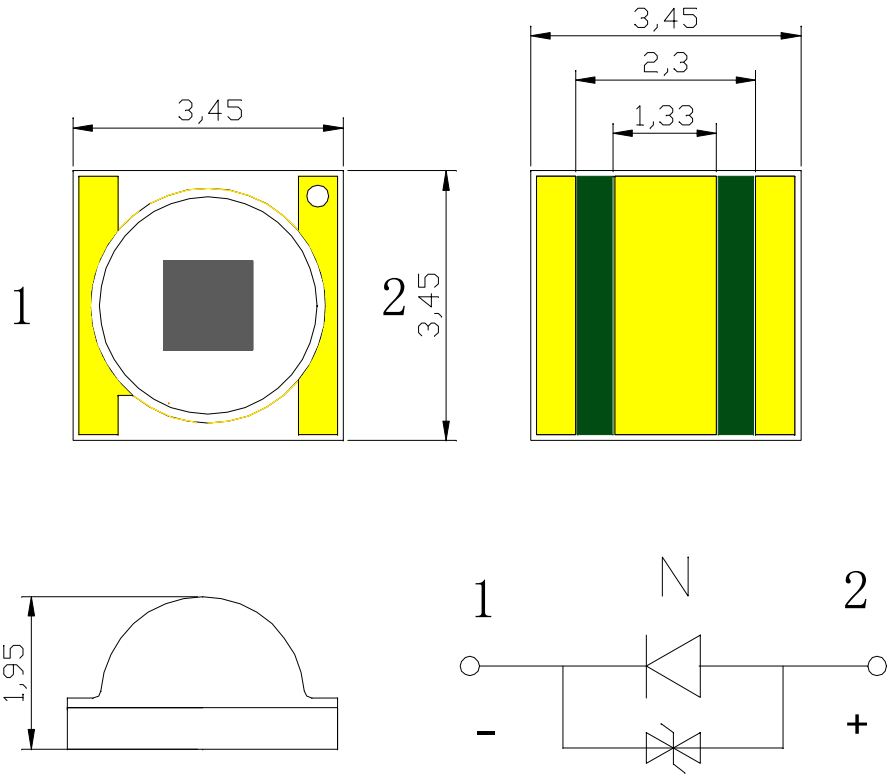
RF-UV35-UI

Description

- Viewing angle:120 deg
- The materials of the LED dice is GaN
- 3.45mm×3.45mm×1.95mm
- RoHS compliant lead-free soldering compatible



Package Outline



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ±0.3mm (0.012inch) unless otherwise noted.

Absolute maximum ratings at Ta=25℃

Parameter	Symbol	Value	Unit
Forward DC current	If	700	mA
Reverse DC voltage	Vr	5	V
Operating temperature range	Top	-40~+100	℃
Storage temperature range	Tstg	-40~+100	℃
Peak pulsing current	Ifp	1000	mA
ESD Classification	ESD	2000	V
Thermal resistance	θ th	12	℃/W

Electro-optical characteristics at Ta=25℃

Parameter	Test Condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Forward voltage	If=350mA	Vf	3.0	--	4.0	V
Peak wavelength	If=350mA	WLP	400	--	405	nm
Luminous flux	If=350mA	PO	240	--	480	mW
Viewing angle at 50% Iv	If=350mA	2 θ1/2	--	120	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

NOTE: (Tolerance: Φ ±10% , Vf ±0.1V)

IFP Conditions : Pulse Width ≦ 10msec. and Duty ≦ 1/10.

Optical characteristics curves

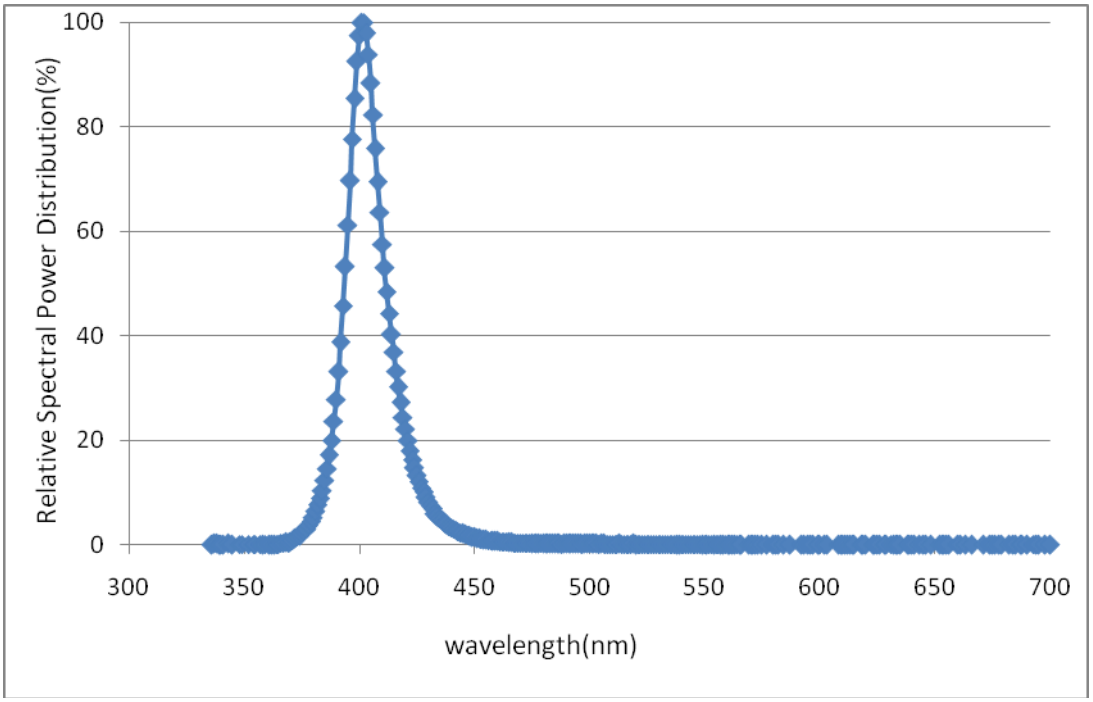
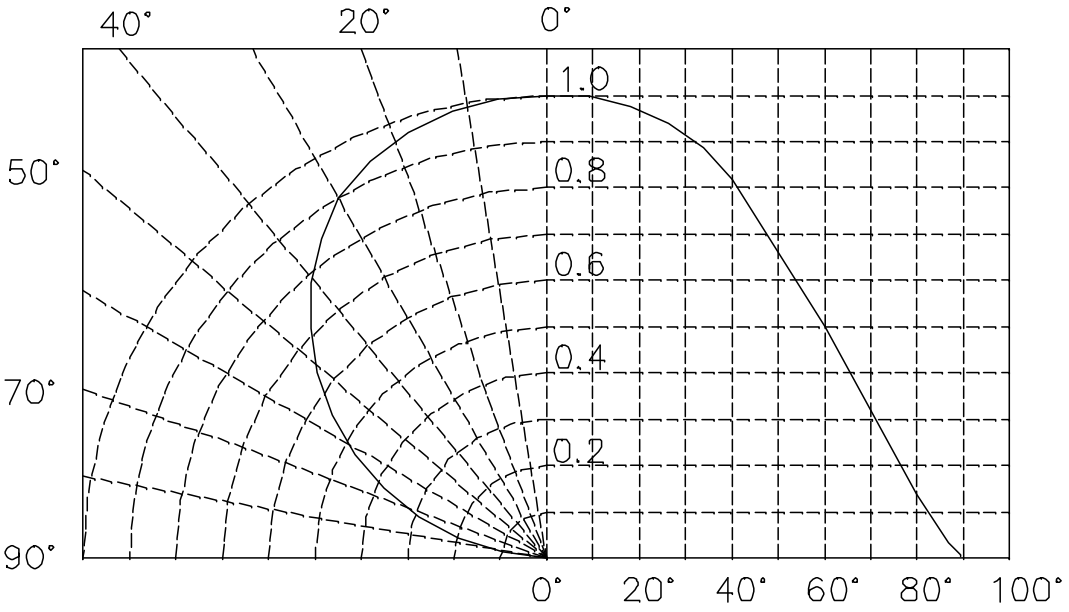
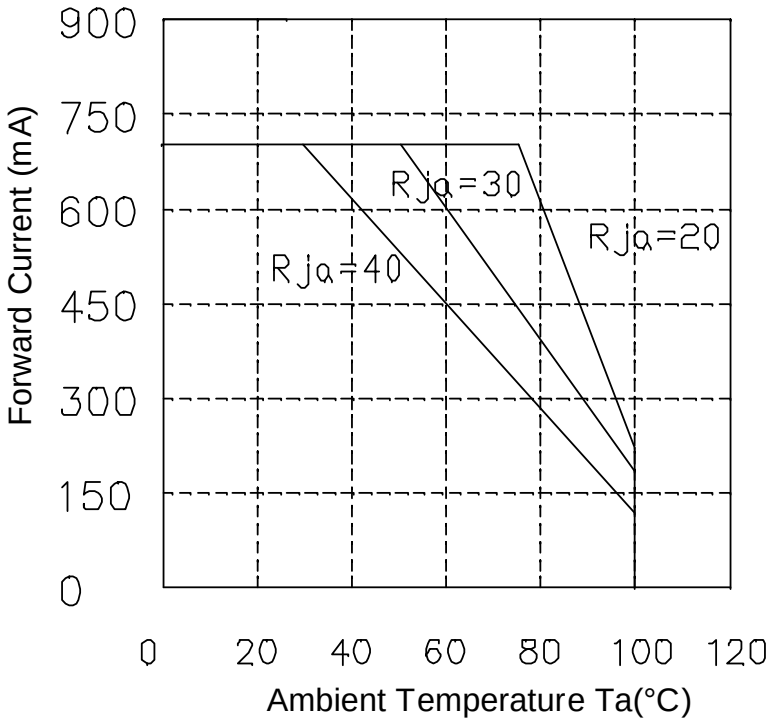


Diagram characteristics of radiation

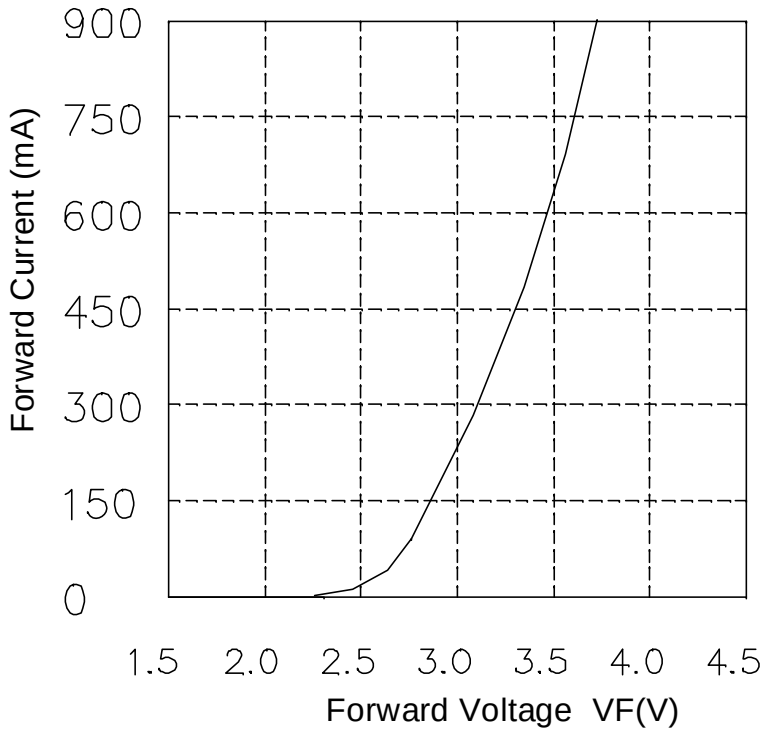


Derating

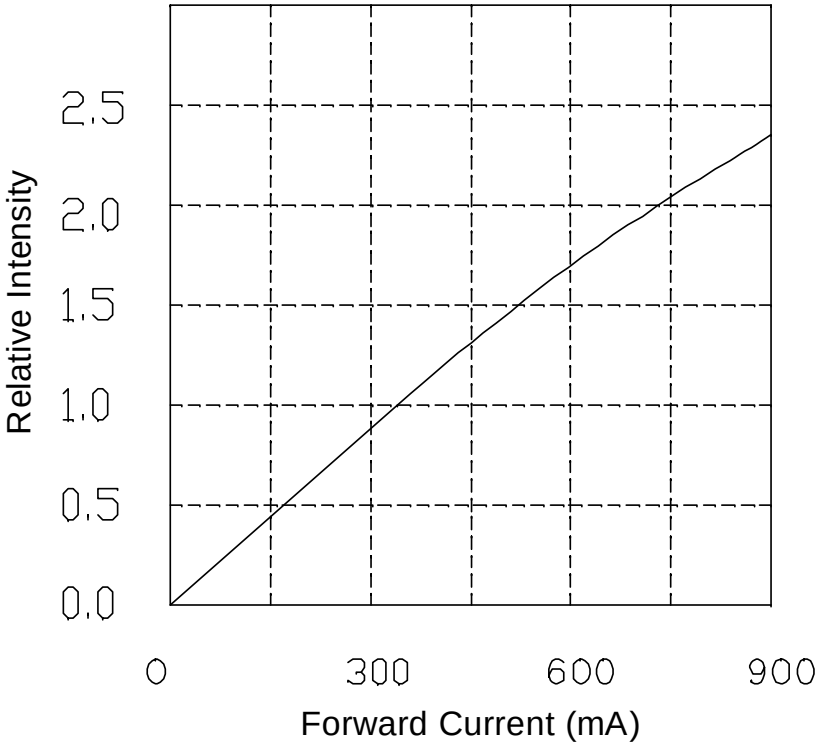
Ambient Temperature vs. Maximum Forward Current



Forward Voltage vs. Forward Current (Ta=25°C)



Relative Intensity vs. Forward Current (Ta=25°C)



Reflow profile

■ Soldering condition

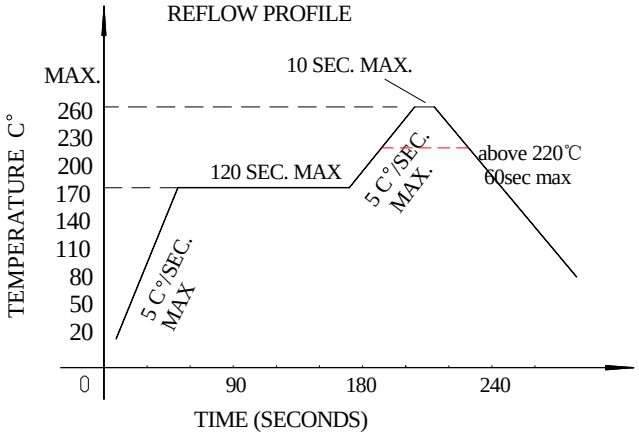
• Recommended soldering conditions

Reflow Soldering		Hand Soldering	
Pre-heat	160～180℃	Temperature	300℃ Max.
Pre-heat time	120 seconds Max.		
Peak temperature	260℃ Max.	Soldering time	3 second Max.
Soldering time	10 seconds Max.		(one time only)
Condition	Refer to Temperature-profile		

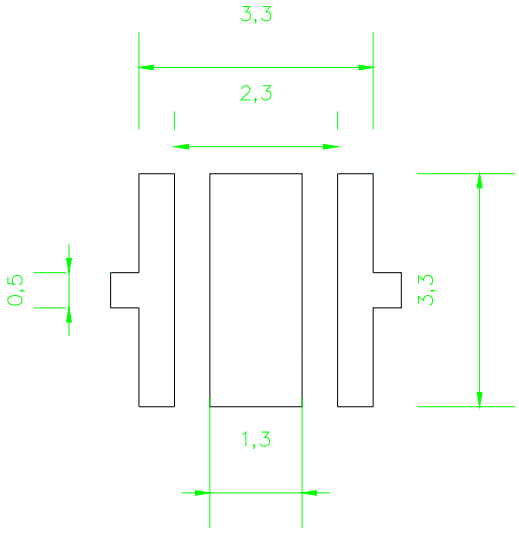
• After reflow soldering rapid cooling should be avoided

■ Temperature-profile (Surface of circuit board)

Use the following conditions shown in the figure.



RECOMMEND PAD DESIGN (Units: mm)



1. Reflow soldering should not be done more than two times
2. When soldering ,do not put stress on the LEDs during heating

■ Soldering iron

1. When hand soldering, keep the temperature of the iron under 300℃, and at that temperature keep the time under 3 sec.
2. The hand soldering should be done only a time
3. The basic spec is ≤5 sec. when the temperature of 260℃, do not contact the resin when hand soldering

Reliability

(1)TEST ITEMS AND RESULTS

Type	Test Item	Ref. Standard	Test Conditions	Note	Number of Damaged
Environmental Sequence	Resistance to Soldering Heat(Reflow Soldering)	JESD22-B106	Tsld=260℃,10sec	3 times	0/22
	Temperature Cycle	JESD22-A104	-40℃ 30min ↑↓5min 100℃ 30min	200 cycle	0/22
	Thermal Shock	JESD22-A106	-40℃ 15min ↑↓ 100℃ 15min	200 cycle	0/22
	High Temperature Storage	JESD22-A103	T_a=100℃	1000 hrs	0/22
	Low Temperature Storage	JESD22-A119	T_a=-40℃	1000 hrs	0/22
Operation Sequence	Life Test	JESD22-A108	T_a=25℃ I_F=700mA	1000 hrs	0/22
	High Temperature Life Test	JESD22-A108	T_a=85℃ I_F=350mA	1000 hrs	0/22
	High Humidity Heat Life Test	JESD22-A101	60℃ RH=90% I_F=350mA	1000 hrs	0/22

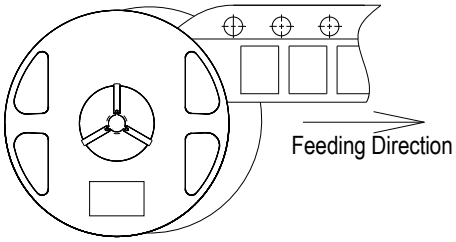
(2)CRITERIA FOR JUDGING THE DAMAGE

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage	VF	IF=350mA	_	U.S.L*)×1.1
Reverse Current	IR	VR=5V	_	U.S.L*)×2.0
Luminous flux	Φ	IF=350mA	L.S.L**)×0.7	_

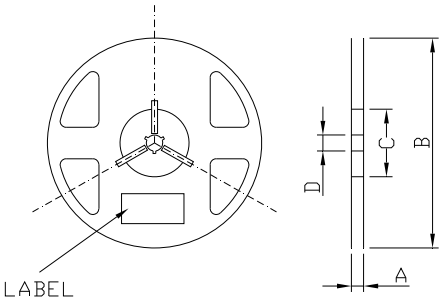
U.S.L.: Upper Standard Level **L.S.L.: Lower Standard Level**

Packaging Specifications

● Feeding Direction

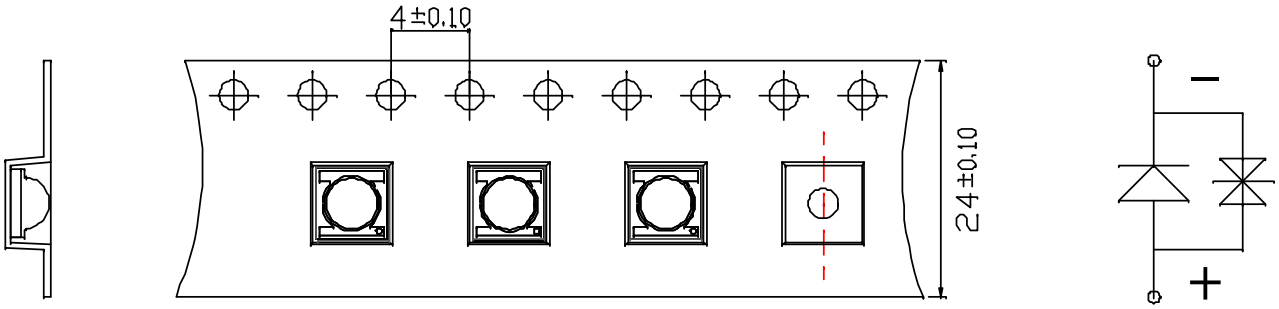


● Dimensions of Reel (Unit: mm)

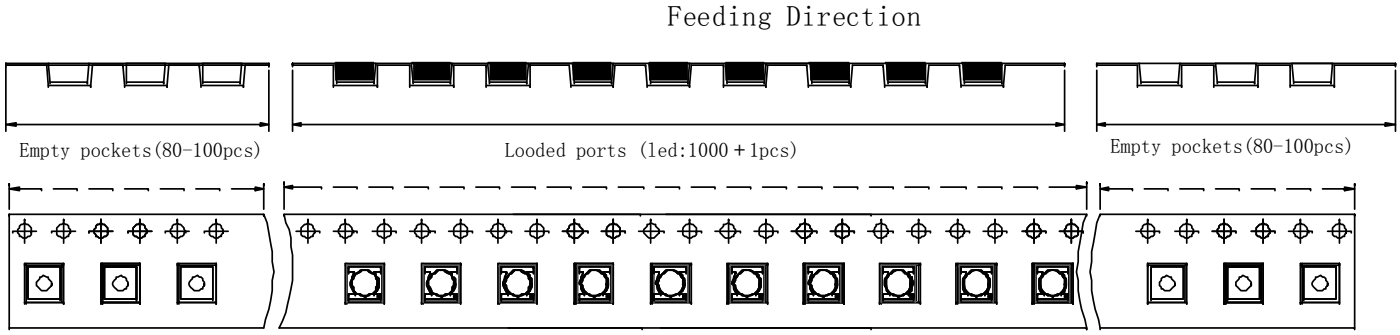


A	15.8±0.1mm
B	178±1mm
C	59±1mm
D	13.3±0.5mm

● Dimensions of Tape (Unit: mm)



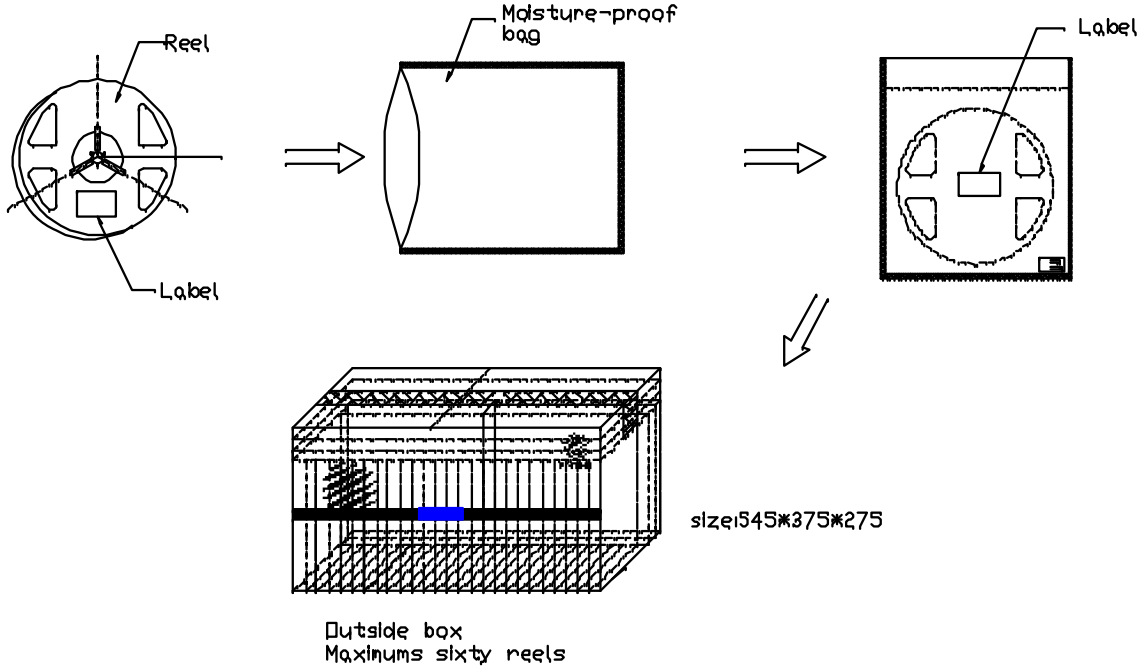
● Arrangement of Tape



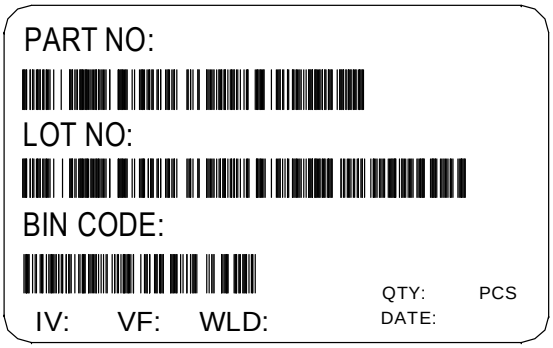
NOTES

1. Empty component pockets are sealed with top cover tape;
2. The maximum number of missing lamps is two;
3. The cathode is oriented towards the tape sprocket hole in accordance with ANSI/EIA RS-481 specifications.
4. 500 pcs/ Reel.

Packaging specifications



■ Label



CAUTIONS

Package specifications

Reeled products (numbers of products are 500pcs) packed in a seal off moisture-proof bag along with a desiccant one by one, Sixty moisture-proof bag of maximums are put the outside box (size: about 545mm x about 375mm x about 275mm) Together with buffer material, and it is packed. (Pare No., Lot No., quantity should appear on the label on the moisture-proof bag, part No. And quantity should appear on the label on the cardboard box.) The number of the loading steps of outside box (cardboard box) has two steps.

Storage conditions

Before opening the package:

The LEDs should be kept at 30℃ or less and 70%RH or less. The LEDs should be used within a year. When storing the LEDs, moisture proof packaging with absorbent material (silica gel) is recommended.

After opening the package:

The LEDs should be kept at 30℃ or less and 50%RH or less. If unused LEDs remain, they should be stored in moisture proof packages, such as sealed containers with packages of moisture absorbent material (silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.