

Product Type:

- 30D Outline : 3.5*3.5*3.38mm
- 60D Outline : 3.5*3.5*2.8mm
- 90D Outline : 3.5*3.5*2.34mm
- 120D Outline : 3.5*3.5*2.0mm

Features

- ROHS and REACH-compliant
- Vertical patent free chip
- Ceramic substrate with black surface (Optional substrate)

Applications

- Security 、 IP cam 、 baby cam

◆ Specification

Angle	Radiometric Power (mW)			Peak Wavelength (nm)	Forward Voltage (V)		Part Number
	Group	700mA Min	700mA Max		Min	Max	
120°	P45	300	350	730-740	1.6	1.8	3535F74003D000
	P50	350	400		1.8	2.0	
	P55	400	450	740-750	2.0	2.2	
	P60	450	500		2.2	2.4	
90°	P45	300	350	730-740	1.6	1.8	3535D74003D000
	P50	350	400		1.8	2.0	
	P55	400	450	740-750	2.0	2.2	
	P60	450	500		2.2	2.4	
60°	P45	300	350	730-740	1.6	1.8	3535C74003D000
	P50	350	400		1.8	2.0	
	P55	400	450	740-750	2.0	2.2	
	P60	450	500		2.2	2.4	
30°	P45	300	350	730-740	1.6	1.8	3535A74003D000
	P50	350	400		1.8	2.0	
	P55	400	450	740-750	2.0	2.2	
	P60	450	500		2.2	2.4	

Notes:

1. Forward voltage (V_F) $\pm 0.1V$, Radiometric Power (P_o) $\pm 10\%$.
2. Testing current of 3W is 700mA

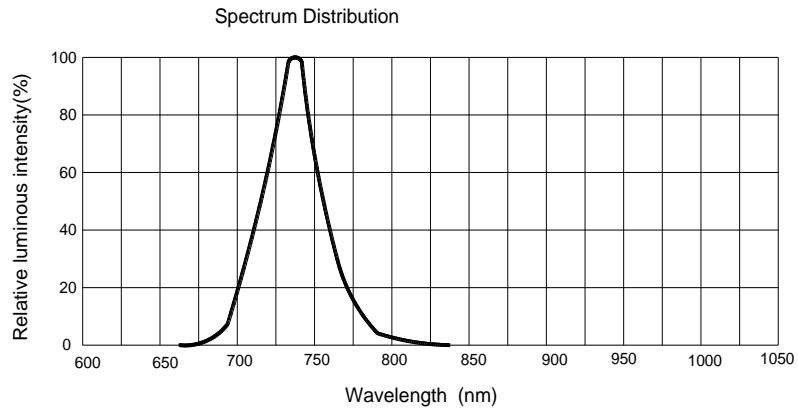
◆ Maximum Rating

Characteristics	Symbol	Min.	Typical	Max.	Unit
DC Forward Current ¹	I_F	---	350	700	mA
Pulse Current	I_p	---	---	1000	mA
Forward Voltage	V_F	1.4	---	2.6	V
Reverse Voltage	V_R	---	-5	---	V
Leakage Current (5V)	I_R	---	---	10	μ A
Junction Temperature ³	T_j	---	125	---	$^{\circ}$ C
Storage Temperature Range	T_{stg}	-40	-	100	$^{\circ}$ C
Soldering Temperature	T_{sol}	---	---	260	$^{\circ}$ C
Thermal Resistance Junction / Solder Point	R_{th}	---	10	---	$^{\circ}$ C/W
Viewing Angle	$2\theta_{1/2}$	---	30 60 90 120	---	Deg

Notes:

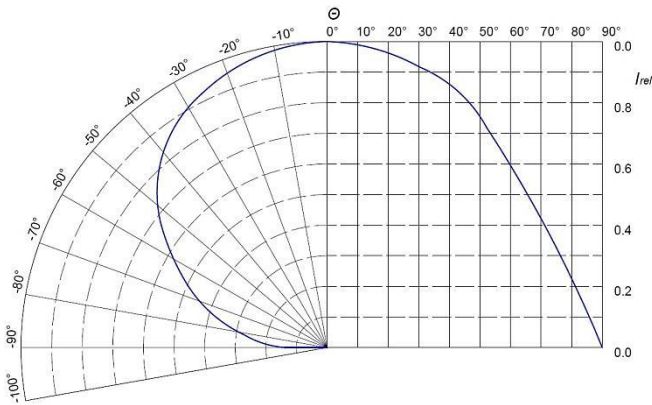
1. D=0.01s duty 1/10.
2. When drive on maximum current , T_j must be kept below 125 $^{\circ}$ C
3. Viewing angle($2\theta_{1/2}$) $\pm 10^{\circ}$

● 740nm Characteristic

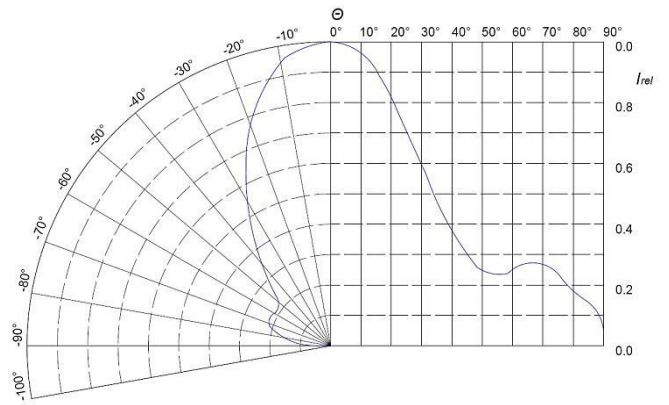


◆ Typical Spatial Distribution

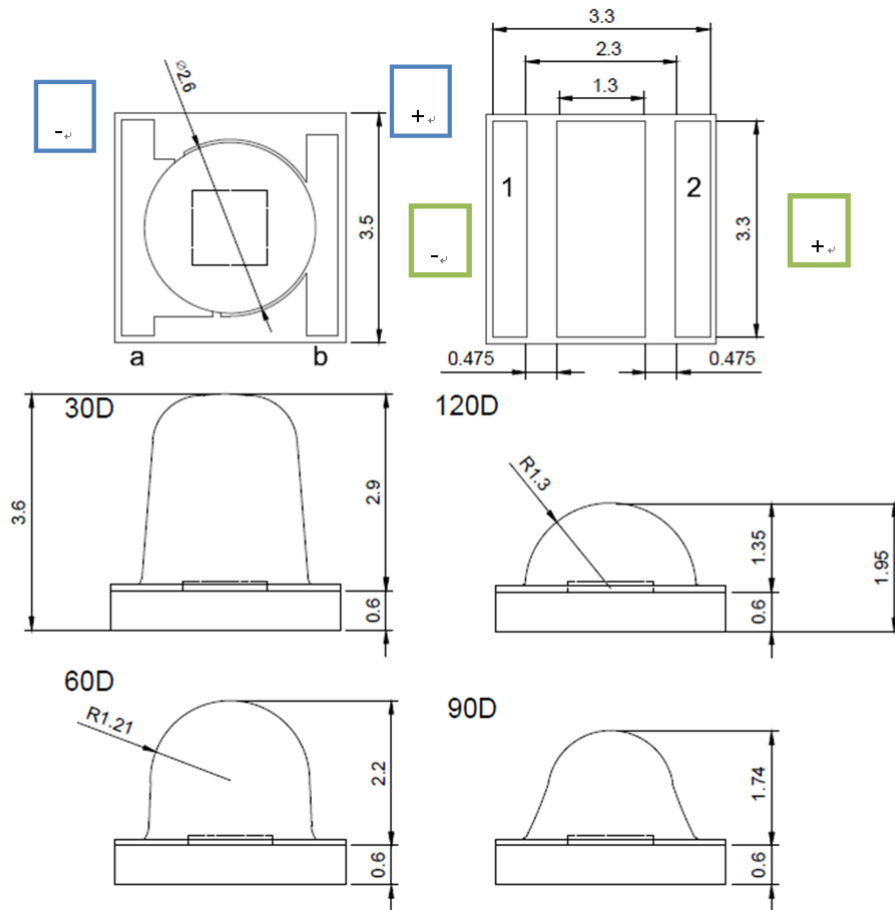
120°



60°



◆ Dimensions

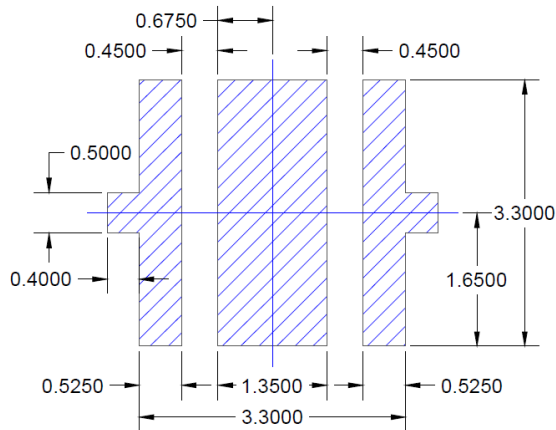


Note:

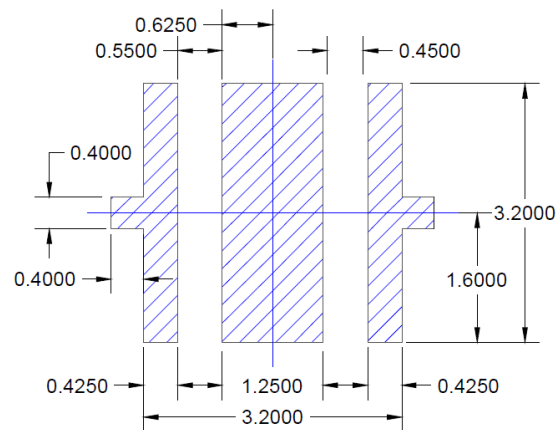
1. All dimensions are in millimeters.
2. Tolerance is ± 0.1 mm unless other specified.

◆ Suggest Stencil Pattern

RECOMMENDED PCB SOLDER PAD

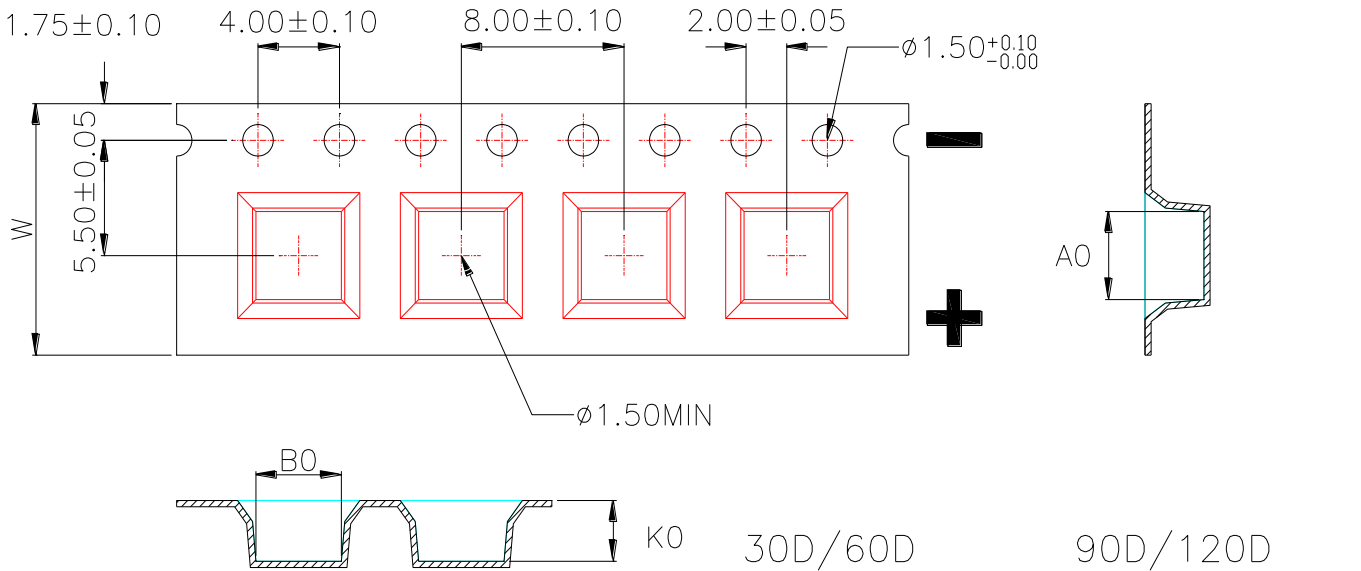


RECOMMENDED STENCIL PATTERN
(HATCHED AREA IS OPENING)



§ Suggest stencil $t = 0.12$ mm

◆ Packing



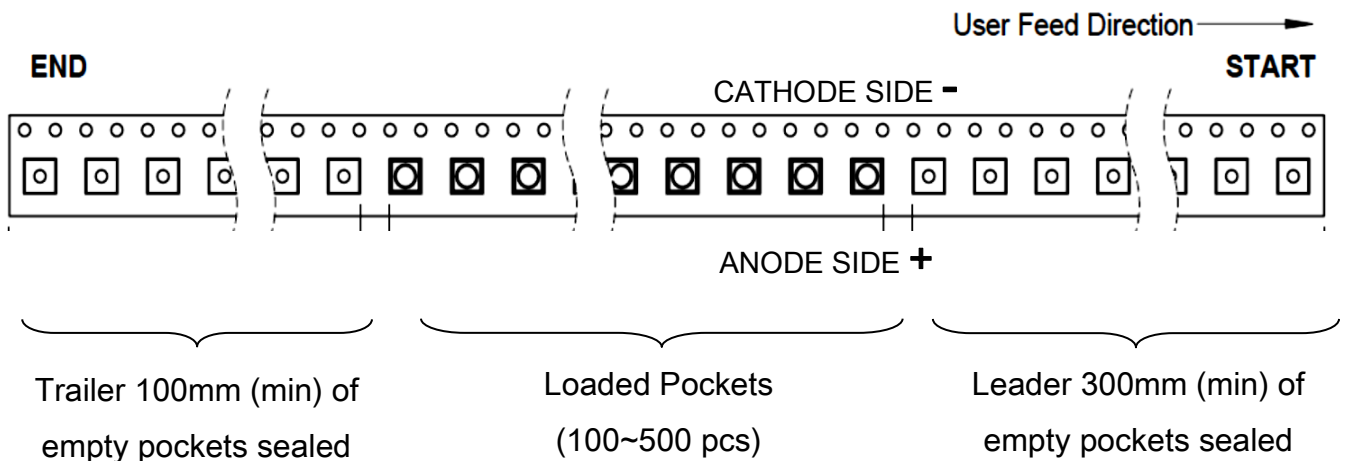
1. 10 sprocket hole pitch cumulative tolerance ± 0.20 .
2. Carrier camber is within 1 mm in 250 mm.
3. Material : Black Conductive Polystyrene Alloy.
4. All dimensions meet EIA-481-D requirements.
5. Thickness : $0.30 \pm 0.05 \text{ mm}$.
6. Packing length per 22 " reel : 62.5 Meters(1:3).
7. Component load per 7" reel : 400~1000 pcs.

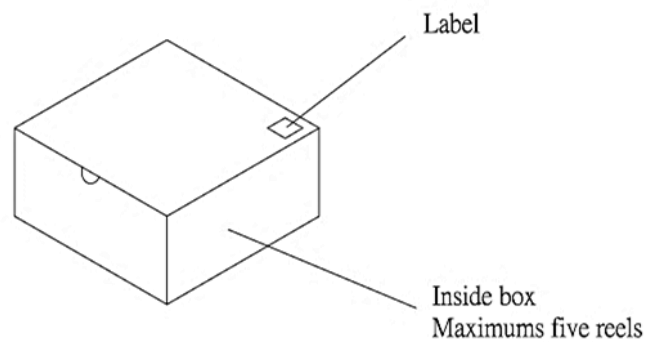
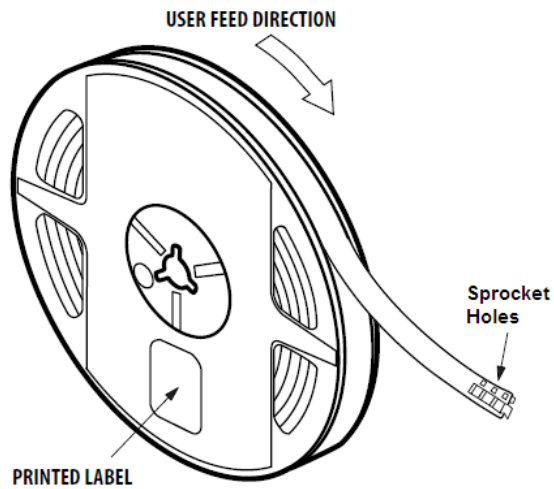
30D/60D

W	12.00 ± 0.30
A0	4.20 ± 0.10
B0	4.20 ± 0.10
K0	3.50 ± 0.10

90D/120D

W	12.00 ± 0.30
A0	4.20 ± 0.10
B0	4.20 ± 0.10
K0	2.90 ± 0.10



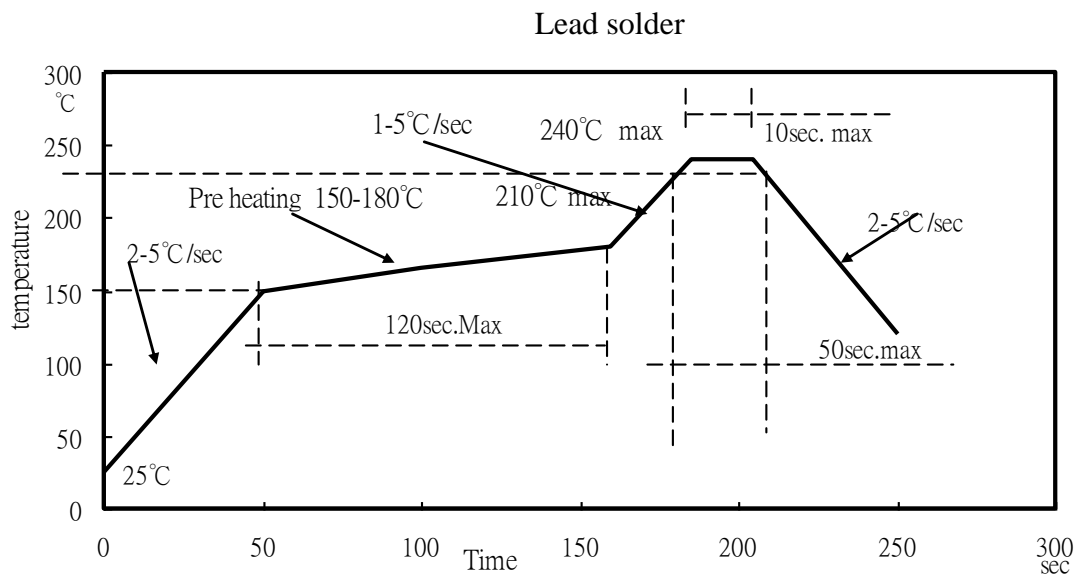
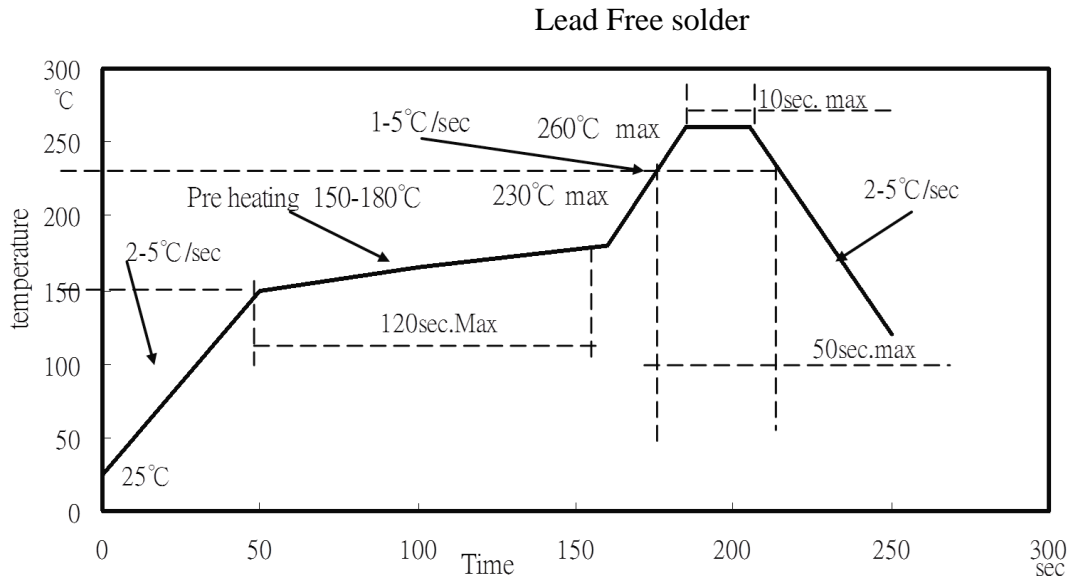


Notes:

1. Each Reel (minimum number of pieces is 100 and maximum is 500 (60D/30D)/1000 (90D/120D) is packed in a moisture-proof bag along with 1 packs of desiccant and a humidity indicator card;
2. A maximum of 5 moisture-proof bags are packed in an inner box (size: 240mm x 200mm x 105mm \pm 5mm)
3. A maximum of 4 inner boxes are put in an outer box (size: 410mm x 255mm x 230mm \pm 5mm)
4. Part No., Lot No., quantity should be indicated on the label of the moisture-proof bag and the cardboard box.

◆ Reflow Profile

IR reflow soldering Profile



Notes:

1. The recommended reflow temperature is 240°C(±5°C). The maximum soldering temperature should be limited to 260°C.
2. Do not stress the silicone resin while it is exposed to high temperature.
3. The number of reflow process should not exceed 3 times.

◆ Test Items and Results of Reliability

Test Item	Test Conditions	Duration/ Cycle	Number of Damage	Reference
Thermal Shock	-40°C 30min ↑ ↓ 5min 125°C 30min	100 cycles	0/22	AEC-Q101
High Temperature Storage	T _a =100°C	1000 hrs	0/22	EIAJ ED-4701 200 201
Humidity Heat Storage	T _a =85°C RH=85%	1000 hrs	0/22	EIAJ ED-4701 100 103
Low Temperature Storage	T _a =-40°C	1000 hrs	0/22	EIAJ ED-4701 200 202
Life Test	T _a =25°C I _f =700mA	1000 hrs	0/22	Tested with UVT standard
High Humidity Heat Life Test	85°C RH=85% I _f =700mA	1000 hrs	0/22	Tested with UVT standard
High Temperature Life Test	T _a =85°C	1000 hrs	0/22	Tested with UVT standard
ESD(HBM)	2KV at 1.5kΩ;100pf	3 Times	0/22	MIL-STD-883

Criteria for Judging the Damage

Item	Symbol	Condition	Criteria for Judgment	
			Min	Max
Forward Voltage	V _F	I _f =700mA	—	USL ¹ ×1.1
Reverse Current	I _R	V _R =5V	—	100μA
Luminous Intensity	I _v	I _f =700mA	LSL ² ×0.7	—

Notes:

1. USL: Upper specification level
2. LSL: Lower specification level