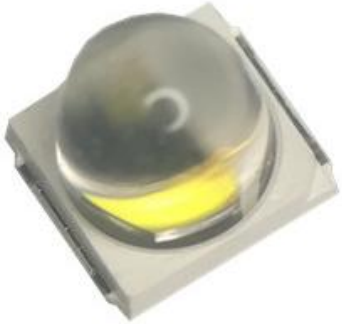
<u>High Power LED:</u> 5.0X5.0mm. White

(高功率 LED：5.0X5.0mm 白光)



Part No(部件型号）:YL-5050D(19)-W(342lm)

PRODUCT DESCRIPTION：(产品描述：)

High luminous intensity and long lifetime(高亮度、长使用寿命)

Indoor and outdoor/ Back lighting/ Automotive/ Flash lighting applications
(户内外/背光源/汽车照明/闪光照明应用)

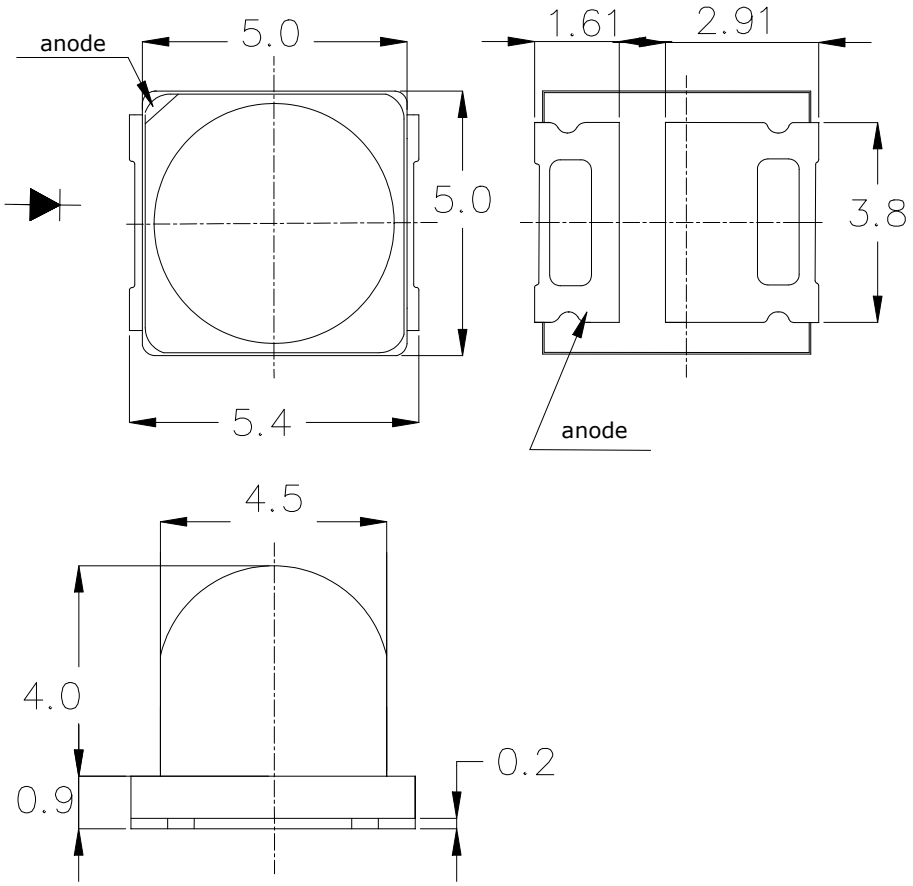
Low voltage DC operated(低電壓直流驅動)

Cool beam,safe touched (冷光源，可觸摸)

TYPICAL APPLICATLONS(應用範圍):

General Linghting(普通照明)
Reading lights(car,bus,aircraft)(閱讀燈（汽車、公車、飛機）)
Portable lighing(flashlight,bicycle)(攜帶式照明（手電筒、腳踏車）)
Decorative(裝潢)
Architectural details(建築部分)
Automtive Exterior(Stop-tail-turn,CHMSL,MirrorSide Repeat)(汽車照明（車尾燈、第三剎車燈、方向燈）)

■ Package Dimension:



PART NO(產品型號)	LED Emitted Color （LED 的发光颜色）	LensColor （镜片颜色）
YL-5050D(19)-W(342lm)	White（白 ）	Water Clear （无色透明）

Notes:

1. All dimensions are in millimeters (所有尺寸以毫米為單位)
2. Tolerance is ±0.25mm unless otherwise noted..(未標注公差為：±0.25.，另有標注除外).
3. Specifications are subject to change without notice(規格若有變動，恕不另行通知).

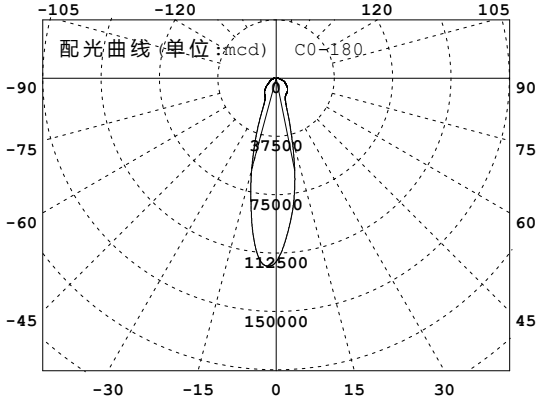
■ Absolute Maximum Ratings at Ta=25℃(在 25℃環境下之最大額定值)

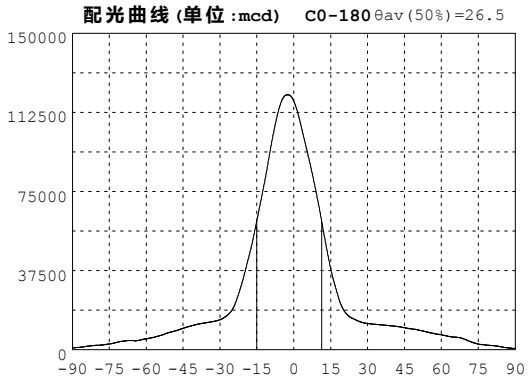
Parameter（參數）	Symbol 符號	MAX.（最大值）	Unit（單位）
DC Forward Current（正向輸入電流）	I_F	1000	mA
Peak pulsed forward current（最大正向脈沖電流）	I_{PF}	1500	mA
Power Disspation（功率）	P_D	3	W
Reverse Voltage（反向電壓）	V_R	5	V
Operating Temperature Range（工作溫度）	Topr	-40 to +85	℃
Storage Temperature Range（儲存溫度）	Tstg	-40 to +85	℃
Soldering Temperature (Max.)（焊接溫度）	Tsol	240 ± 5	5 Seconds

■Electronic Optical Characteristics :（电子光学特性）

Parameter 参数	Symbol 符号	Min. 最小值	Typ 中间值	Max. 最大值	Unit 单位	Condition 测试条件
Luminous Flux(光通量)	Φ_v	／	170	／	lm	I_F=350mA
Viewing Angle 视角	2θ 1/2	／	26.5	／	deg	I_F=350mA
Dominant Wavelength 色温	Tc	5000	7000	10000	K	I_F=350mA
Forward Voltage 正向电压	VF	2.6	3.0	3.4	V	I_F=350mA
Reverse Current 反向漏电流	I_R			10 uA	V	V_R=5V

Typical electro-optical characteristics curves : （典型光電特性曲線圖）





光强分布数据:(角度°，光强mcd) C0-180

角度	光强	角度	光强	角度	光强	角度	光强	角度	光强	角度	光强
-90.0	917.4	-59.6	5316	-29.2	14670	1.2	114100	31.6	12260	62.0	6617
-88.4	1064	-58.0	5650	-27.6	15839	2.8	107009	33.2	12075	63.6	6236
-86.8	1219	-56.4	6094	-26.0	17506	4.4	99153	34.8	11915	65.2	6036
-85.2	1458	-54.8	6602	-24.4	20333	6.0	91268	36.4	11750	66.8	5895
-83.6	1760	-53.2	7143	-22.8	25188	7.6	83151	38.0	11562	68.4	5469
-82.0	1968	-51.6	7878	-21.2	31133	9.2	74108	39.6	11378	70.0	4739
-80.4	2103	-50.0	8430	-19.6	37994	10.8	64527	41.2	11190	71.6	3981
-78.8	2213	-48.4	8897	-18.0	45360	12.4	54147	42.8	10943	73.2	3310
-77.2	2401	-46.8	9483	-16.4	53394	14.0	44181	44.4	10613	74.8	2798
-75.6	2692	-45.2	10116	-14.8	62534	15.6	35432	46.0	10262	76.4	2473
-74.0	2973	-43.6	10708	-13.2	71723	17.2	28755	47.6	9962	78.0	2306
-72.4	3399	-42.0	11256	-11.6	81198	18.8	22617	49.2	9737	79.6	2110
-70.8	3854	-40.4	11744	-10.0	91668	20.4	18660	50.8	9372	81.2	1971
-69.2	4135	-38.8	12188	-8.4	101936	22.0	16346	52.4	8947	82.8	1742
-67.6	4343	-37.2	12540	-6.8	110722	23.6	15053	54.0	8504	84.4	1396
-66.0	4384	-35.6	12858	-5.2	117210	25.2	14193	55.6	8061	86.0	1071
-64.4	4307	-34.0	13195	-3.6	120488	26.8	13390	57.2	7665	87.6	847.6
-62.8	4520	-32.4	13515	-2.0	120846	28.4	12812	58.8	7359	89.2	693.2
-61.2	4975	-30.8	13949	-0.4	118896	30.0	12484	60.4	7014		

电学参数:

工作电流If: 349.94mA 工作电压Vf: 2.92V
反向电压Vz: 10.01V (偏置Ir=0.10μA)
反向漏电流Ir: 0.00μA (偏置Vr=5.00V)
电功率P: 1022.52mW

光学参数(CIE A):

等效光通量: Φeff = 64231mlm 光效: Eff=62.82lm/W
平均光强扩散角: θ(25%): 38.2° θ(50%): 26.5° θ(75%): 16.2° θ(50%): 26.5°
最大光强Imax = 120948 mcd (C=0.0°,G=-2.6°)
C0-180平面 Imax = 120948 mcd (G=-2.6°) Io = 118427 mcd

Typical electro-optical characteristics curves : （典型光電特性曲線圖）

Fig.1-Relative Luminous Intensity vs. Forward Current

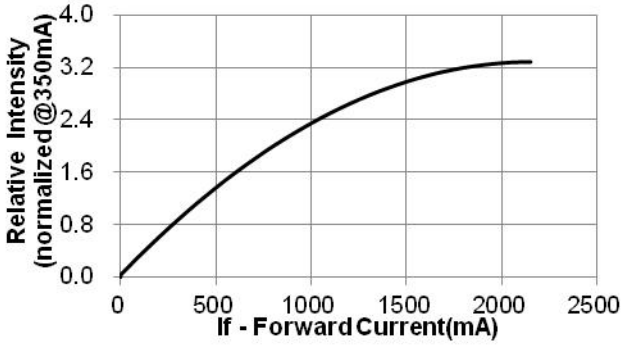


Fig.2-Forward Current vs. Forward Voltage

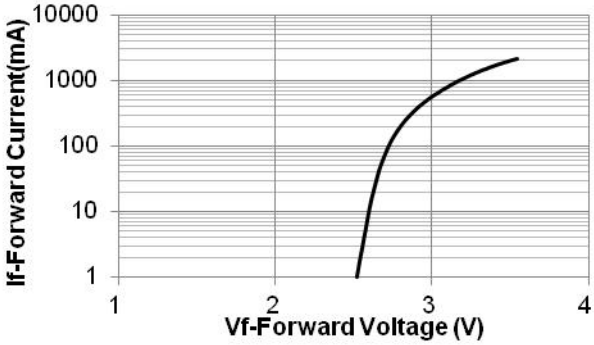


Fig.3-Relative Intensity (@350mA) vs. Ambient Temperature

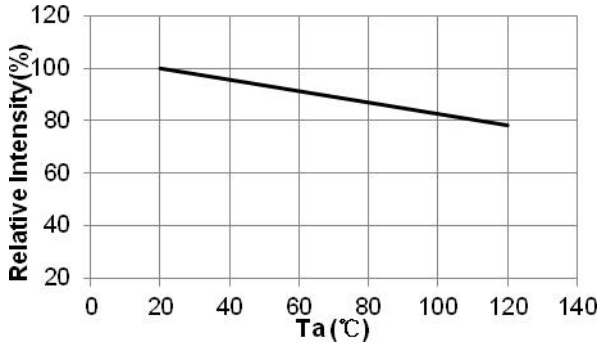


Fig.4-Forward Voltage (@350mA) vs. vs. Ambient Temperature

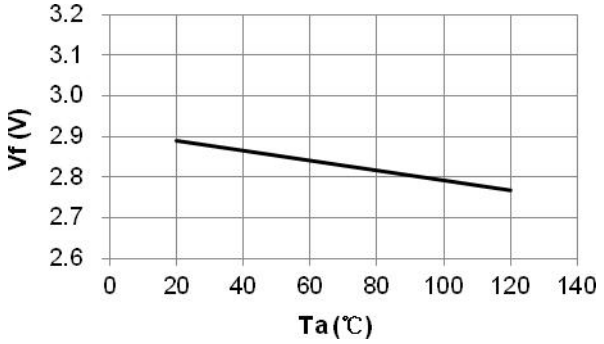


Fig.5- Color coordinates (@350mA) vs. Ambient Temperature Ambient

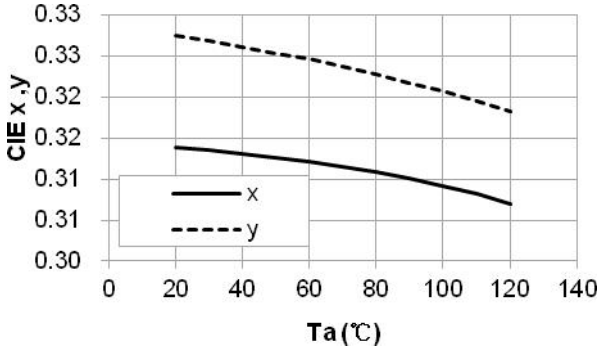
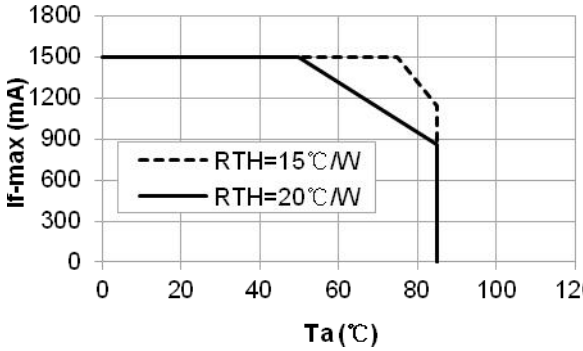
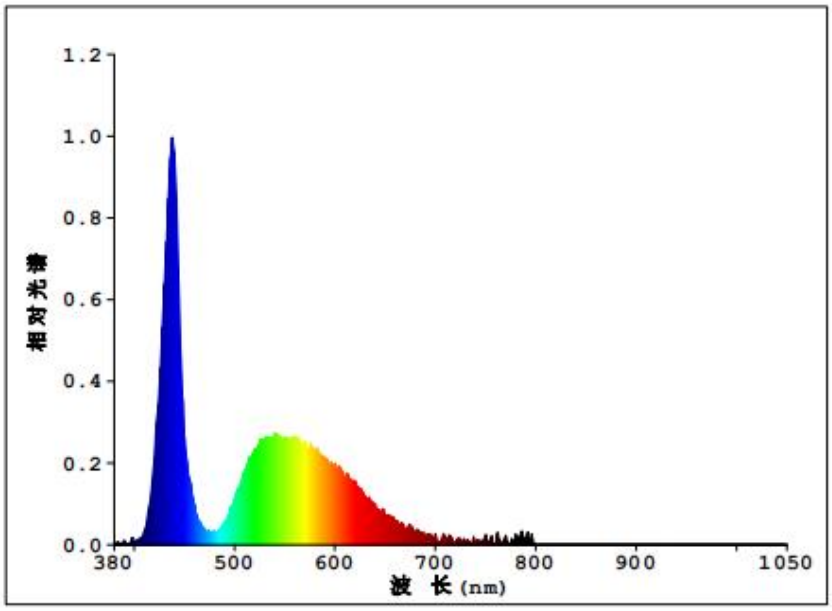


Fig.6-Maximum Driving Forward DC Current vs. Temperature (Derating based on Tj max=150℃)



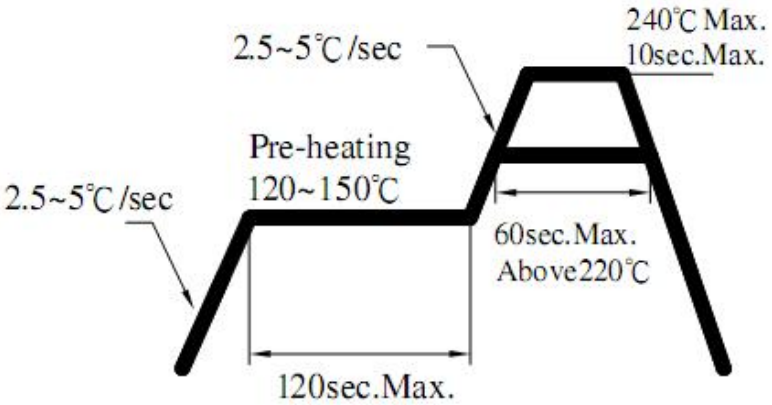
■White Color Spectrum(白色光譜)



■ Precautions For Use　使用注意事项

Soldering Condition：焊接条件：

Pb-free solder temperature profile无铅焊料的温度曲线



1. Reflow soldering should not be done more than two times.回流焊不可做两次以上。
2. When soldering, do not put stress on the LEDs during heating.
   焊接时，在加热过程中勿对 LED 施加压力。
3. After soldering, do not warp the circuit board.焊接后，勿弯曲电路板。

备注：

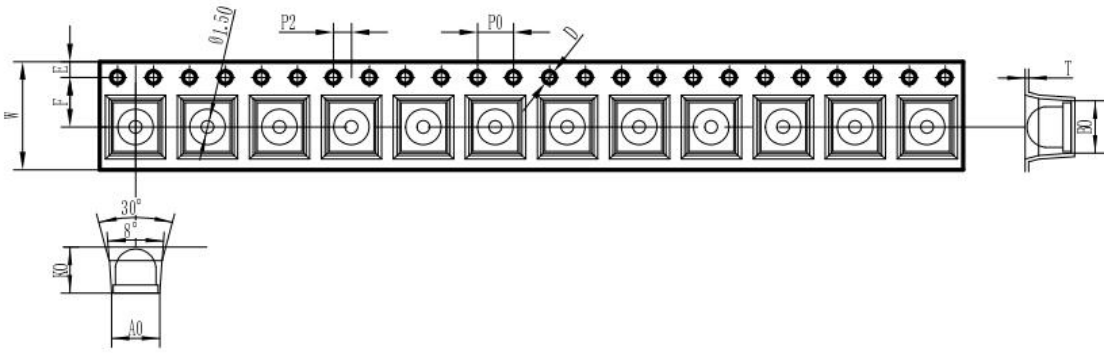
!请注意洗板水的使用，劣质的洗板水有可能会造成发光区及外观的伤害。

Shipping Package Style

Tapping Dimension Packaging Specification

- 1 Reel/bag.
- 1500/Reel

Unit : mm

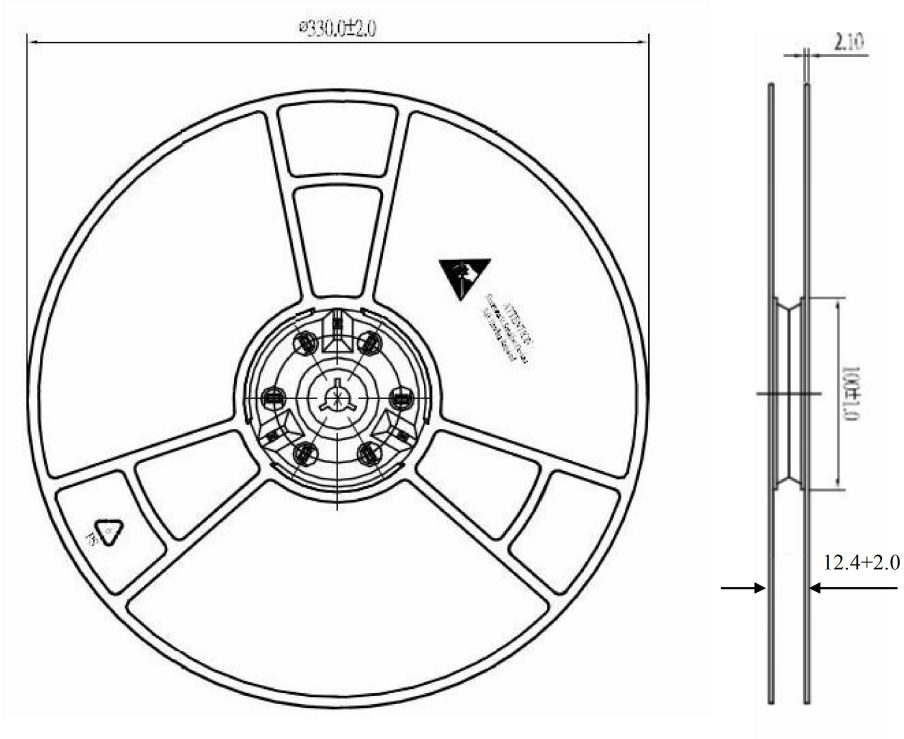
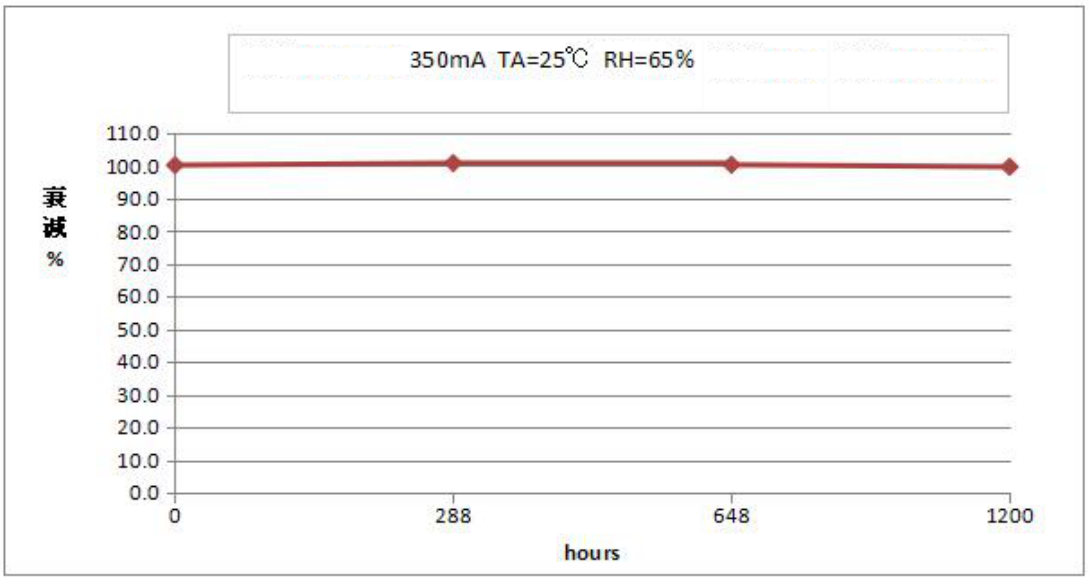
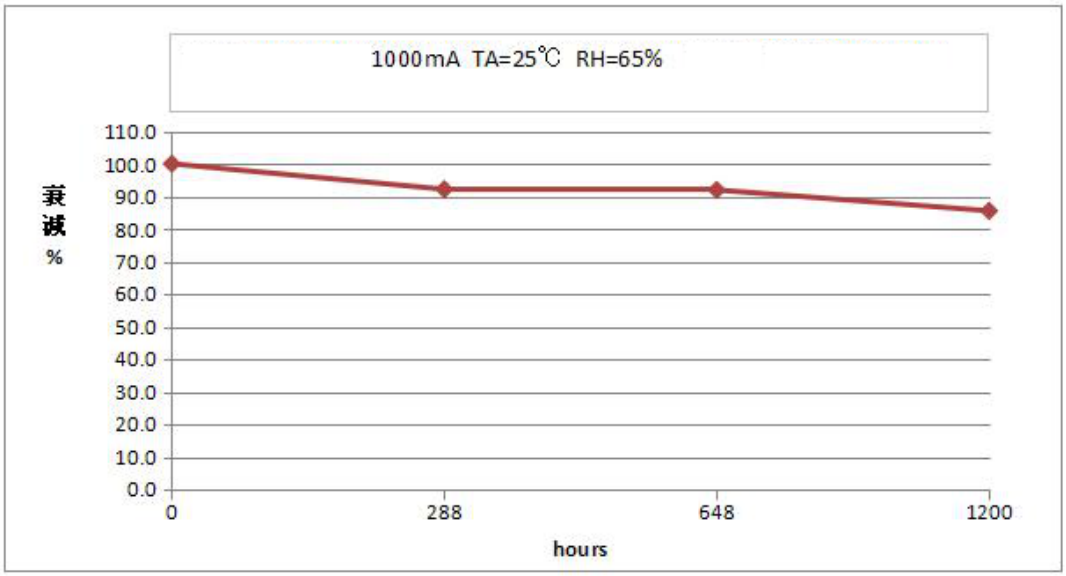


ITEM	W	A0	B0	K0	E	F	P	P0	P2	D	T
DIM	12.0+0.1	5.35±0.1	5.8±0.1	5.1±0.1	1.75±0.1	5.5±0.1	8.0±0.1	4.00±0.1	2.00±0.1	1.5+0.1	0.4±0.05

Reel Packaging :

Reel Part :

Unit : mm



YL-5050D(19)-W(342lm) Lifetime test report