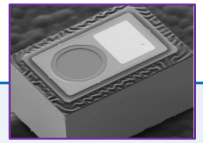
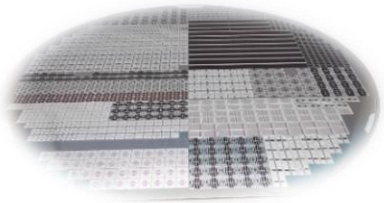
Ver. 2021-12-01



PIN Point LED

Navigator of Optoelectronics
Booster of Optical Sensing Technologies



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恩邦科技
NBTECH

About US

NBTech was established in 2016 at Shanghai. We are a professional manufacture and trader engaged in the R&D, Production, Sale and Service of advanced Optical-sensing devices, including photo diode , photo Transistor, IR-LED, photo interrupter, Photo ICs and various optical sensing modules.

We are dedicated to provide the best Solutions for various applications in smart city and home, smart equipment manufacture, automobile sensing, medical instruments.



Head Office:

Address: Rm406, Block B, No.485, Yangnan Road, Pudong District, Shanghai, China

Nature – Bio - Science





R&D Lab:

Address: 3F, Block-2, No.33-23, Quanyun 5-Raod , Hunnan New District, Shenyang, China

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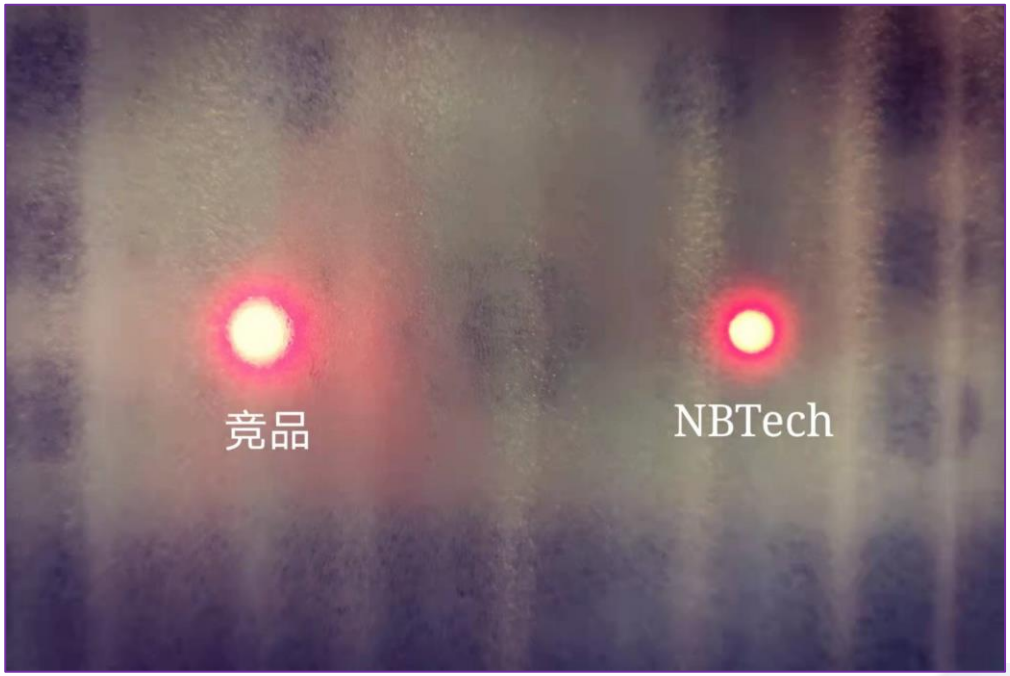
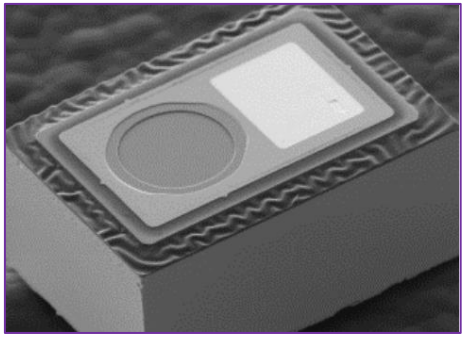
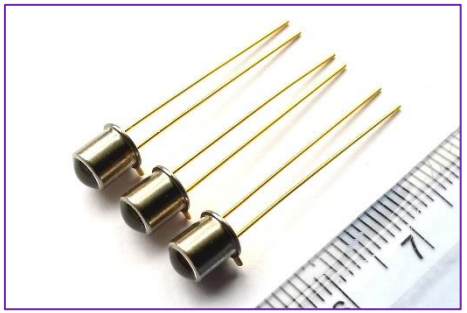
Product Line-Up

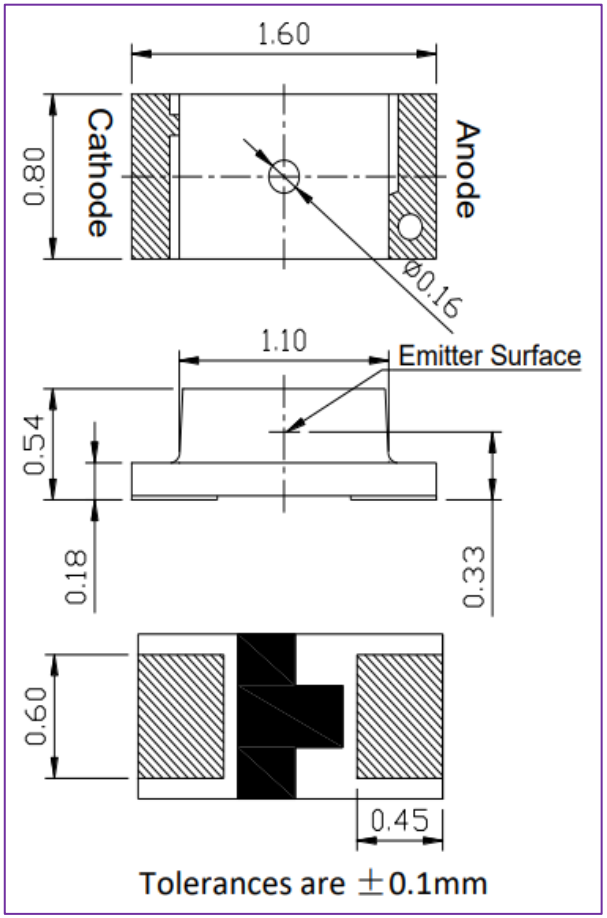
Device	Point Size	VF (V)	λp	Po	Remark
NL0603C-1665	160um	2.1V @ 20mA	650nm	5.5mW	COB 0603
NL1206C-1665	160um	2.1V @ 20mA	650nm	5.5mW	COB 1206
NL1665	160um	2.1V @ 20mA	650nm	18.0mW	TO46 + Lens



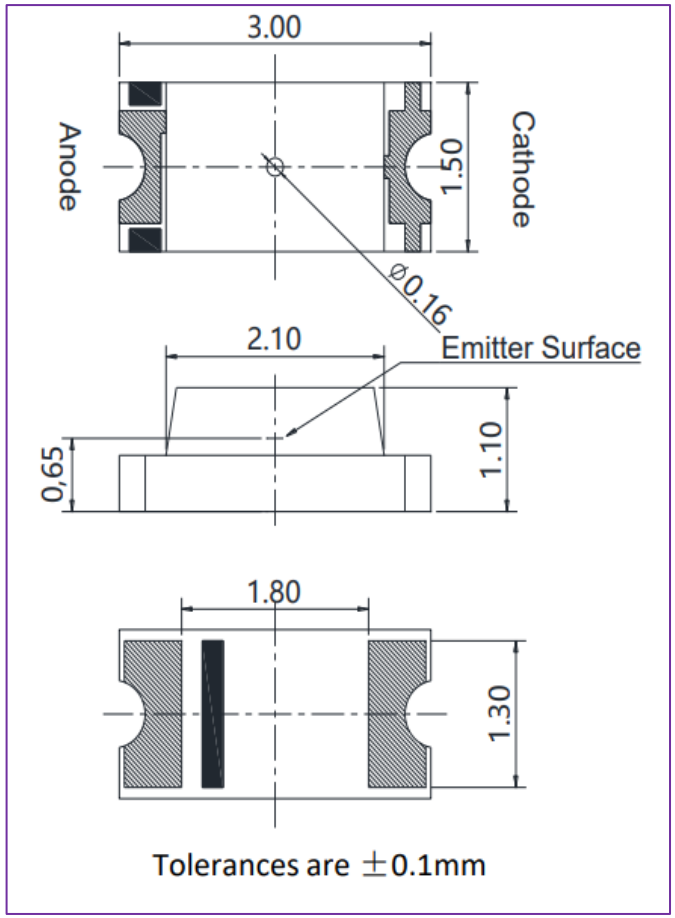




Package



COB 0603



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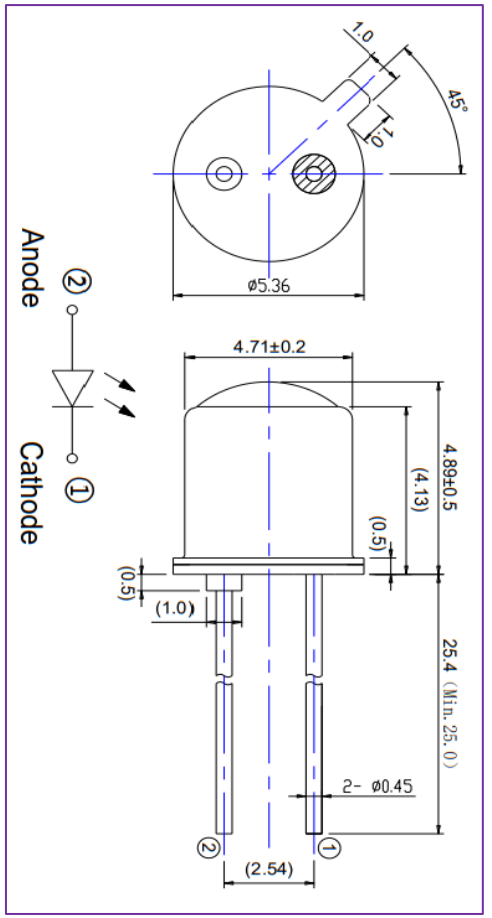


TO46

■ 产品参数

■ Absolute maximum ratings

Parameter	Symbol	Rating	Unit
Forward Current	I_F	50	mA
Reverse Voltage	V_R	3	V
Operating Temperature	T_{opr}	-40 ~ 85	℃
Storage Temperature	T_{stg}	-40 ~ 100	℃

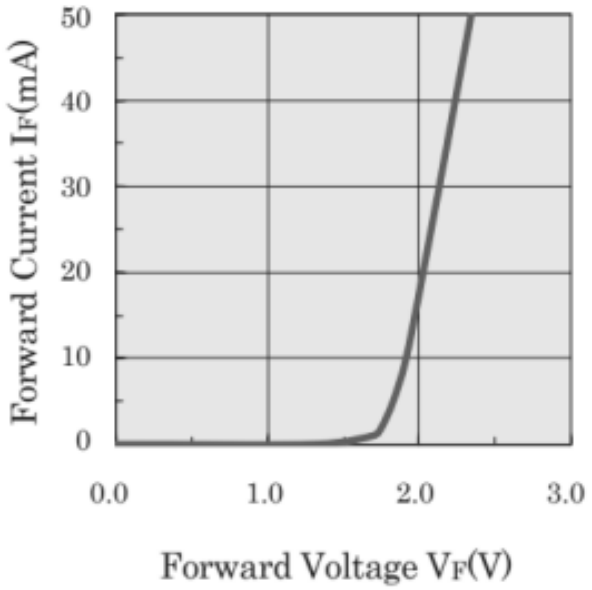
■ Electro-optical characteristics

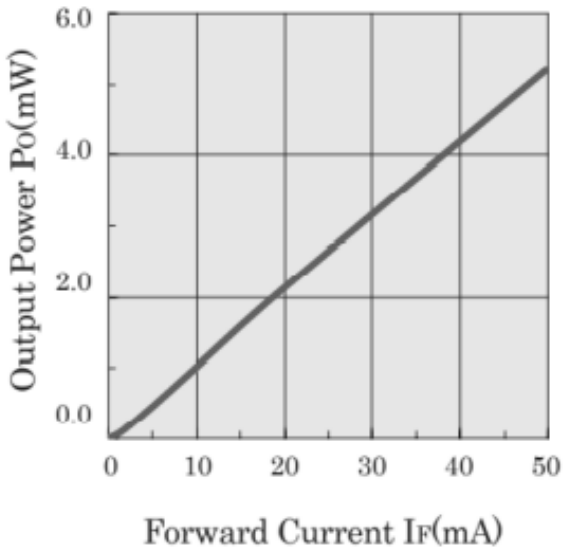
(Ta=25℃)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F=20mA	-	2.1	2.8	V
Reverse Current	I_R	V_R=3V	-	-	10	μA
Output Power	P_o	I_F=20mA	4.0	5.5	-	mW
Peak Wavelength	λ_P	I_F=20mA	-	650	-	nm

直流 I-V 特性

■ 直流 IF-VF， IF-Po 特性

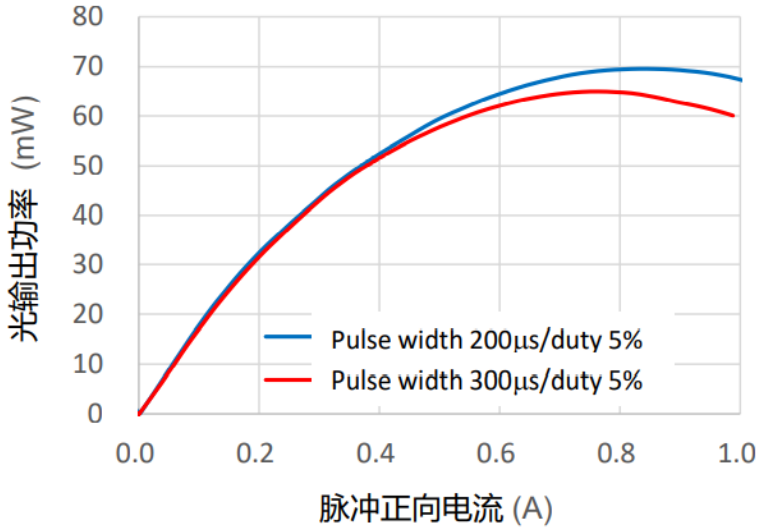


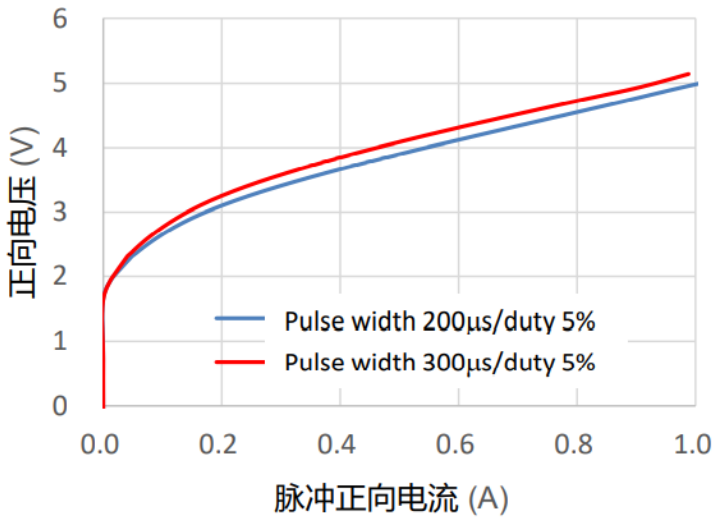


备注： VF 随 IF增加较多，直流驱动需要匹配电路。
直流驱动建议工作在20mA~40mA

脉冲 I-V, I-P 特性

■ 脉冲 I-VL 特性

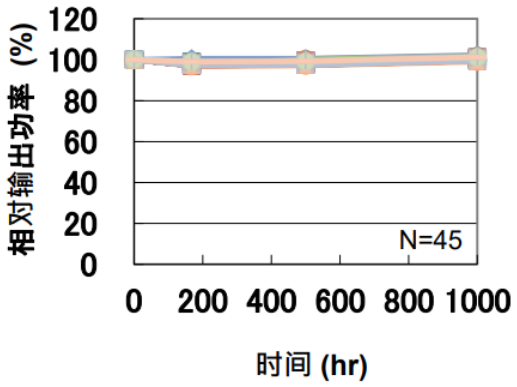




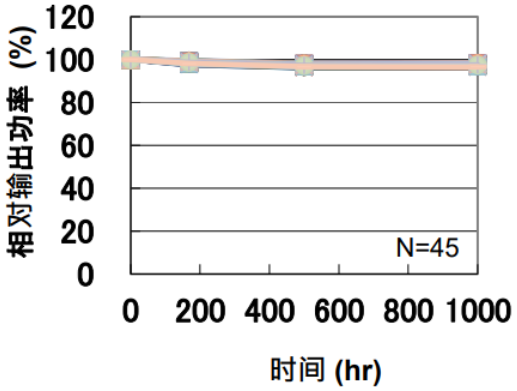
备注： 光输出功率在800mA以内增加，在800mA以上时减少。
脉冲驱动模式建议工作在300~600mA（@200us/ duty 5%）

寿命试验

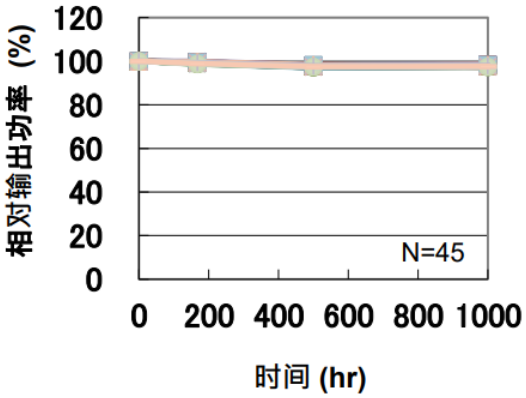
■ 寿命试验 (直流电流)



-40℃, 50mA



RT, 50mA



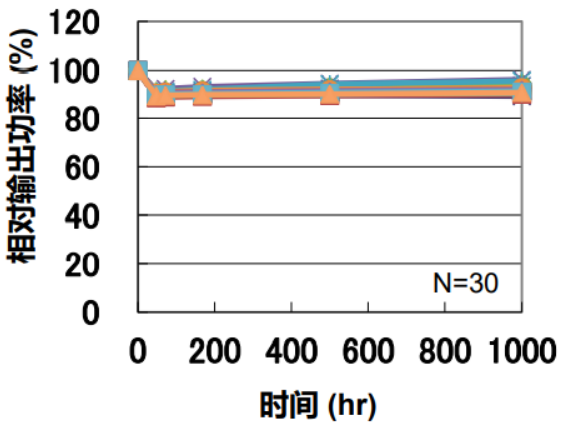
85℃、20mA

结果： 光输出功率没有明显变化

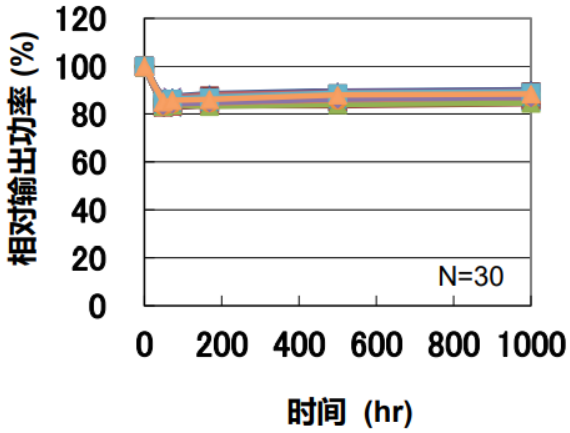
寿命试验

■ 寿命试验 (脉冲电流)

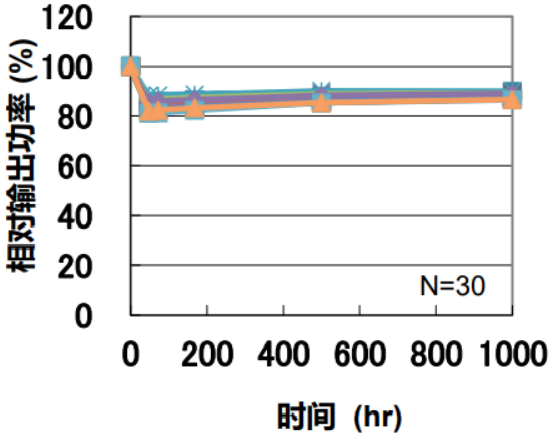
脉冲宽度： 5us， 占空比： 10%



RT, 300mA



RT, 400mA



85℃, 300mA

结果： 光输出功率没有明显变化

协作感恩，互为辅弼

THANKS

- 联系人：张智
- 电　话：181-2105-9111
- 邮　箱：zz@nbfamily.com