

# Photo Transistor --ORT-PT3016H1

## 1. Scope:

- This specification applies to NPN Photo Transistor.

## 2. Structure:

- Top Side : aluminium alloy
- Bottom Side : silver alloy
- Passivation : Silicon Nitride

## 3. Size:

- Die Size :  $415\mu\text{m} \times 415\mu\text{m} \pm 30\mu\text{m}$
- Thickness :  $220\mu\text{m} \pm 20\mu\text{m}$
- Pad Size:
- Base :  $70\mu\text{m} \times 70\mu\text{m} \pm 10\mu\text{m}$
- Emitter :  $130\mu\text{m} \times 130\mu\text{m} \pm 10\mu\text{m}$
- Active Area :  $320\mu\text{m} \times 320\mu\text{m} \pm 20\mu\text{m}$
- Pattern Drawing: fig.1.

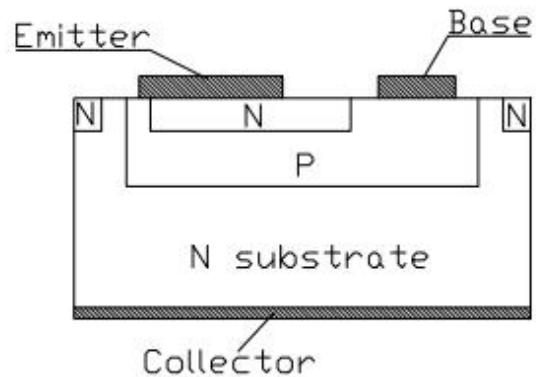
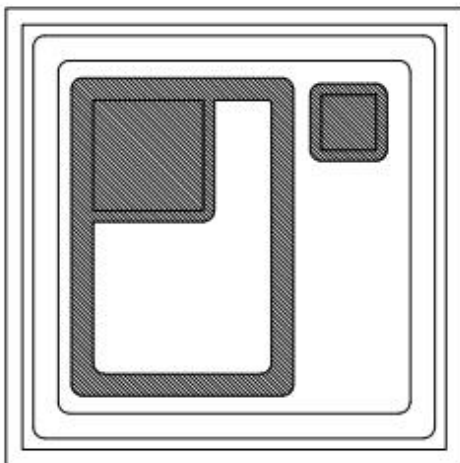


fig.1

## 4. Electro-Optical Characteristics (光电性能) :

( $T_a = +25^\circ\text{C}$ )

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
C-E Leakage Current	$I_{CEO}$	$V_{CE}=20\text{V}$			50	nA
C-E Saturation Voltage	$V_{CES}$	$I_C=5\text{mA}, I_B=1\text{mA}$			250	mV
C-E Voltage	$BV_{CEO}$	$I_{CE}=500\mu\text{A}$	80			V
E-C Voltage	$BV_{ECO}$	$I_{EC}=50\mu\text{A}$	7			V
DC Current Gain	$h_{FE}$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	300			-



## 5. hfe Classification:

### PT3016H1 3 series(1:1.3)

Classification	PT3016H1-3A	PT3016H1-3B	PT3016H1-3C	PT3016H1-3D	PT3016H1-3E
hfe	600~780	660~860	720~940	780~1020	840~1100

Classification	PT3016H1-3F	PT3016H1-3G	PT3016H1-3H	PT3016H1-3I	PT3016H1-3J
hfe	900~1180	960~1260	1020~1340	1080~1420	1140~1500

Classification	PT3016H1-3K	PT3016H1-3L	PT3016H1-3M	PT3016H1-3N
hfe	1200~1580	1500~2000	2000~2600	2400~3000

### PT3016H1 5 series(1:1.5)

Classification	PT3016H1-5A	PT3016H1-5B	PT3016H1-5C	PT3016H1-5D	PT3016H1-5E
hfe	600-900	700-1050	800-1300	900-1400	1100-1700

Classification	PT3016H1-5F	PT3016H1-5G	PT3016H1-5H
hfe	1300-2000	1500-2300	2000-3000

### PT3016H1 7 series(1:1.7)

Classification	PT3016H1-7A	PT3016H1-7B	PT3016H1-7C	PT3016H1-7D	PT3016H1-7E
hfe	600~1020	680~1160	760-1300	840-1440	920-1580

Classification	PT3016H1-7F	PT3016H1-7G	PT3016H1-7H
hfe	1000-1700	1200-2000	1800-3000

### PT3016H1 A series(1:2)

Classification	PT3016H1-AA	PT3016H1-AB	PT3016H1-AC	PT3016H1-AD	PT3016H1-AE	PT3016H1-AO
hfe	600~1200	800~1600	1000~2000	1200~2400	2000~3000	600~3000

## 6. Packing :

- Packing: Sheet Type

## 7. Application Notes:

- All data are measured by Orient' s tester on bare chips within 98% of the nominal value.